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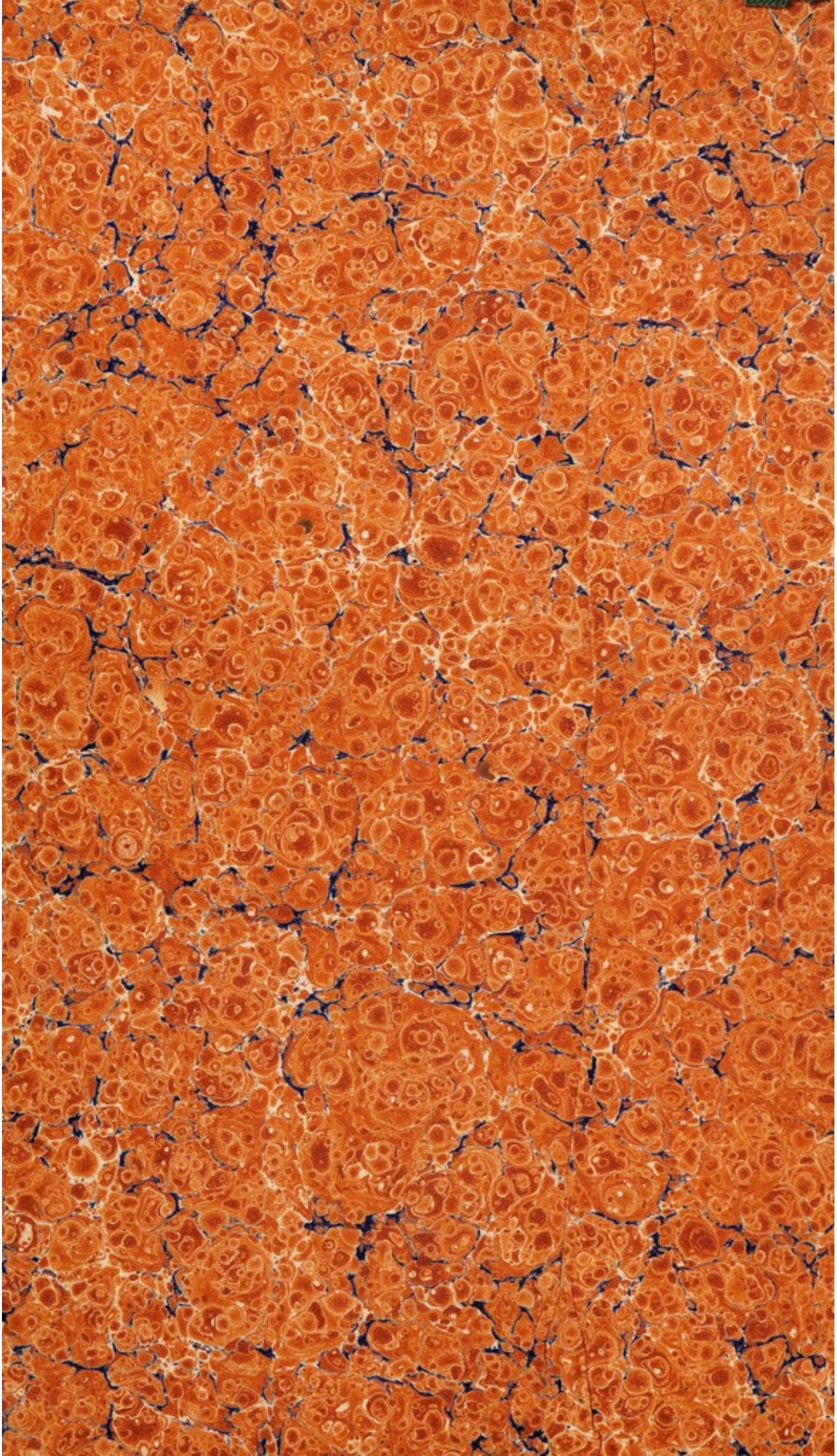

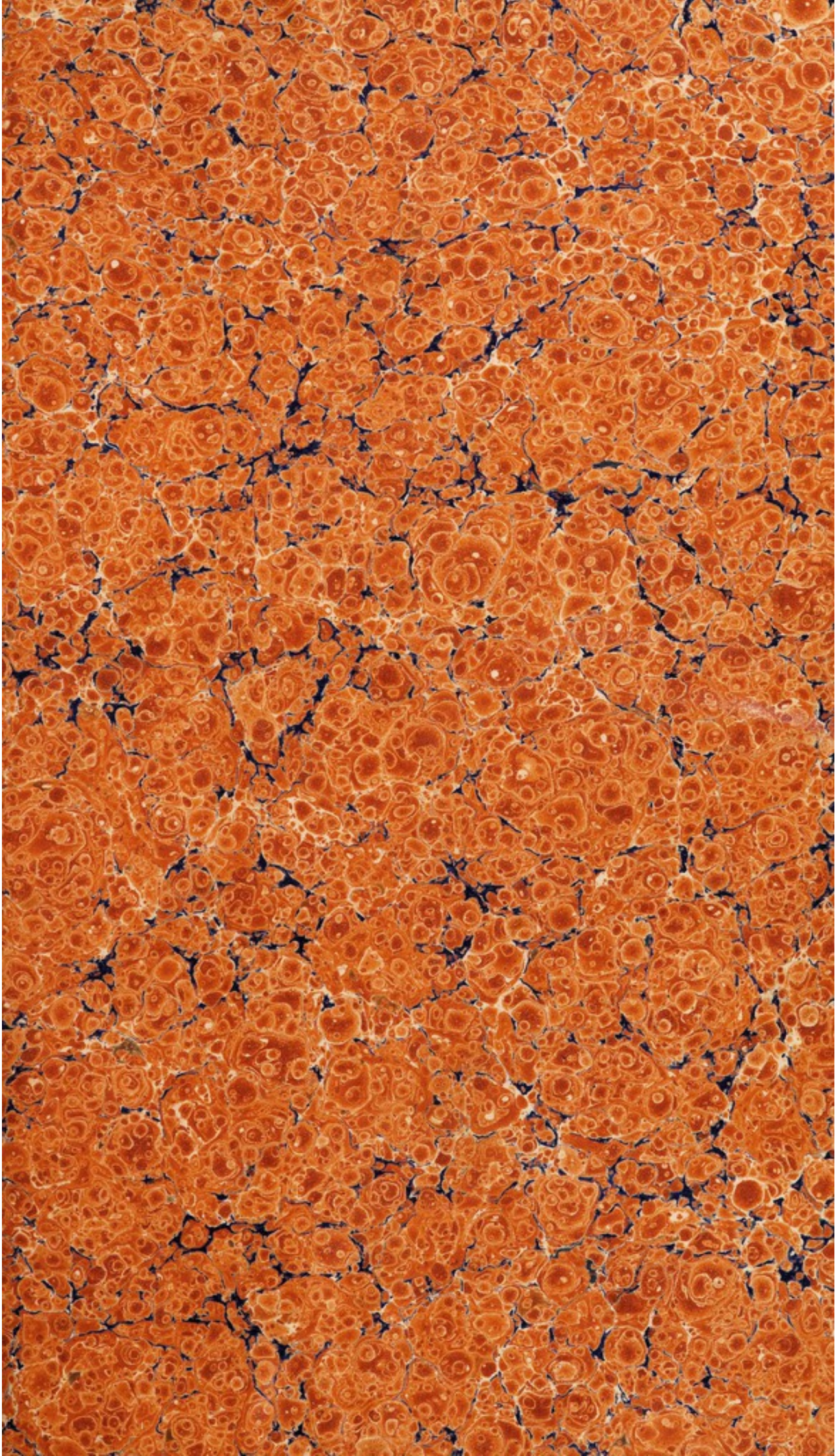

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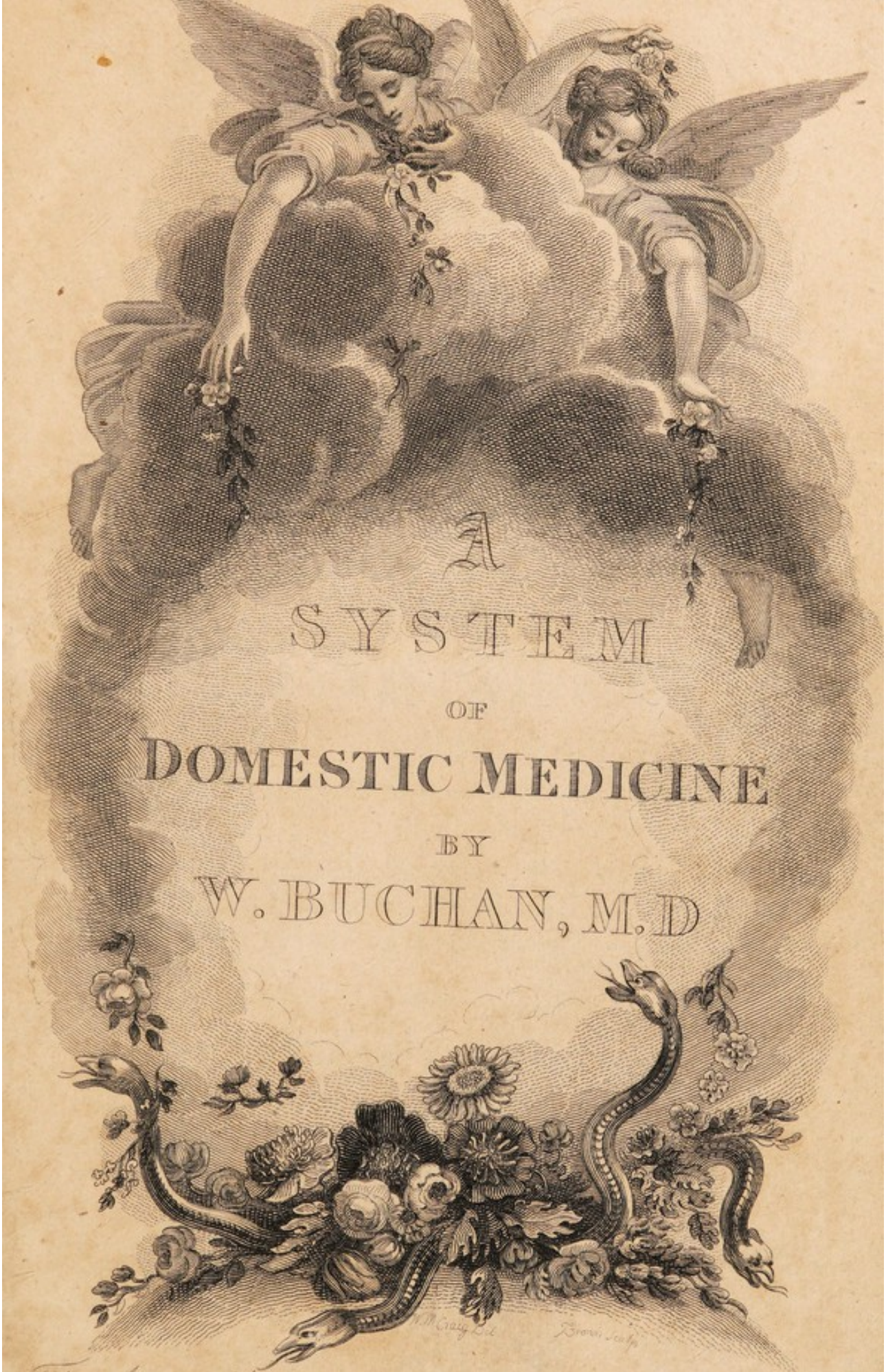

A SYSTEM OF DOMESTIC MEDICINE

BY

W. BUCHAN, M.D

The Angels of Providence showering down upon the World the means of alleveating or cureing Human Diseases.

Published by T. Kinnersley Jan.y 1.1810

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DOMESTIC MEDICINE,

OR THE

FAMILY PHYSICIAN;

WHEREIN

THE PREVENTION AND CURE OF

Diseases,

BY REGIMEN & SIMPLE MEDICINES,

IS CLEARLY LAID DOWN AND CONSIDERED.

ALSO,

AN APPENDIX,

CONTAINING

A Dispensatory for the Use of Private Practitioners

WITH

THE FOLLOWING NEW TREATISES:

SEA-BATHING, MINERAL WATERS, COW-POX, RECOVERY OF DROWNED PERSONS, RUPTURES, MEDICAL ELECTRICITY, CHILD-BIRTH, DIET.

BY WILLIAM BUCHAN, M. D.

Late Fellow of the Royal College of Physicians, Edinburgh.

LONDON:

PUBLISHED BY T. KINNERSLEY, ACTON PLACE,

KINGSLAND ROAD.

1821.

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PREFACE.

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

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

The observations relative to Nursing, and the Management of Children were chiefly suggested by an extensive practice among infants, in a large branch of the Foundling Hospital, where I had an opportunity not only of treating the diseases incident to childhood, but likewise of trying different plans of nursing, and observing their effects. Whenever I had it in my power to place the children under the care of proper nurses, to instruct these nurses in their duty, and to be satisfied that they performed it, very few

of them died; but when, from distance of place, and other unavoidable circumstances, the children were left to the sole care of mercenary nurses, without any person to instruct or superintend them, scarcely any of them lived.

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

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

I do not mean to intimidate men, far less to insinuate that even those arts, the practice of which is attended with some degree of danger, should not be carried on; but to guard the less cautious and unwary against those dangers which they have in their power to avoid, and which they often, through mere ignorance, incur. As every occupation in life disposes those who follow it to some particular diseases more than to others, it is certainly of importance to know

these, in order that people may be upon their guard against them. It is always better to be warned of the approach of an enemy, than to be surprised by him, especially where there is a possibility of avoiding the danger.

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

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

Some of the public means of preserving health are mentioned in the general prophylaxis, as the inspection of provisions, widening the streets of great towns, keeping them clean, supplying the inhabitants with wholesome water, &c.; but they are passed over in a very cursory manner. A proper attention to these would have swelled this volume to too large a size; I have, therefore, reserved them for the subject of a future publication.

In the treatment of diseases, I have been peculiarly attentive to Regimen. The generality of people lay too much stress upon Medicine, and trust too little to their own endeavours. It is always in the power of

the patient, or of those about him, to do as much towards his recovery as can be effected by the physician By not attending to this, the designs of medicine are often frustrated; and the patient, by pursuing a wrong plan of regimen, not only defeats the Doctor's endeavours, but renders them dangerous. I have often known patients killed by an error in regimen, when they were using very proper medicines. It will be said, the physician always orders the regimen, when he prescribes a medicine. I wish it were so, both for the honour of the Faculty and the safety of their patients; but physicians, as well as other people, are too little attentive to this matter.

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

This seems to have been the first idea of medicine. The ancient physicians acted chiefly in the capacity of nurses. They went very little beyond aliment in their prescriptions; and even this they generally administered themselves, attending the sick for that purpose through the whole course of the disease, which gave them an opportunity not only of marking the changes of diseases with great accuracy, but likewise of observing the effects of their different applications, and adapting them to the symptoms.

The learned Dr. Arbuthnot asserts, that by a proper attention to these things which are almost within the reach of every body, more good and less mischief will be done in acute diseases, than by medicines

improperly and unseasonably administered; and that great cures may be effected in chronical distempers by a proper regimen of the diet only. So entirely do the doctor's sentiments and mine agree, that I would advise every person, ignorant of physic, to confine his practice solely to diet, and the other parts of regimen; by which means he may often do much good, and can seldom do any hurt.

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

To render this book more generally useful, however, as well as more acceptable to the intelligent part of mankind, I have in most diseases, besides regimen, recommended some of the most simple and approved forms of medicine, and added such cautions and directions as seemed necessary for their safe administration. It would no doubt have been more acceptable to many, had the book abounded with pompous prescriptions, and promised great cures in consequence of their use; but this was not my plan; I think the administration of medicines always doubtful, and often dangerous, and would much rather teach men how to avoid the necessity of using them, than how they should be used.

Several medicines, and those of considerable efficacy, may be administered with great freedom and safety. Physicians generally trifle a long time with medicines before they learn their proper use. Many peasants at present know better how to use some of the most important articles in the *materia medica*, than physicians did a century ago; and doubtless the same observation will hold with regard to others for some time hence. Wherever I was convinced that medicine might be used with safety, or where the cure depended chiefly upon it, I have taken care to recommend it: but where

it was either highly dangerous, or not very necessary, it is omitted.

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

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

I know some of the Faculty disapprove of every attempt of this nature, imagining that it must totally destroy their influence. But this notion appears to me to be as absurd as it is illiberal. People in distress

will always apply for relief to men of superior abilities, when they have it in their power; and they will do this with greater confidence and readiness when they believe that Medicine is a rational science, than when they take it to be only a matter of mere conjecture.

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

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

I have only to add, that the book has not more exceeded my expectations in its success than in the effects it has produced. Some of the most pernicious practices, with regard to the treatment of the sick,

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

INTRODUCTION.

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

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

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

The different branches of philosophy have also of late been very universally studied by all who pretended to a liberal education. The advantages of this are manifest. It frees the mind from prejudice and superstition; fits it for the investigation of truth; induces habits of reasoning and judging properly; opens an inexhaustible source of entertainment; paves the way to the improvement of arts and agriculture; and qualifies men for acting with propriety in the most important stations of life.

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

Medicine, however, has not, as far as I know, in any country, been reckoned a necessary part of the education of a gentleman.

But surely no sufficient reason can be assigned for this omission.

No science lays open a more extensive field of uefsul knowledge, or affords more ample entertainment to an inquisitive mind. Anatomy, Botany, Chymistry, and the Materia Medica, are all branches of Natural History, and are fraught with such amusement and utility, that the man who entirely neglects them has but a sorry claim either to taste or learning. If a gentleman has a turn for observation, says an excellent and sensible writer*, surely the natural history of his own species is a more interesting subject, and presents a more ample field for the exertion of genius, than the natural history of spiders and cockle-shells.

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

As matters stand at present, it is easier to cheat a man out of his life than of a shilling, and almost impossible either to detect or punish the offender. Notwithstanding this, people still shut their eyes, and take every thing upon trust that is administered by any pretender to medicine, without daring to ask him a reason for any part of his conduct. Implicit faith, every where else the object of ridicule, is still sacred here. Many of the faculty are no doubt worthy of all the confidence that can be reposed in them; but as this can never be the character of every individual in any profession, it would certainly be for the safety, as well as the honour of mankind, to have some check upon the conduct of those to whom they entrust so valuable a treasure as health.

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

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

* Observations on the Duties and Offices of a Physician.

dical observations, does more real service to the art, than he who writes a volume in support of some favourite hypothesis.

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

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

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

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

I know it will be said, that diffusing medical knowledge among the people might induce them to tamper with medicine, and to trust to their own skill, instead of calling a physician. The reverse of this, however, is true. Persons who have most knowledge in these matters, are commonly most ready both to ask and follow advice, when it is necessary. The ignorant are always most apt to tamper with medicine, and have the least confidence in physicians.

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

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

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

The appearance of mystery in the conduct of physicians not only renders their art suspicious, but lays the foundation of quackery, which is the disgrace of medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been much confounded. The line between them is not sufficiently apparent; at least is too fine for the general eye. Few persons are able to distinguish sufficiently between the conduct of that man who administers secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the honest physician, which needs no disguise, gives a sanction to that of the villain, whose sole consequence depends upon secrecy.

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

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

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

But this practice is not only ridiculous, it is likewise dangerous. However capable physicians may be of writing Latin, I am certain apothecaries are not always in a condition to read it, and that dangerous mistakes, in consequence of this, often happen. But suppose the apothecary ever so able to read the physician's prescription, he is generally otherwise employed, and the business of making up prescriptions is left entirely to the apprentice. By this means the greatest man in the kingdom, even when he employs a first-rate physician, in reality trusts his life in the hands of an idle boy, who has not only the chance of being very ignorant, but likewise giddy and careless. Mistakes will sometimes happen in spite of the greatest care; but where human lives are concerned, all possible methods ought certainly to be taken to prevent them. For this reason, the prescriptions of physicians, instead of being couched in mystical characters and a dead language, ought, in my humble opinion, to be conceived in the most plain and obvious terms possible.

Diffusing medical knowledge among the people would not only tend to improve the art and banish quackery, but likewise to render medicine more universally useful, by extending its benefits to society. However long medicine may have been known as a science, we will venture to say, that many of its most important purposes to society have either been overlooked, or very little attended to. The cure of diseases is doubtless a matter of great importance; but the preservation of health is of still greater. This is the concern of every man, and surely what relates to it ought to be rendered as plain and obvious to all as possible. It is not to be supposed, that men can be sufficiently upon their guard against diseases, who are totally ignorant of their causes. Neither can the legislature, in whose power it is to do much more for preserving the public health than can be done by the Faculty, exert their power

with propriety, and to the greatest advantage, without some degree of medical knowledge.

Men of every occupation and condition in life might avail themselves of a degree of medical knowledge; as it would teach them to avoid the dangers peculiar to their respective stations; which is always easier than to remove their effects. Medical knowledge, instead of being a check upon the enjoyments of life, only teaches men how to make the most of them. It has indeed been said, *that to live medically, is to live miserably:* but it might with equal propriety be said, that to live rationally is to live miserably. If physicians obtrude their own ridiculous whims upon mankind, or lay down rules inconsistent with reason or common sense, no doubt they will be despised. But this is not the fault of medicine. It proposes no rules that I know, but such as are perfectly consistent with the true enjoyment of life, and every way conducive to the real happiness of mankind.

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

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

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

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

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

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

Persons who do not choose to administer medicine to the sick, may nevertheless direct their regimen. An eminent medical author has said, That by diet alone all the intentions of medicine may be answered.* No doubt a great many of them may; but there are other thing besides diet, which ought by no means to be neglected. Many hurtful and destructive prejudices, with regard to the treatment of the sick still prevail among the people, which persons of better sense and learning alone can eradicate. To guard the poor against the influence of these prejudices, and to instil into their minds just ideas of the importance of proper food, fresh air, cleanliness, and other pieces of regimen necessary in diseases, would be a work of great merit, and productive of many happy consequences. A proper regimen, in most diseases, is at least equal to medicine, and in many of them it is greatly superior.

To assist the well-meant endeavours of the humane and the benevolent in relieving distress; to eradicate dangerous and hurtful prejudices; to guard the ignorant and credulous against the frauds

* Arbuthnot.

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

CONTENTS.

MEMOIRS of Dr. Buchan ... i
Preliminary Discourse or Advice to Mothers ix

PART I.

OF THE GENERAL CAUSES OF DISEASES.

CHAP. I. PAGE
Of Children 1
Of Diseased Parents 6
Of Clothing of Children 9
Of Food of ditto..... 14
Of Exercise of ditto 20
Of bad effects of unwholesome Air upon ditto 28
Of Nurses 30

CHAP. II.
Of the Laborious, &c. 34
Of the Sedentary 43
Of the Studious 49

CHAP. III.
Of Aliment..... 55

CHAP. IV.
Of Air..... 67

CHAP. V.
Of Exercise 73

CHAP. VI.
Of Sleep 79
Of Clothing 81

CHAP. VII.
Of Intemperance 86

CHAP. VIII.
Of Cleanliness 91

CHAP. IX.
Of Infection 97

CHAP. X.
Of the Passions 102
Of Anger..... 102
Of Fear 103
Of Grief 106
Of Love 108
Of Religious Melancholy.. 109

CHAP. XI. PAGE
Of the Common Evacuations 111
Of Stool 111
Of Urine 113
Of Perspiration 114
Of being affected by Changes in the Atmosphere 115
Of Wet Clothes 116
Of Wet Feet 116
Of Night Air 116
Of Damp Beds..... 117
Of Damp Houses 118
Of sudden Transitions from Heat to Cold 119

PART II.

OF DISEASES.

CHAP. XII.
Of the Knowledge and Cure of Diseases 123

CHAP. XIII.
Fevers in general..... 128

CHAP. XIV.
Of intermitting Fevers or Agues 135

CHAP. XV.
Of an acute continual Fever 144

CHAP. XVI.
Of the Pleurisy 149
Of the Bastard ditto..... 155
Of the Paraphrenitis 155

CHAP. XVII.
Inflammation of the Lungs 156

CHAP. XVIII.
Of Consumptions..... 159

CHAP. XIX.
Of the slow or Nervous Fever 172

CHAP XX.
Malignant, Putrid, or Spotted Fever 178

CHAP. XXI.
Miliary Fever 187

	PAGE
CHAP. XXII.	
Remitting Fever	192
CHAP. XXIII.	
The Small-pox	195
Inoculation	206
CHAP. XXIV.	
The Measles	219
Scarlet Fever	224
Bilious Fever	225
CHAP. XXV.	
St. Anthony's Fire	227
CHAP. XXVI.	
Inflammation of the Brain	232
CHAP. XXVII.	
Inflammation of the Eyes	236
CHAP. XXVIII.	
The Quinsey	241
Malignant ditto	247
CHAP. XXIX.	
Colds and Coughs	252
A common Cough	255
Hooping Cough	259
CHAP. XXX.	
Inflammation of the Stomach	263
——— of the Intestines	265
Of the Colic	269
Inflammation of the Kidneys	274
——— of the Bladder	276
——— of the Liver	277
CHAP. XXXI.	
Of the Cholera Morbus, and other excessive Discharges from the Stomach and Bowels	281
Of a Diarrhœa, or Looseness	283
Of Vomiting	286
CHAP. XXXII.	
Disorders of the Kidneys and Bladder	289
Of the Diabetes, or excessive Discharge of Urine	289
Of the suppression of Urine	292
Of the Gravel and Stone	293
CHAP. XXXIII.	
Involuntary Discharges of Blood	298
Bleeding at the Nose	300
Bleeding and Blind Piles	303
Spitting of Blood	307
Vomiting of ditto	310
Bloody Urine	311
——— Flux	313
Cœliac Passion	319
CHAP. XXXIV.	
Of the Head-ach	319
——— Tooth-ach	323
——— Ear-ach	326
Pain of the Stomach, &c.	328
CHAP. XXXV.	
Of Worms	330
CHAP. XXXVI.	
Of the Jaundice	336
CHAP. XXXVII.	
Of the Dropsy	339
CHAP. XXXVIII.	
Of the Gout	344
——— Rheumatism	351
CHAP. XXXIX.	
Of the Scurvy	355
——— Scrophula	360
——— Itch	365
CHAP. XL.	
Of the Asthma	368
CHAP. XLI.	
Of the Apoplexy	371
CHAP. XLII.	
Of Costiveness	375
Of Want of Appetite	377
Of Heartburn	378
CHAP. XLIII.	
Of Nervous Diseases	380
Of Melancholy	385
Of the Palsy	389
Of the Epilepsy, or Falling Sickness	391
Of the Hiccup	394
Of Cramp of the Stomach	396
Of the Night-Mare	397
Of Swoonings	398
Of Flatulencies, or Wind	400
Of Low Spirits	403
Of Hysteric Affections	404
Of Hypochondriac Affections	407
CHAP. XLIV.	
Disorders of the Senses	411
——— the Eye	412
A Gutta Serena	413
A Cataract	414
Short-sightedness	414

PAGE

Seeing only at too great a Distance 414
Squinting 414
Spots or Specks 414
Blood-shot Eye..... 415
Watery or Weeping Eye.. 415
Of the Ear 415
——— Taste and Smell.. 417
——— Touch..... 420

CHAP. XLV.

Of Schirrus and Cancer .. 421

CHAP. XLVI.

Of Poisons 427
Of Mineral Poisons 428
Of vegetable ditto 429
Bites of Poisonous Animals 430
—— of the Mad Dog 431
—— of the Viper 438
—— of Poisonous Insects 438
—— of the Rattle-Snake 440

CHAP. XLVII.

Of the Venereal Disease.. 441
Of Virulent Gonorrhœa .. 442
Of Gleets 450
Of Swelled Testicle..... 453
Of Buboes 454
Of Chancres 455
Of a confirmed Lues or Pox 458
General Observations 463

CHAP. XLVIII.

Diseases of Women 469
Of the menstrual Discharge 470
Pregnancy..... 477
Child-birth 479
Barrenness 487

CHAP. XLIX.

Diseases of Children 488
Of the Meconium..... 490
Of the Aphthæ or Thrush 491
Of Acidities 492
Of Galling and Excoriation 494
Of Stoppage of the Nose.. 494
Of Vomiting 495
Of a Looseness..... 496
Of Eruptions 497
Of the Croup 500
Of Teething..... 502
Of the Rickets..... 504
Of Convulsions 507
Of Water in the Head.... 508

CHAP. L. PAGE

Of Surgery 510
Bleeding 511
Inflammations and Abscesses 514
Wounds 516
Burns 520
Bruises 521
Ulcers 523

CHAP. LI.

Of Dislocations 525
Dilocation of the Jaw ... 526
———— Neck ... 527
———— Ribs 528
———— Shoulder 529
———— Elbow ... 529
———— Wrist and Fingers..... 530
———— Thigh .. 530
———— Knees .. 530
———— Ankles.. 530
———— Toes.... 530

CHAP. LII.

Of Broken Bones, &c..... 531
Of Strains 534

CHAP. LIII.

Of Casualties 535
Of Substances stopt between the Mouth and Stomach 537
Of Noxious Vapours 542
Effects of extreme Cold.. 544
———— Heat... 546

CHAP. LIV.

Of fainting Fits and other Cases which require immediate assistance 546
Of Intoxication 551
Suffocation and Strangling 553
Of Persons who expire in Convulsion Fits 555

CHAP. LV.

Of Cold Bathing, with Remarks on the Cases in which the Warm Bath is more adviseable 558

CHAP. LVI.

Of Mineral Waters 563

CHAP. LVII.

Of the Cow-pox 571

CHAP. LVIII.

Of the Recovery of Drowned Persons..... 577

CHAP. LIX. PAGE
Of Ruptures 581
Falling down of the Fundament 585
CHAP. LX.
Of Medical Electricity .. 587
CHAP. LXI. PAGE
Of Child-birth 588
CHAP. LXII.
Of Diet 594
Conclusion 607

CONTENTS OF THE APPENDIX.

Introduction - - - 2
List of Simples - - 8

MEDICAL PREPARATIONS.

Balsams - - - - 10
Boluses - - - 11
Cataplasms and Sinapisms 12
Clysters - - - - 13
Collyria, or Eye-waters - 15
Confections - - - 16
Conserves and Preserves - 17
Decoctions - - - 18
Draughts - - - 21
Electuaries - - - 22
Emulsions - - - 24
Extracts - - - 26
Fomentations - - - 26
Gargles - - - - 27
Infusions - - - 29
Julaps - - - - 31
Mixtures - - - 33
Ointments, Liniments, Cerates 34
Pills - - - - 38
Plasters - - - - 41
Powders - - - - 44
Syrups - - - - 47
Tinctures, Elixirs, &c. - 48
Vinegars - - - - 53
Waters by Infusion, &c. - 55
Simple Distilled Waters - 57
Wheys - - - - 58
Wines - - - - 59

General Catalogue of Medicines - - - - - 62
A Glossary - - - - - - - - - - 70
Index - - - - - - - - - - - 74

DIRECTIONS TO THE BINDER:

TITLE PAGE
HEAD OF BUCHAN } to face each other
POISONOUS HERBS 428
DISLOCATION OF SHOULDER 529
DROWNED MAN 577
TRUSSES 581
ELECTRIFYING MACHINE 587
MIDWIFERY 588

PART I.

OF THE

GENERAL CAUSES OF DISEASES.

CHAP. I.

OF CHILDREN.

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

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

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

who perish annually by art alone, exhibited to public view, it would astonish most people.

If parents are above taking care of their children, others must be employed for that purpose: these will always endeavour to recommend themselves by the appearance of extraordinary skill and address. By this means such a number of unnecessary and destructive articles have been introduced into the diet, clothing, &c. of infants, that it is no wonder so many of them perish.

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

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

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

by delicate women, either die young, or continue weak and sickly all their lives.

When we say that mothers are not always in a condition to suckle their own children, we would not be understood as discouraging that practice. Every mother who can, ought certainly to perform so tender and agreeable an office.* But, suppose it to be out of her power, she may, nevertheless, be of great service to her child. The business of nursing is by no means confined to giving suck. To a woman who abounds with milk, this is the easiest part of it. Numberless other offices are necessary for a child, which the mother ought at least to see done.

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

It is indeed to be regretted, that more care is not bestowed in teaching the proper management of children to those whom Nature has designed for mothers. This, instead of being made the principal, is seldom considered as any part of female education. Is it any

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

wonder, when females so educated come to be mothers, that they should be quite ignorant of the duties belonging to that character? However strange it may appear, it is certainly true, that many mothers, and those of fashion too, are as ignorant, when they have brought a child into the world, of what is to be done for it, as the infant itself. Indeed, the most ignorant of the sex are generally reckoned most knowing in the business of nursing. Hence, sensible people become the dupes of ignorance and superstition: and the nursing of children, instead of being conducted by reason, is the result of whim and caprice.*

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

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

* Tacitus, the celebrated Roman historian, complains greatly of the degeneracy of the Roman ladies in his time, with regard to the care of their offspring. He says, that in former times, the greatest women in Rome used to account it their chief glory to keep the house and attend their children; but that now the young infant was committed to the sole care of some poor Grecian wench, or other menial servant. We are afraid, wherever luxury and effeminacy prevail, there will be too much ground for this complaint.

But the mother is not the only person concerned in the management of children. The father has an equal interest in their welfare, and ought to assist in every thing that respects either the improvement of the body or mind.

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

Nor have physicians themselves been sufficiently attentive to the management of children; this has been generally considered as the sole province of old women, while men of the first character in physic have refused to visit infants even when sick. Such conduct in the faculty has not only caused this branch of medicine to be neglected, but has also encouraged the other sex to assume an absolute title to prescribe for children in the most dangerous diseases. The consequence is, that a physician is seldom called till the good women have exhausted all their skill; when his attendance can only serve to divide the blame, and appease the disconsolate parents.

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

Were physicians more attentive to the diseases of infants, they would not only be better qualified to treat

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

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

Of diseased Parents.

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

An ingenious writer † observes, that on the constitution of mothers depends originally that of their offspring. No one who believes this will be surprised, on a view of the female world, to find diseases and death so frequent among children. A delicate female,

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

† Rousseau.

brought up within doors, an utter stranger to exercise and open air, who lives on tea and other slops, may bring a child into the world, but it will hardly be fit to live. The first blast of disease will nip the tender plant in the bud; or should it struggle through a few years' existence, its feeble frame, shaken with convulsions from every trivial cause, will be unable to perform the common functions of life, and prove a burden to society.

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

A person labouring under any incurable malady ought not to marry. He thereby not only shortens his own life, but transmits misery to others; but when both parties are deeply tainted with the scrophula, the scurvy, or the like, the effects must be still worse. If such have any issue they must be miserable indeed. Want of attention to these things, in forming connections for life, has rooted out more families than plague, famine, or the sword; and as long as the connections are formed from mercenary views, the evil will be continued.*

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

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

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

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

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

does greater injury to his posterity than the prodigal who squanders away the other.

Of the Clothing of Children.

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

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

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

In most parts of Britain, the practice of rolling children with so many bandages is now, in some measure, laid aside; but it would still be a difficult task to persuade the generality of mankind, that the shape of an infant does not entirely depend on the care of the midwife. So far, however, are all her endeavours to mend the shape from being successful, that they constantly operate the contrary way, and mankind become deformed just in proportion to the means used to prevent it. How little deformity of body is to be found among uncivilized nations! So little indeed, that it is vulgarly believed they put all their deformed children to death. The truth is, they hardly know such a thing as a deformed child: neither should we, if we followed their example. Savage nations never think of manacling their children. They allow them the full use of every organ, carry them abroad in the open air, wash their bodies daily in cold water, &c. By this management their children become so strong and hardy, that, by the time our puny infants get out of the nurse's arms, theirs are able to shift for themselves.*

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

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

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

tuation! the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and lest they should receive an injury from pressure in the womb, has surrounded the fœtus every where with fluids. This shews the care which Nature takes to prevent all unequal pressure on the bodies of infants, and to defend them against every thing that might in the least cramp or confine their motions.

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

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

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

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

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

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

Children are not only hurt by the tightness of their clothes, but also by the quantity. Every child has some degree of fever after the birth; and if it be loaded with too many clothes, the fever must be increased. But this is not all; the child is generally laid in bed

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

with the mother, who is often likewise feverish; to which we may add the heat of the bed-chamber, the wine, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

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

It would answer little purpose to specify the particular species of dress proper for an infant. These will always vary in different countries, according to custom and the humour of parents. The great rule to be observed is, "That a child have no more clothes than "are necessary to keep it warm, and that they be quite "easy for its body."

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

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

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

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

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

Of the Food of Children.

Nature not only points out the food proper for an infant, but actually prepares it. This however, is not sufficient to prevent some, who think themselves wiser than Nature, from attempting to bring up their children without her provision. Nothing can shew the disposition which mankind have to depart from Nature more than their endeavouring to bring up children without the breast. The mother's milk, or that of an healthy nurse, is unquestionably the best food for an infant. Neither art nor nature can afford a proper substitute for it. Children may seem to thrive for a few months without the breast; but when teething, the small-pox, and other diseases incident to childhood, come on, they generally perish.

A child, soon after the birth, shows an inclination to suck; and there is no reason why it should not be gratified. It is true, the mother's milk does not always come immediately after the birth; but this is the way to bring it: besides, the first milk that the child can squeeze out of the breast answers the purpose of cleans-

ing better than all the drugs in the apothecary's shop, and at the same time prevents inflammations of the breasts, fevers, and other diseases incident to mothers.

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

Upon the first sight of an infant, almost every person is struck with the idea of its being weak, feeble, and wanting support. This naturally suggests the need of cordials. Accordingly wines are universally mixed with the first food of children. Nothing can be more fallacious than this way of reasoning, or more hurtful to infants than the conduct founded upon it. Children require very little food for some time after the birth; and what they receive should be thin, weak, light, and of a cooling quality. A very small quantity of wine is sufficient to heat and inflame the blood of an infant; but every person conversant in these matters must know that most of the diseases of infants proceed from the heat of their humours.

If the mother or nurse has enough milk, the child

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

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

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

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

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

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

Children may be hurt by too little as well as too much food. 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. Children thrive best with small quantities of food frequently given. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme.

Nature has many ways of relieving herself when overcharged; but a child, who is pinched with hunger, will never become a strong or healthy man. That errors are frequently committed on both sides, we are ready to acknowledge; but where one child is hurt by the quantity of its food, ten suffer from the quality. This is the principal evil, and claims our strictest attention.

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

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

Few things are more hurtful to children than unripe fruits. They weaken the powers of digestion, and sour and relax the stomach, by which means it becomes a proper nest for insects. Children indeed shew a great inclination for fruit; and I am apt to believe, that if good ripe fruit were allowed them in proper quantity, it would have no bad effects. We never find a natural inclination wrong, if properly regulated. Fruits are generally of a cooling nature, and correct the heat and

acrimony of the humours. This is what most children require; only care should be taken lest they exceed. Indeed the best way to prevent children from going to excess in the use of fruit, or eating that which is bad, is to allow them a proper quantity of what is good.*

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

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

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

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

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

Of the Exercise of Children.

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

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

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

selves, it is the business of their parents and nurses to assist them.

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

When children begin to walk, the safest and best method of leading them about is by the hands. The common way, of swinging them in leading-strings fixed to their backs, has several bad consequences. It makes them throw their bodies forward, and press with their whole weight upon their stomach and breast: by this means the breathing is obstructed, the breast flattened, and the bowels compressed; which must hurt the digestion, and occasion consumptions of the lungs, and other diseases.

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

* The nurse ought to be careful to keep the child in a proper position; as deformity is often the consequence of inattention to this circumstance.

once, there may be some danger; but this proceeds entirely from the child's not having been accustomed to use its legs from the beginning.

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

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

Whoever considers the structure of the human body, will soon be convinced of the necessity of exercise for the health of children. The body is composed of an infinite number of tubes, whose fluids cannot be pushed on without the action and pressure of the muscles. But if the fluids remain inactive, obstructions must happen, and the humours must of course be vitiated, which cannot fail to occasion diseases. Nature has furnished both the vessels which carry the blood and lymph with numerous valves, in order that the action of every muscle might push forward their contents; but without ac-

* If it were made the interest of the poor to keep their children alive, we should lose very few of them. A small premium given annually to each poor family, for every child they have alive at the year's end, would save more infants' lives than if the whole revenue of the crown were expended on hospitals for that purpose. This would make the poor esteem fertility a blessing; whereas many of them think it the greatest curse that can befal them: and in place of wishing their children to live, so far does poverty get the better of natural affection, that they are often very happy when they die.

tion, this admirable contrivance can have no effect. This part of the animal œconomy proves to a demonstration the necessity of exercise for the preservation of health.

Arguments to shew the importance of exercise might be drawn from every part of the animal œconomy; without exercise, the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise, the fluids cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motions of the lungs, and all the vital functions are greatly assisted by exercise. But to point out the manner in which these effects are produced, would lead us farther into the œconomy of the human body, than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that when exercise is neglected, none of the animal functions can be duly performed; and when this is the case, the whole constitution must go to wreck. A good constitution ought certainly to be our first object in the management of children. It lays a foundation for their being useful and happy in life: and whoever neglects it, not only fails in his duty to his offspring, but to society.

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school, he needs no keeper. Thus the school-master is made the nurse; and the poor child is fixed to the seat seven or eight hours a day, which time ought to be spent in exercise and diversions.* Sitting so long cannot fail to pro-

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

duce the worst effects upon the body; nor is the mind less injured. Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.

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

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

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

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

tions, at a time when they are less fit to learn new motions, gestures, &c.*

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

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

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

Would mothers, instead of having their daughters instructed in many trifling accomplishments, employ them in plain work and housewifery, and allow them

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

sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishments, but would have them only considered as secondary, and always disregarded when they impair health.

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

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

There are, nevertheless, various ways of employing young people, without hurting their health. The easier parts of gardening, husbandry, or any business carried on without doors, are most proper. These are employments which most young people are fond of, and some

parts of them may always be adapted to their age, taste, and strength.*

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

Some imagine that exercise within doors is sufficient; but they are greatly mistaken. One hour spent in running, or any other exercise without doors, is worth ten within. When children cannot go abroad, they may indeed be exercised at home. The best method of doing this is, to make them run about in a long room, or dance. This last kind of exercise, if not carried to excess, is of excellent service to young people. It cheers the spirits, promotes perspiration, strengthens the limbs, &c. I knew an eminent physician, who used to say, that he made his children dance, instead of giving them physic. It were well if more people followed his example.

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

The greatest objection to the use of the cold bath arises from the superstitious prejudices of nurses. These are often so strong, that it is impossible to bring them to make a proper use of it. I have known some of them who would not dry a child's skin after bathing it, lest it should destroy the effect of the water. Others

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

will even put clothes dipt in the water upon the child, and either put it to bed, or suffer it to go about in that condition. Some believe, that the whole virtue of the water depends upon its being dedicated to a particular saint; while others place their confidence in a certain number of dips, as three, seven, nine, or the like; and the world could not persuade them, if these do not succeed, to try it a little longer. Thus, by the whims of nurses, children lose the benefit of the cold bath, and the hopes of the physician from that medicine are often frustrated.

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

The bad Effects of unwholesome Air upon Children.

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

Want of wholesome air is likewise destructive to many poor children born in great towns. There the poorer sort of inhabitants live in low, dirty, confined houses, to which the fresh air has hardly any access. Though grown people, who are hardy and robust, may be in such situations, yet they generally prove fatal to

their offspring, few of whom arrive to maturity, and those who do are weak and deformed. As such people are not in a condition to carry their children abroad into the open air, we must lay our account with losing the greater part of them. But the rich have not this excuse. It is their business to see that their children be daily carried abroad, and that they be kept in the open air for a sufficient time. This will always succeed better, if the mother goes along with them. Servants are often negligent in these matters, and allow a child to sit or lie on the damp ground, instead of leading or carrying it about. The mother surely needs air as well as her children; and how can she be better employed than in attending them?

A very bad custom prevails of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery ought always to be the largest and best-aired room in the house. When children are confined in small apartments, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds and many other disorders. Nor is the custom of wrapping them up too close in cradles less pernicious. One would think that nurses were afraid lest children should suffer by breathing in the air, as many of them actually cover the child's face while asleep, and others wrap a covering over the whole of the cradle, by which means the child is forced to breathe the same air over and over all the time it sleeps. Cradles, indeed, are on many accounts hurtful to children, and it would be better if the use of them were totally laid aside.*

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

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

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

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

Without entering into a detail of the particular advantages of wholesome air to children, or of the bad consequences which proceed from the want of it, I shall only observe, that of several thousands of children which have been under my care, I do not remember one instance of a single child who continued healthy in a close, confined situation; but have often known the most obstinate diseases cured by removing them from such a situation to an open, free air.

Of Nurses.

It is not here intended to lay down rules for the choice of nurses. This would be wasting time. Common sense will direct every one to chose a woman who

is healthy, and has plenty of milk.* If she be at the same time cleanly, careful, and good-natured, she can hardly fail to make a proper nurse. After all, however, the only certain proof of a good nurse, is a healthy child upon her breast. But, as the misconduct of nurses often proves more fatal to children, it will be of importance to point out a few of their most baneful errors, in order to rouse the attention of parents, and to make them look more strictly into the conduct of those to whom they commit the care of their infant-offspring.

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

One of the most common faults of those who nurse for hire is, to dose the children with stupefactives, or such things as lull them to sleep. An indolent nurse, who does not give a child sufficient exercise in the open air to make it sleep, and does not choose to be disturbed by it in the night, will seldom fail to procure for it a dose of laudanum, diacodium, saffron, or, what answers the same purpose, a dram of spirits or other strong liquors. These though they may be poison to infants, are every day administered by many who bear the character of very good nurses.†

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

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

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

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

Nurses who deal much in medicine are always to be suspected. They trust to it, and neglect their duty. I never knew a good nurse who had her Godfrey's cordial, Daffy's elixirs, &c. at hand. Such generally imagine, that a dose of medicine will make up for all the defects in food, air, exercise, and cleanliness.

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

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

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

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

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

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

No person ought to imagine these things unworthy of his attention. On the proper management of children depend not only their health and usefulness in life, but likewise the safety and prosperity of the state to which

they belong. Effeminacy ever will prove the ruin of any state where it prevails; and when its foundations are laid in infancy, it can never afterwards be wholly eradicated. Parents who love their offspring, and wish well to their country, ought, therefore, in the management of their children, to avoid every thing that may have a tendency to make them weak or effeminate, and to take every method in their power to render their constitutions strong and hardy.

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

CHAP. II.

OF THE LABORIOUS, THE SEDENTARY, AND THE STUDIOUS.

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

Chymists, founders, forgers, glass-makers, and several other artists, are hurt by the unwholesome air which they are obliged to breathe. The air is not only loaded with the noxious exhalations arising from metals and minerals, but it is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently,

and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

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

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

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

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

Miners ought never to go to work fasting, nor to continue too long at work. Their food ought to be

nourishing, and their liquor generous; nothing more certainly hurts them than living too low. They should by all means avoid costiveness. This may either be done by chewing a little rhubarb, or taking a sufficient quantity of salad-oil. Oil not only opens the body, but sheathes and defends the intestines from the ill effects of the metals. All who work in mines or metals ought to wash carefully, and to change their clothes as soon as they give over working. Nothing would tend more to preserve the health of such people, than a strict and almost religious regard to cleanliness.

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

Tallow-chandlers, boilers of oil, and all who work in putrid animal substances, are likewise liable to suffer from the unwholesome smells or effluvia of these bodies. They ought to pay the same regard to cleanliness as miners; and when they are affected with nausea, sickness, or indigestion, we would advise them to take a vomit or a gentle purge. Such substances ought always to be manufactured as soon as possible. When long kept, they not only become unwholesome to those who manufacture them, but likewise to people who live in the neighbourhood.

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

THE LABORIOUS.

Though those who follow laborious employments are in general the most healthy of mankind, yet the nature of their occupations, and the places where they are carried on, expose them more particularly to some diseases. Husbandmen, for example, are exposed to all the vicissitudes of the weather, which, in this country,

are often very great and sudden, and occasion colds, coughs, quinsies, rheumatisms, fevers, and other acute disorders. They are likewise forced to work hard, and often to carry burdens above their strength, which, by overstraining the vessels, occasion asthmas, ruptures, pleurisies, &c.

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

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

Carrying heavy burdens is generally the effect of mere laziness, which prompts people to do at once what should be done at twice. Sometimes it proceeds from vanity or emulation. Hence it is, that the strongest men are most commonly hurt by heavy burdens, hard labour, or feats of activity. It is rare to find one who boasts of his strength without a rupture, a spitting of blood, or some other disease, which he reaps as the fruit of his folly. One would imagine the daily instances we have of the fatal effects of carrying great weights, running, wrestling, and the like, would be sufficient to prevent such practices.

There are indeed some employments which necessarily require a great exertion of strength: as porters, blacksmiths, carpenters, &c. None ought to follow these but men of strong body; and they should never exert their strength to the utmost, nor work too long. When the muscles are violently strained, frequent rest is necessary

in order that they may recover their tone: without this, the strength and constitution will soon be worn out, and premature old age be induced.

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

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

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

When such persons come home cold, they ought to keep at a distance from the fire for some time, to wash their hands in cold water, and to rub them well with a dry cloth. It sometimes happens, that people are so benumbed with cold, as to be quite deprived of the

use of their limbs. In this case the only remedy is to rub the parts affected with snow, or, where it cannot be had, with cold water. If they be held near the fire, or plunged into warm water, a mortification will generally ensue.

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

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

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

Fevers of a very bad kind are often occasioned among labourers by poor living. When the body is not sufficiently nourished, the humours become vitiated, and the solids weak; from whence the most fatal consequences ensue. Poor living is likewise productive of many of those cutaneous diseases so frequent among the lower class of people. It is remarkable that cattle, when pinched in their food, are generally affected with diseases of the skin, which seldom fail to disappear when they are put upon a good pasture. This shews

how much a good state of the humours depends upon a sufficient quantity of proper nourishment.

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

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

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

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

* Indeed, it is to be regretted, that soldiers suffer not less from indolence and intemperance in time of peace, than from hardships

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

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

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

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

But the health of sailors suffers most from unwholesome food. The constant use of salted provisions vitiates the humours, and occasions a scurvy, and other obstinate maladies. It is no easy matter to prevent this disease in long voyages; yet we cannot help thinking, that much might be done towards effecting so desirable an end, were due pains bestowed for that purpose. For example, various roots, greens, and fruits, might be kept a long time at sea, as onions, potatoes, cabbages, lemons, oranges, tamarinds, apples, &c. When fruits cannot be kept, the juices of them, either fresh or fermented, may. With these all the drink, and even the food, of the ship's company ought to be acidulated in long voyages.

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

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

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

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

The best medical antidote that we can recommend to sailors or soldiers on foreign coasts, especially where dampness prevails, is the Peruvian bark. This will often prevent fevers, and other fatal diseases. About a drachm of it may be chewed every day; or, if this should prove disagreeable, an ounce of bark with half an ounce of orange-peel, and two drachms of snake-root coarsely powdered, may be infused for two or three days in an English quart of brandy, and half a wine-glass of it taken twice or thrice a day when the stomach is empty. This has been found to be an excellent antidote against fluxes, putrid, intermitting, and other fevers, in unhealthy climates. It is not material in what form this medicine is taken. It may either be infused in water, wine, or spirits, as recommended above, or made into an electuary with syrup of lemons, oranges, or the like.

THE SEDENTARY.

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

Agricnlture, the first and most healthful of all employments, is now followed by few who are able to

a strict attention to cleanliness, to procure abundance of vegetables and fresh provisions, especially good water, and to allow his people sufficient time for rest.

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

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

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

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

But it is not the want of exercise alone which hurts sedentary people; they likewise suffer from the confined air which they breathe. It is very common to see ten or a dozen tailors,* or stay-makers, for example, crowded into one small apartment, where there is hardly room for one person to breathe freely. In this situa-

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

tion they generally continue for many hours at a time, often with the addition of sundry candles, which tend to waste the air, and render it less fit for respiration. Air that is breathed repeatedly becomes unfit for expanding the lungs. This is one cause of the phthisical coughs, and other complaints of the breast, so incident to sedentary artificers.

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

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

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

A bending posture is likewise hurtful to the lungs. When this organ is compressed, the air cannot have free access into all its parts, so as to expand them properly. Hence tubercles, adhesions, &c. are formed, which often end in consumptions. Besides, the proper action of the lungs being absolutely necessary for

making good blood, when that organ fails, the humours soon become universally depraved, and the whole constitution goes to wreck.

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

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

A sedentary life seldom fails to occasion an universal relaxation of the solids. This is the great source from whence most of the diseases of sedentary people flow. The scrophula, consumption, hysterics, and nervous diseases, now so common, were very little known in this country before sedentary people became so numerous; and they are still very little known among such of our people as follow active employments without doors, though, in great towns, at least two-thirds of the inhabitants are afflicted with them.

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

It has been already observed, that sedentary artificers are often hurt by their bending posture. They ought therefore, to stand or sit as erect as the nature of their employments will permit. They should likewise change

their posture frequently, and should never sit too long at a time, but leave off work, and walk, ride, run, or do any thing that will promote the vital functions.

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

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

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

Sedentary people ought to avoid food that is windy or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors, will soon throw off a debauch; but one who sits has by no means an equal chance. Hence it often happens, that sedentary people are seized with fevers after hard drinking. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride or walk in the fields. This would remove the complaint more effectually than strong liquor, and would never hurt the constitution.

Instead of multiplying rules for preserving the health of the sedentary, we shall recommend to them the following general plan, viz. That every person who follows a

sedentary employment should cultivate a piece of ground with his own hands. This he might dig, plant, sow, and weed at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

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

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

Mechanics are too much inclined to crowd into great towns. The situation may have some advantages, but it has likewise many disadvantages. All mechanics who live in the country have it in their power to cultivate a

piece of ground; which indeed most of them do. This not only gives them exercise, but enables them to live more comfortably. So far at least as my observation extends, mechanics who live in the country are far more happy than those in great towns. They enjoy better health, live in greater affluence, and seldom fail to rear a healthy and numerous offspring.

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

THE STUDIOUS.

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

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

Perpetual thinkers, as they are called, seldom think long. In a few years they generally become quite stupid, and exhibit a melancholy proof how readily the

greatest blessings may be abused. Thinking, like every thing else when carried to excess, becomes a vice: nor can any thing afford a greater proof of wisdom, than for a man frequently and seasonably to unbend his mind. This may generally be done by mixing in cheerful company, active diversions, or the like.

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

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

The studious are likewise very liable to the stone and gravel. Exercise greatly promotes both the secretion and discharge of urine; consequently a sedentary life must have the contrary effect. Any one must be satisfied of this by observing, that he passes much more urine by day than in the night, and also when he walks or rides, than when he sits.

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

Few diseases proves more fatal to the studious than consumptions of the lungs. It has already been observed that this organ cannot be duly expanded in those who do not take proper exercise; and where

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

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

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

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

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

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

Fevers, especially of the nervous kind, are often the effect of study. Nothing affects the nerves so much as intense thought. It in a manner unhinges the whole human frame, and not only hurts the vital motions, but disorders the mind itself. Hence a delirium, melancholy, and even madness, are often the effects of close application to study. In fine, there is no disease which can proceed either from a bad state of the humours, a defect of the usual secretions, or a debility of the nervous system which may not be induced by intense thinking.

But the most affecting of those diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men often reduced by it! Their strength and appetite fail, a perpetual gloom hangs over their minds, they live in constant dread of death, and are continually in search of relief from medicine, where, alas, it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our highest sympathy and compassion. Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom an useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed it rarely happens, that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics, and overwhelm them with doubt and uncertainty. All that is necessary for man to know, in order to be happy, is easily obtained; and the rest, like the forbidden fruit, serves only to increase his misery.

Studious persons, in order to relieve their minds, must not only discontinue to read and write, but engage in some employment or diversion that will so far occupy

the thoughts as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

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

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

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

The morning has, by all medical writers, been reckoned the best time for study. It is so. But it is also the most proper season for exercise, while the stomach is empty, and the spirits refreshed with sleep. Studious people should therefore sometimes spend the morning in walking, riding, or some manly diversions without doors. This would make them return to study with greater alacrity, and would be of more service than twice the time after their spirits are worn out with fatigue. It is not sufficient to take diversions only when we can think no longer. Every studious person should make it a part of his business, and should let nothing interrupt his hours of recreation more than those of study.

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

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

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

It is much to be regretted that learned men, while in health, pay so little regard to these things! There is not any thing more common than to see a miserable object, overrun with nervous diseases, bathing, walking, riding, and in a word, doing every thing for health after it is gone; yet, if any one had recommended

these things to him by way of prevention, the advice would, in all probability, have been treated with contempt, or at least with neglect. Such is the weakness and folly of mankind, and such the want of foresight, even in those who ought to be wiser than others!

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

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

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

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

CHAP. III.

OF ALIMENT.

UNWHOLESOME food, and irregularities of diet occasion many diseases. There is no doubt but the whole constitution of body may be changed by diet alone. The fluids may be thereby attenuated or

condensed, rendered mild or acrimonious, coagulated or diluted, to almost any degree. Nor are its effects upon the solids less considerable. They may be braced or relaxed, have their sensibility, motions, &c. greatly increased or diminished, by different kinds of aliment. A very small attention to these things will be sufficient to shew how much the preservation of health depends upon a proper regimen of the diet.

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

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

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

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

promote their own interest by adulterating the necessaries of life.*

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

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

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

Animals are often rendered unwholesome by being

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

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

But this is not the only way by which butchers render meat unwholesome. The abominable custom of filling the cellular membrane of animals with air, in order to make them appear fat, is every day practised. This not only spoils the meat, and renders it unfit for keeping, but is such a dirty trick, that the very idea of it is sufficient to disgust a person of any delicacy at every thing that comes from the shambles. Who can bear the thought of eating meat which has been blown up with air from the lungs of a dirty follow, perhaps labouring under the very worst of diseases?

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

No people in the world eat such quantities of animal food as the English, which is one reason why they are so generally tainted with the scurvy and its numerous train of consequences, indigestion, low spirits, hypochondriacism, &c. Animal food was surely designed for man, and, with a proper mixture of vegetables, it

will be found the most wholesome; but to gorge beef, mutton, pork, fish, and fowl, twice or thrice a-day, is certainly too much. All who value health ought to be contented with making one meal of flesh in the twenty-four hours, and this ought to consist of one kind only.

The most obstinate scurvy has often been cured by a vegetable diet; nay, milk alone will frequently do more in that disease than any medicine. Hence it is evident, that if vegetables and milk were more used in diet, we should have less scurvy, and likewise fewer putrid and inflammatory fevers. Fresh vegetables, indeed, come to be daily more used in diet: this laudable practice we hope will continue to gain ground.

Our aliment ought neither to be too moist nor too dry. Moist aliment relaxes the solids, and renders the body feeble. Thus we see females, who live much on tea and other watery diet, generally become weak and unable to digest solid food; hence proceed hysterics, and all their dreadful consequences. On the other hand, food that is too dry renders the solids in a manner rigid, and the humours viscid, which disposes the body to inflammatory fevers, scurvies, and the like.

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

The arts of cookery render many things unwholesome, which are not so in their own nature. By

jumbling together a number of different ingredients, in order to make a poignant sauce, or rich soup, the composition proves almost a poison. All high seasoning, pickles, &c. are only incentives to luxury, and never fail to hurt the stomach. It were well for mankind, if cookery, as an art, were entirely prohibited. Plain roasting or boiling is all that the stomach requires. These alone are sufficient for people in health, and the sick have still less need of a cook.

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

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

Before water is brought into great towns, the strictest attention ought to be paid to its qualities, as many

diseases may be occasioned or aggravated by bad water: and when once it has been procured at a great expence people are unwilling to give it up.

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

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

Fermented liquors, which are too strong, hurt digestion: and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard labour could not be supported without drinking strong liquors: this is a very erroneous notion. Men who never taste strong liquors are not only able to endure more fatigue, but also live much longer than those who use them daily. But, suppose strong liquors did enable a man to do more work, they must nevertheless waste the powers of life, and occasion premature old age. They keep up a constant fever, which exhausts the spirits, inflames the blood, and disposes the body to numberless diseases.

But fermented liquors may be too weak as well as too strong; when that is the case, they must either be drank new, or they become sour or dead: when such

liquors are drank new, the fermentation not being over, they generate air in the bowels, and occasion flatulencies; and when kept till stale, they turn sour on the stomach, and hurt digestion. For this reason all malt liquors, cyder, &c. ought to be of such strength as to keep till they be ripe, and then they should be used. When such liquors are kept too long though they should not become sour, yet they generally contract a hardness, which renders them unwholesome.

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

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

We would recommend it to families, not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe is not always the case with bread prepared by those who make a trade of vending it. Their object is rather

to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too fine; well fermented, and made of wheat flour, or rather of wheat and rye mixed together.

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

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

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

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

Those who are too lean must follow an opposite course.

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

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

stomach. Their food should be light, spare, cool, and of an opening nature.

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

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

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

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

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

The frequent repetition of aliment is not only necessary for repairing the continual waste of our bodies, but likewise to keep the humours sound and sweet. Our humours, even in the most healthy state, have a constant tendency to putrefaction, which can only be prevented by frequent supplies of fresh nourishment: when that is wanting too long, the putrefaction often proceeds so far, as to occasion very dangerous fevers. From hence we may learn the necessity of regular meals. No person can enjoy a good state of health, whose vessels are either frequently overcharged, or the humours long deprived of fresh supplies of chyle.

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

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

It is a very common practice to eat a light breakfast and a heavy supper. This custom ought to be reversed. When people sup late, their supper should be very light; but the breakfast ought always to be solid.

If any one eats a light supper, goes soon to bed, and rises betimes in the morning, he will be sure to find an appetite for his breakfast, and he may freely indulge it.

The strong and healthy do not indeed suffer so much from fasting as the weak and delicate; but they run great hazard from its opposite, viz. repletion. Many diseases, especially fevers, are the effects of a plethora, or too great fulness of the vessels. Strong people, in high health, have generally a great quantity of blood and other humours. When these are suddenly increased, by an overcharge of rich and nourishing diet, the vessels become too much distended, and obstructions and inflammations ensue. Hence so many people are seized with inflammatory and eruptive fevers, &c. after a feast or debauch.

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

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

Some authors have entered into minute details respecting the various qualities of food: this to me appears unnecessary. That which every person, from experience, has found to agree best with him, is a more just criterion to judge by, than any speculative comparison of the nutriment of different aliments.

People, however, should not eat or drink indiscriminately whatever chance may throw in their way ; but enjoy those blessings, which Providence has sent us, in a rational manner.

CHAP. IV.

OF AIR.

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

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

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

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

In great cities so many things tend to contaminate the air, that it is no wonder it proves so fatal to the inhabitants. The air in cities is not only breathed repeatedly over, but it is likewise loaded with sulphur, smoke, and other exhalations, besides the vapours continually arising from innumerable putrid substances, as dunghills, slaughter-houses, &c. All possible care should be taken to keep the streets of large towns open and wide, that the air may have a free current through them. They ought, likewise, to be kept very clean. Nothing tends more to contaminate the air of a city than dirty streets.

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

Burying within churches is a practice still more detestable. The air in churches is seldom good, and the effluvia from putrid carcases must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom open above once a week,

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

are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels on entering a church, and renders it a very unsafe place for the weak and valetudinary. These inconveniences might, in a great measure, be obviated, by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.

Wherever air stagnates long, it becomes unwholesome. Hence the unhappy persons confined in gaols not only contract malignant fevers themselves, but often communicate them to others. Nor are many of the holes, for we cannot call them houses, possessed by the poor in great towns, much better than gaols. These low dirty habitations are the very lurking places of bad air and and contagious diseases. Such as live in them seldom enjoy good health ; and their children commonly die young. In the choice of a house, those who have it in their power ought always to pay the greatest attention to open free air.

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

In hospitals, gaols, ships, &c. where that cannot be conveniently done, ventilators should be used. The method of expelling foul, and introducing fresh air, by means of ventilators, is a most salutary invention, and is, indeed, the most useful of all our modern medical improvements. It is capable of universal application, and is fraught with numerous advantages,

both of those in health and sickness. In all places, where numbers of people are crowded together, ventilation becomes absolutely necessary.

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

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

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

Delicate persons ought as much as possible to avoid the air of great towns. It is peculiarly hurtful to the asthmatic and consumptive. Such persons should avoid cities as they would the plague. The hypochondriac are likewise much hurt by it. I have often seen persons so much afflicted with this malady while in town, that it seemed impossible for them to live, who, upon being removed to the country, were immediately relieved. The same observation holds with regard to nervous and hysteric women.

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

Many people, indeed, have it not in their power to change their situation in quest of better air. All we can say to such persons is, that they should go as often abroad into the open air as they can, that they should admit fresh air frequently into their houses, and take care to keep them very clean.

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

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

Houses situated in low marshy countries, or near large lakes of stagnating water, are likewise unwholesome. Waters which stagnate not only render the air damp, but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries ought to make choice of the driest situations they can find, to live generously, and to pay the strictest regard to cleanliness.

If fresh air be necessary for those in health, it is still more so for the sick, who often lose their lives for want of it. The notion that sick people must be kept very hot, is so common, that one can hardly enter the chamber where the patient lies, without being ready to faint by reason of the hot suffocating smell. How this

must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not, however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and, if possible, by opening the windows of some other apartment.

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

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

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

Great attention has of late years been paid in selecting proper scites for erecting hospitals, as well as to keep them properly ventilated; but the interment of the dead in the middle of crowded towns is not yet done away. The ancients never interred their dead in

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

churches or church-yards: this is evident from the first words, "Siste, viator," *stop, traveller*, on the old Roman tomb-stones; and is a proof that they interred their dead, not in temples or churches, but adjoining the road-side. The late Joseph II. passed a law on this subject, which does him great honour, forbidding the interment of the dead in places of public worship. He remarks: "It is horrid that a place of worship, a "temple of the Supreme Being, should be converted "into a pest-house for living creatures! A person who, "upon his death-bed, makes it a condition of his will "to be buried in a church or chapel, acts like a mad-"man; he ought to set his fellow-creatures a good ex-"ample, and not to do all in his power to destroy "their constitutions, by exposing them to the effluvia "arising from a corpse in a state of putrefaction."

A striking instance is afforded in a fair countrywoman of our own, to the folly and superstition stigmatized by the emperor. Regardless of the prejudices of custom, this exalted female, by her will, directed her body to be burnt; being aware, as she says, "that the bodies of "the dead might be offensive to the living." Her ashes she directed to be preserved in an urn, and deposited in the burial-ground of St. George's, Hanover Square. This happened a few years ago.

CHAP. V.

OF EXERCISE.

MANY people look upon the necessity man is under of earning his bread by labour, as a curse. Be that as it may, it is evident, from the structure of the body, that exercise is not less necessary than food for the preservation of health: those whom poverty obliges to labour for daily bread, are not only the most healthy, but generally the most happy, part of mankind. Indus-

try seldom fails to place them above want, and activity serves them instead of physic. This is peculiarly the case with those who live by the culture of the ground. The great increase of inhabitants in infant colonies, and the longevity of such as follow agriculture, every where evidently prove it to be the most healthful, as well as the most useful, employment.

The love of activity shows itself very early in man. So strong is this principle, that a healthy youth cannot be restrained from exercise even by the fear of punishment. Our love of motion is surely a strong proof of its utility. Nature implants no disposition in vain. It seems to be a catholic law throughout the whole animal creation, that no creature, without exercise, should enjoy health, or be able to find subsistence. Every creature, except man, takes as much of it as is necessary. He alone, and such animals as are under his direction, deviate from this original law, and they suffer accordingly.

Inactivity never fails to induce an universal relaxation of the solids, which disposes the body to innumerable diseases. When the solids are relaxed, neither the digestion nor any of the secretions can be duly performed. In this case the worst consequences must ensue. How can persons who loll all day in easy chairs, and sleep all night on beds of down, fail to be relaxed? Nor do such greatly mend the matter, who never stir abroad but in a coach, sedan, or such like.* These elegant pieces of luxury are become so common, that the inhabitants of great towns seem to be in some danger of losing the use of their limbs altogether. It is now below any one to walk who can afford to be carried.

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

How ridiculous would it seem to a person unacquainted with modern luxury to behold the young and healthy swinging along on the shoulders of their fellow-creatures! or to see a fat carcase, overrun with diseases occasioned by inactivity, dragged through the streets by half a dozen horses.

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

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

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

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

No piece of indolence hurts the health more than the modern custom of lying a-bed too long in the morning. This is the general practice in great towns. The inhabitants of cities seldom rise before eight or nine o'clock; but the morning is undoubtedly the best time for exercise, while the stomach is empty, and the body refreshed with sleep. Besides, the morning air braces and strengthens the nerves, and, in some measure, answers the purpose of a cold bath. Let any one who has been accustomed to lie a-bed till eight or nine o'clock, rise by six or seven, spend a couple of hours in walking, riding, or any active diversion without doors, and he will find his spirits cheerful and serene through the day, his appetite keen, and his body braced and strengthened. Custom soon renders early rising agreeable, and nothing contributes more to the preservation of health.

The inactive are continually complaining of pains of the stomach, flatulencies, indigestions, &c. These com-

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

plaints, which pave the way to many others, are not to be removed by medicines. They can only be cured by a vigorous course of exercise, to which indeed they seldom fail to yield.

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

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

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

Such as can, ought to spend two or three hours a-day on horseback; those who cannot ride, should employ the same time in walking. Exercise should never be

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

continued too long. Over-fatigue prevents the benefit of exercise, and, instead of strengthening the body, tends to weaken it.

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

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

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

It is evidently designed by Nature, that the love of food, as well as of motion, so inherent in every animal from the time of its birth, should operate as its preservation. The sluggard hopes in vain for enjoyment

in the lap of indolence; he is a rebel to the laws of Nature, and deserves her severest reproaches; every source of delight is contaminated by its influence, and it not only causes a disease, but occasions them to be nearly incurable.

CHAP. VI.

OF SLEEP AND CLOTHING.

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

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

Nature points out night as the proper season for sleep. Nothing more certainly destroys the constitution than night-watching. It is great pity that a practice so destructive to health should be so much in fashion. How

quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those, who, as the phrase is, turn day into night, and night into day.

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

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

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

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the

wretched, and visits the happy, the cheerful, and the gay. This is a sufficient reason why every man should endeavour to be as easy in his mind as possible when he goes to rest. Many, by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

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

To rise early, it is necessary to go early to bed, both of which become habitual, and evince sobriety, regularity, and an exemption from dissipation. He who retires to rest at an early hour, has not time to partake of what is called the pleasures of the table; but, unlike the votary of Bacchus, he enjoys his rest undisturbed. He requires no opiates. His sleep is sound, occasioned by tranquillity of body and mind, temperance, and exercise. Fully refreshed, he rises in the morning, vigorous and cheerful, to breathe the pure air, and go through his daily occupation. Nothing, in a word, can more certainly contribute to health and longevity as a custom of going to bed, and rising, early.

Of Clothing.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article, but no custom can ever change the nature of things so

* Men of every occupation, and in every situation in life, have lived to a good old age; nay, some have enjoyed this blessing whose plan of living was by no means regular: but it consists with observation, that all very old men have been early risers. This is the only circumstance attending longevity to which I ever knew an exception.

far as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of clothes we wear, and the degree of latitude which we inhabit; but proper attention ought to be paid to it, as well as the openness of the country, the frequency and violence of storms, &c.

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

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

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Man-

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

kind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or conveniency; a farthingale, for example, may be very necessary in hot southern climates, but surely nothing can be more ridiculous in the cold regions of the north.

Even the human shape is often attempted to be mended by dress, and those who know no better, believe that mankind would be monsters without its assistance. All attempts of this nature are highly pernicious. The most destructive of them in this country is that of squeezing the stomach and bowels into as narrow a compass as possible, to procure what is falsely called a fine shape.* By this practice, the action of the stomach and bowels, the motion of the heart and lungs, and almost all the vital functions, are obstructed. Hence proceed indigestions, syncopes or fainting fits, coughs, consumptions of the lungs, and other complaints so common among females.

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

* Matrons in almost every country have adopted this infatuation; and the Roman mothers are ridiculed by Terence the comedian, for following this absurd custom.

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

The proper and only safe method of curing corns is, to soak the foot in warm water, and to cut the corn, repeating the operation once a week till the scarf-skin is restored to its former thinness; and the patient must afterwards be careful not to use straight shoes.

The size and figure of the shoe ought certainly to be adapted to the foot. In children, the feet are as well shaped as the hands, and the motion of the toes as free and easy as that of the fingers; yet few persons in the advanced period of life are able to make any use of their toes. They are generally, by narrow shoes, squeezed all of a heap, and often laid over one another in such a manner as to be rendered altogether incapable of motion, nor is the high heel less hurtful than the narrow toe. A lady may seem taller for walking on her tiptoes, but she will never walk well in this manner. It strains her joints, distorts her limbs, makes her stoop, and utterly destroys all her ease and gracefulness of motion: it is entirely owing to shoes with high heels and narrow toes that not one female in ten can be said to walk well.

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

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

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

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

The men have not been equally happy. The military ideas, so generally prevalent during the late and present wars, have introduced a system of dress in which martial smartness is more studied than either comfort or real taste. The tremendous hat cannot be worn for a considerable time without pain: the neck is ridiculously and unhealthfully bolstered up and closely bandaged, so as to interrupt the circulation of the blood, and occasion eruptions and blotches in the face, head-achs, apoplexies, not unfrequently the occasion of premature death. To this is added, literally, a straight waistcoat, and breeches so buttoned and tied at the

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

knees, as to prevent the necessary freedom of motion; the legs are compressed in boots, or, when shoes are worn, they are sometimes square-toed, sometimes sharp-pointed; every thing, in short, is consulted but the shape and free play of the foot. Cramps and corns inevitably succeed, and the votary of fashion too late repents the sacrifices made to her caprice.

CHAP. VII.

OF INTEMPERANCE.

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

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

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over quantity of either will entirely destroy it. The best things become hurtful, nay, destructive, when carried to excess. Hence we learn, that the highest degree of human wisdom consists in regu-

* Rousseau.

lating our appetites and passions so as to avoid all extremes. It is that chiefly which entitles us to the character of rational beings. The slave of appetite will ever be the disgrace of human nature.

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

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

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

Nor is intemperance in other things less destructive than in diet. How quickly does the immoderate pursuit of carnal pleasures, or the abuse of intoxicating liquors, ruin the best constitution! Indeed these vices generally go hand in hand. Hence it is that we so

* Addison.

often behold the votaries of Bacchus and Venus, even before they have arrived at the prime of life, worn out with diseases, and hastening with swift pace to an untimely grave. Did men reflect on the painful diseases and premature deaths which are daily occasioned by intemperance, it would be sufficient to make them shrink back with horror from the indulgence even of their darling pleasures.

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

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

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

Every act of intoxication puts nature to the expence of a fever, in order to discharge the poisonous draught. When this is repeated almost every day, it is easy to foresee the consequence. That constitution must be strong indeed, which is able long to hold out under a daily fever! but fevers occasioned by drinking do not always go off in a day; they frequently end in an in-

flammation of the breast, liver, or brain, and produce fatal effects.

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

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humours properly prepared. Hence most people of this character are afflicted with the gout, the gravel, ulcerous sores in the legs, &c. If these disorders do not appear, they are seized with low spirits, hypochondriacal affections, and other symptoms of indigestion.

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

Those who drink ardent spirits or strong wines run still greater hazard; these liquors heat and inflame the blood, and tear the tender vessels of the lungs to pieces; yet so great is the consumption of them in this country,

that one would almost be induced to think that the inhabitants lived upon them.*

The habit of drinking proceeds frequently from misfortunes in life. The miserable fly to it for relief. It affords them indeed a temporary ease. But, alas! this solace is short-lived; and, when it is over, the spirits sink as much below their usual tone as they had before been raised above it. Hence a repetition of the dose becomes necessary, and every fresh dose makes way for another, till the unhappy wretch becomes a slave to the bottle, and at length falls a sacrifice to what at first perhaps was taken only as a medicine. No man is so dejected as the drunkard when his debauch is gone off. Hence it is, that those who have the greatest flow of spirits while the glass circulates freely, are of all others the most melancholy when sober, and often put an end to their own miserable existence in a fit of spleen.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures, who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them.† Were such as voluntarily deprive themselves of the use of reason, to

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

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

continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of one act of intoxication, it seldom fails to succeed a course of it. By a habit of drinking, the greatest genius is often reduced to a mere idiot.

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

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

The first propensities to intemperance, both in eating and drinking, ought to be carefully checked. The stomach being distended, occasions a vacuum, which produces an habitual craving of the appetite; and the consequences are heaviness, debility, and disease.

In like manner frequent indulgence in drinking causes a depression of the spirits, only to be suspended by having recourse to a cup of the favourite liquor; and the drunkard considers the repetition of a debauch the best remedy for its consequences next day. Mild and diluting liquors are repeated; and a succession of hot stimulants increase the action of the heart and arteries; the lungs become inflamed, and a total relaxation of the system ensues.

CHAP. VIII.

OF CLEANLINESS.

THE want of cleanliness is a fault which admits of no excuse. Where water can be had for nothing, it is surely in the power of every person to be clean.

The continual discharge from our bodies by perspiration, renders frequent change of apparel necessary. Changing apparel greatly promotes the secretion from the skin, so necessary for health. When that matter which ought to be carried off by perspiration is either retained in the body, or re-absorbed from dirty clothes, it must occasion diseases.

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

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

In places where great numbers of people are collected, cleanliness becomes of the utmost importance. It is well known that infectious diseases are communicated by tainted air. Every thing, therefore, which tends to pollute the air, or spread the infection, ought with the

* Mr. Pott, in his surgical observations, mentions a disease which he calls the chimney-sweeper's cancer, as it is almost peculiar to that unhappy set of people. This he attributes to neglect of cleanliness, and with great justice. I am convinced, if that part of the body which is the seat of this cruel disease were kept clean by frequent washing, it would never happen.

utmost care to be guarded against. For this reason, in great towns, no filth, of any kind, should be permitted to lie upon the streets. Nothing is more apt to convey infection than the excrements of the diseased.

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

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

The peasants in most countries seem to hold cleanliness in a sort of contempt. Were it not for the open situation of their houses, they would often feel the bad effects of this disposition. One seldom sees a farm-

* In ancient Rome, the greatest men did not think cleanliness an object unworthy of their attention. Pliny says, the cloacæ, or common sewers for the conveyance of filth and nastiness from the city, were the greatest of all the public works; and bestows higher encomiums upon Tarquinius, Agrippa, and others, who made and improved them, than on those who achieved the greatest conquest. How truly great does the emperor Trajan appear, when giving directions to Pliny, his proconsul, concerning the making of a common sewer for the health and convenience of a conquered city?

house without a dunghill before the door, and frequently the cattle and their masters lodge under the same roof. Peasants are likewise extremely careless with respect to change of apparel, keeping their houses, &c. clean. This is merely the effect of indolence and a dirty disposition. Habit may indeed render it less disagreeable to them, but no habit can ever make it salutary to wear dirty clothes, or breathe unwholesome air.

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

In camps, the strictest regard should be paid to cleanliness. By negligence in this matter, infectious diseases are often spread amongst a whole army; and frequently more die of these than by the sword. The Jews, during their encampments in the wilderness, received particular instructions with respect to cleanliness.* The rules enjoined them ought to be observed by all in the like situation. Indeed, the whole system of laws delivered to that people has a manifest tendency to promote cleanliness. Whoever considers the nature of their climate, the diseases to which they were liable, and their dirty disposition, will see the propriety of such laws.

It is remarkable that, in most eastern countries, cleanliness makes a great part of their religion. The Mahometan as well as the Jewish religion enjoins various bathings, washings, and purifications. No doubt these might be designed to represent inward purity

* Thou shalt have a place also without the camp, whither thou shalt go forth abroad. And thou shalt have a paddle upon thy weapon: and it shall be, when thou shalt ease thyself abroad, thou shalt dig therewith, and shalt turn back, and cover that which cometh from thee.—Deut. chap. xxiii. ver. 12, 13.

but they were at the same time calculated for the preservation of health. However whimsical these washings may appear to some, few things would tend more to prevent diseases than a proper attention to many of them. Were every person, for example, after visiting the sick, handling a dead body, or touching any thing that might convey infection, to wash before he went into company, or sat down to meat, he would run less hazard either of catching the infection himself, or of communicating it to others.

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

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

A proper attention to cleanliness is no where more necessary that on shipboard. If epidemical distempers break out there, no one can be safe. The best way to prevent them is to take care that the whole company be cleanly in their clothes, bedding, &c. When infectious diseases do break out, cleanliness is the most likely means to prevent their spreading; it is likewise necessary to prevent their returning afterwards, or being conveyed to other places. For this purpose, the clothes, bedding, &c. of the sick ought to be carefully washed, and fumigated with brimstone. Infection will lodge a long time

in dirty clothes, and afterwards break out in the most terrible manner.

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

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

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

* As it is impossible to be thoroughly clean without a sufficient quantity of water, we would earnestly recommend it to the magi-

Poverty often produces uncleanliness. The poor man, while he complains of the want of things beyond his reach, neglects the most important objects of comfort, pure air and cleanliness. These are in the power of every one, and the want of them in the most necessitous, can only be attributed to a most inexcusable indolence, which, instead of increasing pity for their situation, will deter charity herself from the presence of their impure persons and filthy habitations.

CHAP. IX.

OF INFECTION.

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

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

strates of great towns to be particularly attentive to this article. Most great towns in Britain are so situated as to be easily supplied with water, and those persons who will not make a proper use of it after it is brought to their hand, certainly deserve to be severely punished. The streets of great towns, where water can be had, ought to be washed every day. This is the only effectual method for keeping them thoroughly clean; and, upon trial, we are persuaded it will be found the cheapest.

It would be thought highly improper for one who had not had the small-pox, to wait upon a patient in that disease; yet many other fevers are almost as infectious as the small-pox, and not less fatal. Some imagine that fevers prove more fatal in villages than in great towns, for want of proper medical assistance. This may sometimes be the case; but I am inclined to think it oftener proceeds from the cause above mentioned.

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

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

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

he was appointed to wash himself in water, and to keep for some time at a distance from society.

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

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

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

Many are the causes which tend to diffuse infection through populous cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to

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

health. The best advice that we can give to such as are obliged to live in large cities is, to choose an open situation; to avoid narrow dirty crowded streets; to keep their own house and offices clean; and to be as much abroad in the open air as their time will permit.

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

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

However trifling it may appear to inconsiderate persons, we will venture to affirm, that a due attention to those things which tend to diffuse infection would be of great importance in preventing diseases. As most dis-

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

eases are in some degree infectious, no one should continue long with the sick, except the necessary attendants. I mean not, however, by this caution, to deter those whose duty or office leads them to wait upon the sick, from such a laudable and necessary employment.

Many things are in the power of the magistrate, which would tend to prevent the spreading of infection; as the promoting of public cleanliness, removing jails, hospitals, burying grounds, and other places where infection may be generated, at a proper distance from great towns;* widening the streets; pulling down useless walls, and taking all methods to promote a free circulation of air through every part of the town, &c. Public hospitals, or proper places of reception for the sick, provided they were kept clean, well ventilated, and placed in an open situation, would likewise tend to prevent the spreading of infection. Such places of reception would prevent the poor, when sick, from being visited by their idle or officious neighbours. They would likewise render it unnecessary for sick servants to be kept in their masters' houses. Masters had better pay for having their servants taken care of in an hospital, than run the hazard of having an infectious disease diffused among a numerous family. Sick servants and poor people, when placed in hospitals, are not only less apt to diffuse infection among their neighbours, but have likewise the advantage of being well attended.

We are not, however, to learn that hospitals, instead of preventing infection, may become the means of diffusing it. When they are placed in the middle of great towns, when numbers of patients are crowded together in small apartments, when there is a constant communication kept up between the citizens and the patients, and when cleanliness and ventilation are neglected, they become nests for hatching diseases, and every one who goes into them not only runs a risk of receiving infection himself, but likewise of communicating it to others. This, however, is not the fault of the hospitals,

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

but of those who have the management of them. It were to be wished, that they were both more numerous and upon a more respectable footing, as that would induce people to go into them with less reluctance. This is the more to be desired, because most of the putrid fevers, and other infectious disorders, break out among the poor, and are by them communicated to the better sort. Were proper attention paid to the first appearances of such disorders, and the patients early conveyed to an hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

From the preceding observations it may be inferred, that the frequent and unnecessary visits made, especially by country people, to their friends and neighbours when in fevers, may be, and frequently are, attended with the worst and most fatal consequences. The sick person is thus incommoded, and the ill-judged officiousness of the visitors are often attended with the worst consequences. The infection is carried into other families, and spread far and wide. Here, in cases of epidemical diseases, the servants of a family should never be suffered to act as attendants on the patient, but proper nurses be hired on purpose.

CHAP. X.

OF THE PASSIONS.

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

Of Anger.

The passion ot anger ruffles the mind, distorts the countenance, hurries on the circulation of the blood,

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

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

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

Of Fear.

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

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

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

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

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

Many women have lost their lives in child-bed by the old superstitious custom, still kept up in most parts of Britain, of tolling the parish-bell for every person who dies. People who think themselves in danger, are very inquisitive; and if they come to know that the bell tolls for one who died in the same situation with themselves, what must be the consequence? At any rate they

to suppose that this is the case, and it will often be found a very difficult matter to persuade them of the contrary.

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

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

A custom has long prevailed among physicians, of prognosticating, as they call it, the patient's fate, or foretelling the issue of the disease. Vanity, no doubt, introduced this practice, and still supports it, in spite of common sense, and the safety of mankind. I have known a physician barbarous enough to boast, that he pronounced more *sentences* than all his Majesty's judges. Would to God that such sentences were not often equally fatal? It may indeed be alledged, that the doctor does not declare his opinion before the patient. So much the worse. A sensible patient had better hear what the doctor says, than learn it from the disconsolate looks the watery eyes, and the broken whispers, of thos about him. It seldom happens, when the doctor gives an unfavourable opinion, that it can be concealed from the patient. The very embarrassment which the friends and attendants shew in disguising what he has said, is generally sufficient to discover the truth.

Kind Heaven has, for the wisest ends, concealed from mortals their fate; and we do not see what right any man has to announce the death of another, especially if such a declaration has a chance to kill him. Mankind are indeed very fond of prying into future events, and seldom fail to solicit the physician for his opinion. A doubtful answer, however, or one that may tend rather to encourage the hopes of the sick, is surely the most safe. This conduct could neither hurt the patient nor the physician.

Nothing tends more to destroy the credit of physic, than those bold prognosticators, who, by the by, are generally the most ignorant of the faculty. The mistakes which daily happen in this way are so many standing proofs of human vanity, and the weakness of science.

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

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

Of Grief.

Grief is the most destructive of all the passions. Its effects are permanent: and when it sinks deep into the

mind, it generally proves fatal. Anger and fear, being of a more violent nature, seldom last long; but grief often changes into a fixed melancholy, which preys upon the spirits, and wastes the constitution. This passion ought not to be indulged. It may generally be conquered at the beginning; but, when it has gained strength, all attempts to remove it are vain.

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

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

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

The variety of scenes which present themselves to the senses, were certainly designed to prevent our attention from being too long fixed upon any one object.

Nature abounds with variety, and the mind, unless fixed down by habit, delights in contemplating new objects. This at once points out the method of relieving the mind in distress. Turn the attention frequently to new objects: examine them for some time. When the mind begins to recoil, shift the scene. By this means a constant succession of new ideas may be kept up, till the disagreeable ones entirely disappear. Thus travelling, the study of any art or science, reading, or writing on such subjects as deeply engage the attention, will sooner expel grief than the most sprightly amusements.

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

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

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

Of Love.

Love is perhaps the strongest of all the passions. At least, when it becomes violent, it is less subject to the control either of the understanding or will, than any of the rest. Fear, anger, and several other passions, are necessary for the preservation of the individual, but love is necessary for the continuation of the species

itself; it was therefore proper that this passion should be deeply rooted in the human breast.

Though love be a strong passion, it is seldom so rapid in its progress as several of the others. Few persons fall desperately in love all at once. We would therefore advise every one before he tampers with this passion, to consider well the probability of his being able to obtain the object of his love. When that is not likely, he should avoid every occasion of increasing it. He ought immediately to flee the company of the beloved object; to apply his mind attentively to business or study; to take every kind of amusement; and, above all, to endeavour, if possible, to find another object which may engage his affections, and which it may be in his power to obtain.

There is no passion with which people are so ready to tamper as love, although none is more dangerous. Some men make love for amusement, others from mere vanity, or on purpose to shew their consequence with the fair. This is, perhaps, the greatest piece of cruelty that any one can be guilty of. What we eagerly wish for, we easily credit. Hence the too-credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no other cure but the possession of its object, which in this case ought always, if possible, to be obtained.*

Of Religious Melancholy.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They ima-

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

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

It is great pity that ever religion should be so far perverted as to become the cause of those very evils which it was designed to cure. Nothing can be better calculated than true religion to raise and support the mind of its votaries under every affliction that can befall them. It teaches men that even the sufferings of this life are preparatory to the happiness of the next, and that all who persist in a course of virtue shall at length arrive at complete felicity.

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

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

Literary men, under the pressure of melancholy or other corroding passion, will find the best remedy in applying to composition. A gentleman devoted to the Muses, inconsolable for the loss of a beloved wife, was cured of his grief by anxiety to express, in the most pathetic terms, the poignancy of his sorrow in an elegy to her memory. In short, an earnest application of the mind to any interesting pursuit will most effectually

divert the attention, and moderate passions which reason cannot control.

CHAP. XI.

OF THE COMMON EVACUATIONS.

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

Of the Evacuation by Stool.

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

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

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a differ

ent regimen of diet, exercise, &c. It is, however, generally allowed, that one stool a day is sufficient for an adult, and that less is hurtful. But this, like most general rules, admits of many exceptions. I have known persons in perfect health who did not go to stool above once a week. Such a degree of costiveness, however, is not safe; though the person who labours under it may for some time enjoy tolerable health, yet at length it may occasion diseases.

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

The method recommended for this purpose by Mr. Locke, is likewise very proper, viz. *to solicit nature, by going regularly to stool every morning, whether one has a call or not.* Habits of this kind may be acquired, which will in time become natural.

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

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

As an habitual looseness is often owing to an obstructed

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

Of Urine.

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

As a free discharge of urine not only prevents, but actually cures, many diseases, it ought by all means to be promoted; and every thing that may obstruct it, should be carefully avoided. Both the secretion and discharge

* It has long been an observation among physicians, that the appearances of the urine are very uncertain, and very little to be depended on. No one will be surprised at this, who considers how many ways it may be affected, and consequently have its appearance altered. The passions, the state of the atmosphere, the quantity and quality of the food, the exercise, the clothing, the state of the other evacuations, and numberless other causes, are sufficient to induce a change either in the quantity or appearance of the urine. Any one who attends to this will be astonished at the impudence of those daring quacks, who pretend to find out diseases, and prescribe to patients, from the bare inspection of their urine. These impostors, however, are very common all over Britain, and, by the amazing credulity of the populace, many of them amass considerable fortunes. Of all the medical prejudices which prevail in this country, that in favour of urine-doctors is the strongest. The common people have still an unlimited faith in their skill, although it has been demonstrated that no one of them is able to distinguish the urine of a horse, or any other animal, from that of a man.

of urine are lessened by a sedentary life, sleeping on beds that are too soft and warm, food of a dry or heating quality, liquors which are astringent and heating, as red port, claret, and such like. Those who have reason to suspect that their urine is in too small a quantity, or who have any symptoms of the gravel, ought not only to avoid these things, but whatever else they find has a tendency to lessen the quantity of their urine.

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

Many persons have lost their lives, and others have brought on very tedious and even incurable disorders, by retaining their urine too long from a false delicacy. When the bladder has been over-distended, it often loses its power of action altogether, or becomes paralytic; by which means it is rendered unable either to retain the urine, or expel it properly. The calls of nature ought never to be postponed. Delicacy is doubtless a virtue, but that can never be reckoned true delicacy, which induces any one to risk his health or hazard his life.

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

Of the Perspiration.

Insensible perspiration is generally reckoned the

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

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

Changes in the Atmosphere.

One of the most common causes of obstructed perspiration, or catching cold, in this country, is the changeableness of the weather, or state of the atmosphere. There is no place where such changes happen more frequently than in Great Britain. With us, the degrees of heat and cold are not only very different in the different seasons of the year, but often change almost from one extreme to another in a few days, and sometimes even in the course of one day. That such changes must affect the state of the perspiration is obvious to every one.*

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

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

Wet Clothes.

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

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

Wet Feet.

Even wet feet often occasion fatal diseases. The cholic, inflammations of the breast and of the bowels, the iliac passion, cholera morbus, &c., are often occasioned by wet feet. Habit will, no doubt, render this less dangerous; but it ought, as far as possible, to be avoided. The delicate, and those who have not been accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

Night Air.

The perspiration is often obstructed by night air; even in summer, this ought to be avoided. The dews,

which fall plentifully after the hottest day, make the night more dangerous than when the weather is cool. Hence, in warm countries, the evening dews are more hurtful than where the climate is more temperate.

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

Damp Beds.

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

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds, which are not slept in above two or three times a year, should be safe? Nothing is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they carefu.

never to sleep in a bed but what was frequently used they would seldom find any ill consequences from a change.

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

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

Damp Houses.

Damp houses frequently produce the like ill consequences; for this reason those who build should be careful to choose a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceedingly dry, should have the first floor a little raised.

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

servants and others, who are obliged to live in cellars and sunk stories, seldom continue long in health: masters ought surely to pay some regard to the health of their servants, as well as to their own.

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

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

Sudden Transitions from Heat to Cold.

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

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

It is very common for people, when hot, to drink freely of cold water, or small liquors. This conduct is extremely dangerous. Thirst indeed is hard to bear, and the inclination to gratify that habit frequently gets the better of reason, and makes us do what our judgment disapproves. Every peasant, however, knows if his horse be permitted to drink his bellyful of cold water after violent exercise, and be immediately put into the stable, or suffered to remain at rest, that it will kill him. This they take the utmost care to prevent. It were well if they were equally attentive to their own safety.

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

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

Sitting in a warm room, and drinking hot liquors till the pores are quite open, and immediately going into the cold air, is extremely dangerous. Colds, coughs, and inflammations of the breast, are the usual effects of this conduct: yet nothing is more common than for

people, after they have drank warm liquors for several hours, to walk or ride a number of miles in the coldest night, or to ramble about in the streets.*

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is a most dangerous practice. Any person had better sit without doors than in such a situation, as the current of air is directed against one particular part of the body. Inflammatory fevers and consumptions have often been occasioned by sitting or standing thinly clothed near an open window. Nor is sleeping with open windows less to be dreaded. That ought never to be done, even in the hottest weather, unless the window is at a distance. I have known mechanics frequently contract fatal diseases by working stripped at an open window, and would advise all of them to beware of such a practice.

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

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

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

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

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

I shall put an end to what relates to this part of my subject, by giving an abstract of the justly celebrated advice of Celsus, with respect to the preservation of health. "A man," says he, "who is blessed with good health, should confine himself to no particular rules either with respect to regimen or medicine. He ought frequently to diversify his manner of living; to be sometimes in town, sometimes in the country; to hunt, sail, indulge himself in rest, but more frequently to use exercise. He ought to refuse no kind of food that is commonly used, but sometimes to eat more and sometimes less; sometimes to make one at an entertainment, and sometimes to forbear it; to make rather two meals a day than one, and always to eat heartily, provided he can digest it. He ought neither too eagerly to pursue, nor too scrupulously to avoid, intercourse with the fair sex: pleasures of this kind, rarely indulged, render the body alert and active; but, when too frequently repeated, weak and languid. He should be careful in time of health not to destroy, by excesses of any kind, that vigour of constitution, which should support him under sickness."

The most rational and enlightened rules of medicine, instead of lying a disagreeable restraint on men, dictate only the means by which any reasonable person would naturally be directed, and point out more rational and certain maxims for enjoyment and gratification than can be attained by the votary of fashion or Bacchanalian joys.

PART II.

OF DISEASES

CHAP. XII.

OF THE KNOWLEDGE AND CURE OF DISEASES

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

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

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

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

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

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

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

Attention ought, likewise, to be paid to the climate or place where the patient lives, the air he breathes, his diet, &c. Such as live in low marshy situations are subject to many diseases, which are unknown to the inhabitants of high countries. Those who breathe the impure air of cities have many maladies to which the more happy rustics are entire strangers. Persons who

feed grossly, and indulge in strong liquors, are liable to diseases which do not affect the temperate and abstemious, &c.

It has already been observed, that the different occupations and situations in life dispose men to peculiar diseases; it is, therefore, necessary to enquire into the patient's occupation, manner of life, &c. This will not only assist us in finding out the disease, but will likewise direct us in the treatment of it. It would be very imprudent to treat the laborious and the sedentary precisely in the same manner, even supposing them to labour under the same disease.

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

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

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

Medicines are no doubt useful in their places, and, when administered with prudence, may do much good; but, when they are put in place of every thing else, or administered at random, which is not seldom the case, they must do mischief. We would, therefore, wish to

call the attention of mankind from the pursuit of secret medicines to such things as they are acquainted with. The proper regulation of these may often do much good, and there is little danger of their ever doing harm.

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

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

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

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

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

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

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

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

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

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

It has been objected to this book, that it would be the cause of ignorant persons tampering with their health, &c. exercising a dangerous and fatal sort of domestic quackery. Such objection, however, can only

proceed from ignorance of its contents, or a desire to mislead. Instead of encouraging the use of medicine, it will, to a man of common understanding, exhibit a caution against the dangerous practice of recurring, on every occasion, to the apothecary's shop, or using even the most simple remedy without due attention.

It has rather been my wish to explode as much as possible the use of drugs, and recommend, instead of them, a due regard to prevent disorders, by pure air, moderate exercise, temperate and wholesome diet, cleanliness, and the control of the passions. In cases of actual disease, I would recommend to no person to take medicine without the best advice, but even there to confine himself to regimen. The remedies I have recommended are safe, and will, I trust, be found as effectual and salutary as if they had been written in the jargon of apothecaries' Latin, accompanied with all their barbarous hieroglyphics.

CHAP. XIII.

OF FEVERS IN GENERAL.

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

Fevers are not only the most frequent of all diseases, but they are likewise the most complex. In the most simple species of fever there is always a combination of se-

veral different symptoms. The distinguishing symptoms of fever are, increased heat, frequency of pulse, loss of appetite, general debility, pain in the head, and a difficulty in performing some of the vital or animal functions.

The other symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing.

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

When the fever attacks suddenly, it always begins with an uneasy sensation of excessive cold, accompanied with debility, and loss of appetite; frequently the cold is attended with shiverings, oppressions about the heart, and sickness at the stomach, or vomiting.

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

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

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

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

Our design is not to enter into a critical enquiry into the nature and immediate cause of fevers, but to mark their most obvious symptoms, and to point out the proper treatment of the patient with respect to his diet, drink, air, &c. in the different stages of the disease. In these articles, the inclinations of the patient will in a great measure direct our conduct.

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

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

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

In fevers, the mind as well as the body should be kept easy. Company is seldom agreeable to the sick. Indeed, every thing that disturbs the imagination, increases the disease; for which reason, every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose his mind.

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

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

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

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

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

body, and, there is reason to believe, seldom benefits the soul.

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

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

In all fevers, a proper attention should be paid to the patient's lodgings. These are the calls of Nature, and often point out what may be of real use. Patients are not, indeed, to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may

not seem altogether proper. What the patient longs for, his stomach will generally digest, and such things have sometimes a very happy effect.

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

Nothing can be more absurd than a general remedy in cases of fevers of which there are such a variety of sorts, attended with such a variety of symptoms. Yet for half a century a powder, said to possess great virtue in their cure has been swallowed in great quantities here and throughout half the world, in all cases and situations. Bleeding used formerly to be equally prevalent. In short, fashion reigns in physic with as arbitrary a sway as in dress, or any of the most indifferent things.

This powder is not confined to the use of fevers, but, like other quack-medicines, cures every complaint; and there are many examples, not only of its immediate fatal consequences, when used improperly, but still more when its constant repetition has destroyed the constitution, or occasioned the loss of the extremities.

A fever requires to be attentively watched in its progress, in order to enable the most skilful physician to prescribe the regimen as well as medicines, as the symptoms and changes occur. To speak, therefore, of a universal remedy in fevers, is the extreme of absurdity.

CHAP. XIV.

OF INTERMITTING FEVERS, OR AGUES.

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

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

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

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

REGIMEN.---While the fit continues, the patient ought to drink freely of water-gruel, orange whey, weak camomile tea; or, if his spirits be low, small wine whey, sharpened with the juice of lemon. All his drink should be warm, as that will assist in bringing on the sweat, and consequently shorten the paroxysm.*

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

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

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

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

MEDICINE.---The first thing to be done in the cure of an intermitting fever is to cleanse the stomach and bowels. This not only renders the application of other medicines more safe, but likewise more efficacious. In this disease, the stomach is generally loaded with cold vicid phlegm, and frequently great quantities of bile are discharged by vomit, which plainly points out the necessity of such evacuations. Vomits are therefore to be administered before the patient takes any other medicine. A dose of ipecacuanha will generally answer this purpose very well. A scruple or half a drachm of the powder will be sufficient for an adult, and for a younger person the dose must be less in proportion. After the vomit begins to operate, the patient ought to drink plentifully of weak camomile tea. The vomit should be taken two or three hours before the return of the fit, and may be repeated at the distance of two or three days. Vomits not only cleanse the stomach, but increase the perspiration, and all the other secretions, which render them of such importance, that they often cure intermitting fevers without the assistance of any other medicine.

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

Bleeding may sometimes be proper at the beginning of an intermitting fever, when excessive heat, a delirium, &c. give reason to suspect an inflammation; but as the blood is seldom in an inflammatory state in intermitting fevers, this operation is rarely necessary. When frequently repeated it tends to prolong the disease.--- After proper evacuations, the patient may safely use the Peruvian bark, which may be taken in any way that is most agreeable to him. No preparation of the

bark seems to answer better than the most simple form in which it can be given, viz. in powder.

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

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

The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped; but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to the patients not continuing to use the medicines long enough. They

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

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

are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which means the disease gathers strength, and often returns with as much violence as before. A relapse may always be prevented by the patient's continuing to take doses of the medicine for some time after the symptoms disappear. This is both the most safe and effectual method of cure.

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

Those who cannot swallow the bark in substance, may take it in decoction or infusion. An ounce of bark in powder may be infused in a bottle of white wine for four or five days frequently shaking the bottle; afterwards let the powder subside, and pour off the clear liquor. A wine-glass may be drank three or four times a day, or oftener, as there is occasion. If a decoction be more agreeable, an ounce of the bark, and two drachms

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

of snake-root bruised, with an equal quantity of salt of wormwood, may be boiled in a quart of water, into an English pint. To the strained liquor may be added an equal quantity of red wine, and a glass of it taken frequently.

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

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

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

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

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

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

Many dirty things are extolled for the cure of intermitting fevers, as spiders, cobwebs, snuffings of candles, &c. Though these may sometimes succeed, yet their very nastiness is sufficient to set them aside, especially when cleanly medicines will answer the purpose better. The only medicines that can be depended upon for thoroughly curing an intermitting fever, is the Peruvian bark. It may always be used with safety; and I can honestly declare that, in all my practice, I never knew it fail, when combined with the medicines mentioned above, and duly persisted in.

Where agues are endemical, even children are often afflicted with that disease. Such patients are very difficult to cure, as they can seldom be prevailed upon to take the bark, or any other disagreeable medicine. One method of rendering this medicine more palatable is, to make it into a mixture with distilled waters and syrup,

and afterwards to give it an agreeable sharpness with the elixir, or spirit of vitriol. This both improves the medicine, and takes off the nauseous taste. In cases where the bark cannot be administered, the *saline mixture* may be given to advantage to children.*

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

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

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

* See Appendix, *Saline Mixture.*

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

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

Nothing is more essential in the cure of agues than a frequent change of air.

There is, perhaps, no disease which so many pretend to cure as this. Many are the specifics which the possessors have received, handed down from father to son with the most imposing statements of cures performed by them, after every fruitless endeavour of the faculty. The ignorant persons who relate these cures, are not capable of judging how far they were the consequence of the medicine's operation; they only know that the fit ceased after taking it. Still less could they judge whether the medicine, in stopping the fits, did not introduce into the system vitiated humours still more dangerous to the constitution, as the seeds of some other disease. In no case ought such evidence to have weight in medical experiments. Without intending it, they are most apt to give a false statement, or to assert such absurdities as can never deserve credit.

CHAP. XV.

OF AN ACUTE CONTINUAL FEVER.

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

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

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

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

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

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

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

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

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

The above liquids must all be drank a little warm.

* See Appendix, *Pectoral Decoction.*

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

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

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

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

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

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

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

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

MEDICINE.---In this and all other fevers, attended with a hard, full, quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away, however, must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should rise, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth, time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, as the symptoms require. If the pulse continue soft, and the patient is tolerably easy after the first bleeding, it ought not to be repeated.

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

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

If the body is bound, a clyster of milk and water, with a little salt, and a spoonful of sweet oil or fresh butter in it, ought daily to be administered. Should this not have the desired effect, a tea-spoonful of magnesia

alba, or cream of tartar, may be frequently put into his drink. He may likewise eat tamarinds, boiled prunes, roasted apples, and the like.

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

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

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

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

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

The most dangerous thing on recovering from a fever, is the indulgence in eating and drinking, in which the patient is too apt to exceed. The appetite is then unusually voracious, and requires the greatest self-command; else a relapse is most likely to ensue, as well as other still worse consequences, such as boils, ulcers, and settled swellings of the limbs. The diet ought to be light, principally of vegetables, not without, however, the total exclusion of animal food of easy digestion.

On the first appearance of fever, it is necessary to obtain the best medical advice. Many fall victims to their obstinacy in persisting to struggle against it, without even taking to their bed, which would in many cases stop an incipient fever; whereas, the struggling to keep on their legs, inevitably increases its force. Others, in the first symptom, employ hot and volatile sudorifics, smothering themselves up in bed, under a load of clothes, in a chamber where the air is excluded, in order to excite sweats. By these means the fever must certainly increase, whereby sweating, as well as every other evacuation, will be prevented. Diluting liquors, while they quench the patient's thirst, and abate his pains, are the best means of promoting perspiration.

Fevers are in themselves too fatal: they require not to have their effects increased by the absurd management of the unhappy sufferers.

CHAP. XVI.

OF THE PLEURISY.

THE true pleurisy is an inflammation of that membrane called the pleura, which lines the inside of the breast. It is distinguished into the moist and dry. In

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

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

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

The pulse in this disease is commonly quick and hard, the urine high coloured, and if blood be let, it is covered with a tough crust, or buffy coat. The patient's

spittle is at first thin, but afterwards it becomes grosser and is often streaked with blood.

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

For these purposes, the diet, as in the former disease, ought to be cool, slender, and diluting. The patient must avoid all food that is viscid, hard of digestion, or that affords much nourishment; as flesh, butter, cheese, eggs, milk, and also every thing that is of a heating nature. His drink may be whey, or an infusion of pectoral and balsamic vegetables.*

Barley-water, with a little honey or jelly of currants mixed with it, is likewise a very proper drink in this disease. It is made by boiling an ounce of pearl-barley in three English pints of water to two, which must afterwards be strained. The decoction of figs, raisins, barley, &c. recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to keep continually supping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in lukewarm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

MEDICINE.—Almost every person knows, when a fever is attended with a violent pain in the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient be able to

* See Appendix, *Pectoral Infusion.*

bear it. A large quantity of blood let at once, in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may loose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If after the first bleeding, the stitch, with the other violent symptoms, should still continue, it will be necessary, at the distance of twelve or eighteen hours, to let eight or nine ounces more. If the symptoms do not then abate, and the blood shews a strong buffy coat, a third or even a fourth bleeding may be requisite. If the pain of the side abate, the pulse become softer, or the patient begin to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without bleeding. There are likewise many things that may be done to ease the pain of the side without the operation, as fomenting, blistering, &c. Fomentations may be made by boiling a handful of flowers of elder, camomile, and common mallows, or any other soft vegetables, in a proper quantity of water. The herbs may be either put into a flannel bag, and applied warm to the side, or flannels may be dipped in the decoction, afterwards wrung out, and applied to the part affected with as much warmth as the patient can easily bear. As the cloths grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled with warm milk and water, and may be applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. The side may likewise be frequently rubbed with a little of the volatile liniment.*

Topical bleeding has often a very good effect in this

* See Appendix, *Volatile Liniment.*

disease. It may either be performed by applying a number of leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

Leaves of various plants might likewise be applied to the patient's side with advantage. I have often seen great benefit from young cabbage-leaves applied warm to the side in a pleurisy. These not only relax the parts, but likewise draw off a little moisture, and may prevent the necessity of blistering plasters; which, however, when other things fail, must be applied.

If the stitch continue after repeated bleedings, fomentation, &c. a blistering plaster must be applied over the part affected, and suffered to remain for two days. This not only procures a discharge from the side, but takes off the spasm, and by that means assists in removing the cause of the disease. To prevent a strangury when the blistering plaster is on, the patient may drink freely of the Arabic emulsion.*

If the patient is costive, a glister of thin water-gruel, or barley-water, in which a handful of mallows, or any other emollient vegetable, has been boiled may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation, from the breast.

The expectoration may be promoted by sharp, oily, and mucilaginous medicines. For this purpose, an ounce of the oxymel, or the vinegar of squills, may be added to six ounces of the pectoral decoction, and two table spoonfuls of it taken every two hours.

Should the squill disagree with the stomach, the oily emulsion may be administered;† or, in place of it, two ounces of the oil of sweet almonds, or oil of olives, and two ounces of the Syrup of violets, may be mixed with as much sugar-candy powdered as will make an electuary of the consistence of honey. The patient may

* See Appendix, *Arabic Emulsion.*
† See Appendix, *Oily Emulsion.*

take a tea-spoonful of this frequently, when the cough is troublesome. Should oily medicines prove nauseous, which is sometimes the case, two table spoonfuls of the solution of gum ammoniac in barley-water may be given three or four times a day.*

If the patient does not perspire, but has a burning heat upon his skin, and passes very little water, some small doses of purified nitre and camphire will be of use. Two drachms of the former may be rubbed with five or six grains of the latter in a mortar, and the whole divided into six doses, one of which may be taken five or six hours, in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some reckon almost a specific in the pleurisy, viz. the decoction of the seneca rattle-snake root.† After bleeding and other evacuations have been promised, the patient may take two, three, or four, table-spoonfuls of this decoction, according as his stomach will bear it, three or four times a day. If it should occasion vomitting, two or three ounces of simple cinnamon-water may be mixed with the quantity of decoction here directed, or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the body easy, it may be of some service in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things, on purpose that people may have it in their power to choose; and likewise, that when one cannot be obtained, they may make use of another. Different medicines are no doubt necessary in the different periods of a disorder; and where one fails of success, or disagrees with the patient, it will be proper to try another.

What is called the crisis, or height of the fever, is sometimes attended with very alarming symptoms, as difficulty of breathing, an irregular pulse, convulsive motions, &c. These are apt to frighten the attendants,

* See Appendix, *Solution of Gum Ammoniac.*
† See Appendix, *Decoction of Seneca Root.*

and induce them to do improper things, as bleeding the patient, giving him strong stimulating medicines, or the like. But they are only the struggles of Nature to overcome the disease, in which she ought to be assisted by plenty of diluting drink, which is then peculiarly necessary. If the patient's strength, however, be much exhausted by the disease, it will be necessary at this time to support him with frequent small draughts of wine-whey, negus, or the like.

When the pain and fever are gone, it will be proper, after the patient has recovered sufficient strength, to give him some gentle purges, as those directed towards the end of an acute continual fever. He ought likewise to use a light diet of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

OF THE BASTARD PLEURISY.

That species of pleurisy which is called the *bastard* or *spurious*, generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a cooling regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side; which last does not always happen in the true pleurisy. Sometimes, indeed, this disease proves obstinate, and requires bleeding with cupping, and scarifications of the part affected. These, together with the use of nitrous and other cooling medicines, seldom fail to effect a cure. The application of blisters in this disease has often proved fatal.

OF THE PARAPHRENITIS.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarcely necessary to consider it as a separate disease.

It is attended with a very acute fever, and an extreme pain in the part affected, which is generally augmented by coughing, sneezing, drawing in the breath, taking food, going to stool, making water, &c. Hence

the patient breathes quick, and draws in his bowels to prevent the motion of the diaphragm; is restless, anxious, has a dry cough, a hiccup, and often a delirium. A convulsive laugh, or rather a kind of involuntary grin, is no uncommon symptom of this disease.

Every method must be taken to prevent a suppuration, as it is impossible to save the patient's life when this happens. The regimen and medicine are in all respects the same as in the pleurisy. We shall only add, that in this disease, emollient clysters are peculiarly useful, as they relax the bowels, and by that means make a derivation from the part affected.

CHAP. XVII.

OF A PERIPNEUMONY, OR INFLAMMATION OF THE LUNGS.

AS this disease affects an organ which is absolutely necessary to life, it must always be attended with danger. Persons who abound with thick blood, whose fibres are tense and rigid, who feed upon gross aliment, and drink strong viscid liquors, are most liable to a peripneumony. It is generally fatal to those who have a flat breast, or narrow chest, and to such as are afflicted with an asthma, especially in the decline of life. Sometimes the inflammation reaches to one lobe of the lungs only, at other times the whole of the organ is affected, in which case the disease can hardly fail to prove fatal.

When the disease proceeds from a vicid pituitous matter obstructing the vessels of the lungs, it is called spurious or bastard peripneumony. When it arises from a thin acrid defluction on the lungs, it is denominated a catarrhal peripneumony, &c.

CAUSES.—An inflammation of the lungs is sometimes a primary disease, and sometimes it is the consequence of other diseases, as a quinsey, a pleurisy, &c. It proceeds from the same causes as the pleurisy, &c. an

obstructed perspiration from cold, wet clothes, &c. or from an increased circulation of the blood by violent exercise, the use of spiceries, ardent spirits, and such like. The pleurisy and peripneumony are often complicated; in which case the disease is called a pleuro-peripneumony.

SYMPTOMS.---Most of the symptoms of a pleurisy likewise attend an inflammation of the lungs; only in the latter the pulse is more soft, and the pain less acute; but the difficulty of breathing, and oppression of the breast, are generally greater.

REGIMEN.---As the regimen and medicine are in all respects the same in the true peripneumony as in the pleurisy, we shall not here repeat them, but refer the reader to the treatment of that disease. It may not, however, be improper to add, that the aliment ought to be more tender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoctions of barley, and infusions of fennel-roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emollient clysters.

It has already been observed, that the spurious or bastard peripneumony is occasioned by a vicid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter and wet seasons.

The patient at the beginning is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is usually pale, and his colour very little changed.

The diet, in this, as well as in the true peripneumony, must be very slender, as weak broths, sharpened with the juice of orange or lemon, and such like. His drink

may be thin water-gruel sweetened with honey, or a decoction of the roots of fennel, liquorice, and quick grass. An ounce of each of these may be boiled in three English pints of water to a quart, and sharpened with a little currant-jelly or the like.

Bleeding and purging are generally proper at the beginning of this disease; but if the patient's spittle be pretty thick, or well concocted, neither of them are necessary. It will be sufficient to assist the expectoration by some of the sharp medicines recommended for that purpose in the pleurisy, as the solution of gum ammoniac, with oxymel of squills, &c. Blistering plasters have generally a good effect, and ought to be applied pretty early.

If the patient do not spit, he must be bled, according as his strength will permit, and have a gentle purge administered. Afterwards his body may be kept open by clysters, and the expectoration promoted, by taking every four hours two table-spoonfuls of the solution mentioned above.

When an inflammation of the breast does not yield to bleeding, blistering, and other evacuations, it commonly ends in a suppuration, is more or less dangerous, according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the pleura and the lungs, it can only be discharged by an incision made betwixt the ribs. If the patient's strength do not return after the inflammation is to all appearance removed; if his pulse continue quick, though soft, his breathing difficult and oppressed; if he have cold shiverings at times, his cheeks flushed, his lips dry; and if he complains of thirst, and want of appetite, there is reason to fear a suppuration, and that a phthisis or consumption of the lungs will ensue. We shall therefore next proceed to consider the proper treatment of that disease.

CHAP. XVIII.

OF CONSUMPTIONS.

A Consumption is a wasting of the whole body, from an ulcer, tubercles or concr tion of the lungs, an empyema, a nervous atrophy, or cachexy.

Dr. Arbuthnot observes, that in his time consumptions made up above one-tenth part of the bills of mortality in and about London. There is reason to believe they have rather increased since; and we know, from experience, that they are not less fatal in some other towns of England than in London.

Young persons, between the age of fifteen and thirty, of a slender make, long neck, high shoulders, and flat breasts, are most liable to this disease.

Consumptions prevail more in England than in any other part of the world, owing perhaps to the great use of animal-food and malt-liquors, the general application to sedentary employments, and the great quantity of pit-coal which is there burnt: to which we may add, the perpetual changes in the atmosphere, or variableness of the weather.

CAUSES.—It has already been observed, that an inflammation of the breast often ends in an imposthume; consequently whatever disposes people to this disease, must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions; as the scurvy, the scrophula, or king's evil, the venereal disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

Confined or unwholesome air: when this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

—— Violent passions, exertions, or affections of the mind; as grief, disappointment, anxiety, or close application to the study of abstruce arts or sciences.

—— Great evacuations; as sweating, diarrhœas, diabetes, excessive venery, the fluor albus, an over discharge of the menstrual flux, giving suck too long, &c.

—— The sudden stoppages of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

—— Injuries done to the lungs, calculi, &c. I lately saw the symptoms of phthisis occasioned by a small bone sticking in the bronche. It was afterwards vomited along with a considerable quantity of purulent matter; and the patient, by a proper regimen, and the use of Peruvian bark, recovered.

—— Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

—— Frequent and excessive debaucheries. Late watching and drinking strong liquors, which generally go together, can hardly fail to destroy the lungs. Hence the bon companion generally falls a sacrifice to this disease.

—— Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

—— Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, taylors, shoemakers, seamstresses, &c. often die of consumptions. They likewise prove fatal to singers, and all who have occasion to make frequent and violent exertions of the lungs.

—— Cold. More consumptive patients date the beginning of their disorders from wet feet, damp beds, night air, wet clothes, or catching cold after the body had been heated, than from all other causes.

Sharp, saline, and aromatic aliments, which heat and

inflame the blood, are likewise frequently the cause of consumptions.

We shall only add, that this disease is often owing to an hereditary taint, or a scrophulous habit, in which case it is generally incurable.

SYMPTOMS.—This disease generally begins with a dry cough, which often continues for some months. If a disposition to vomit after eating be excited by it, there is still greater reason to fear an approaching consumption. The patient complains of a more than usual degree of heat, a pain and oppression of the breast, especially after motion; his spittle is of a saltish taste, and sometimes mixed with blood; he is apt to be sad, his appetite is bad, and his thirst is great. There is generally a quick, soft, small pulse, though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish, white, or bloody matter. His body is extenuated by the hectic fever and colliquative sweats, which mutually succeed one another, viz. the one towards night, and the other in the morning; a looseness, and an excessive discharge of urine, are troublesome symptoms at this time, and greatly weaken the patient. There is a burning heat in the palms of the hands, and the face generally flushes after eating; the fingers become remarkably small, the nails are bent inwards, and the hair falls off.

At last the swelling of the feet and legs, the total loss of strength, the sinking of the eyes, the difficulty of swallowing, and the coldness of the extremities, shew the immediate approach of death, which, however, the patient seldom believes to be so near. Such is the usual progress of this fatal disease, which, if not early checked, commonly sets all medicine at defiance.

REGIMEN.—On the first appearance of a consumption, if the patient lives in a large town, or any place where the air is confined, he ought immediately to quit it, and to make choice of a situation in the

country, where the air is pure and free. Here he must not remain inactive, but take every day as much exercise as he can bear.

The best method of taking exercise is to ride on horseback, as this gives the body a great deal of motion, without much fatigue. Such as cannot bear this kind of exercise, must make use of a carriage. A long journey, as it amuses the mind by a continual change of objects, is greatly preferable to riding the same ground over and over. Care, however, must be taken to avoid catching cold from wet clothes, damp beds, or the like. The patient ought always to finish his ride in the morning, or at least before dinner; otherwise it will oftener do harm than good.

It is pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their own power. They cannot see how one of the common actions of life should prove a remedy in an obstinate disease, and therefore they reject it, while they greedily hunt after relief from medicine, merely because they do not understand it.

Those who have strength and courage to undertake a pretty long voyage, may expect great advantage from it. This, to my knowledge, has frequently cured a consumption after the patient was, to all appearance, far advanced in that disease, and where medicine had proved ineffectual. Hence it is reasonable to conclude that, if a voyage were undertaken in due time, it would seldom fail to perform a cure.*

Such as try this method of cure ought to carry as much fresh provisions along with them as will serve for the whole time they are at sea;—as milk is not easily obtained in this situation, they ought to live

* Two things chiefly operate to prevent the benefit which would arise from sailing. The one is, that physicians seldom order it till the disease is too far advanced; and the other is, that they seldom order a voyage of sufficient length. A patient may receive no benefit by crossing the Channel, who, should he cross the Atlantic, might be completely cured. Indeed, we have reason to believe that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

upon fruits, and the broth of chickens, or other young animal, which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible, in the mildest season, and that they ought to be towards a warmer climate.*

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these countries agree with them, they should continue there at least till their health be confirmed.

Next to proper air and exercise, we would recommend a due attention to diet. The patient should eat nothing that is either heating or hard of digestion, and his drink must be of a soft and cooling nature. All the diet ought to be calculated to lessen the acrimony of the humours, and to nourish and support the patient. For this purpose he must keep chiefly to the use of vegetables and milk. Milk alone is of more value in this disease than the whole materia medica.

Asses' milk is commonly reckoned preferable to any other, but it cannot always be obtained; besides, it is generally taken in a very small quantity; whereas, to produce any effects, it ought to make a considerable part of the patient's diet. It is hardly to be expected that a gill or two of asses' milk, drank in the space of twenty-four hours, should be able to produce any considerable change in the humours of an adult; and, when people do not perceive its affects soon, they loose hope, and so leave it off. Hence it happens, that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs, and do verily believe, if used at this period, that it would seldom fail; but if it be delayed

* Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West India voyage work wonders in that disorder.

till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and by a grown person in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a-day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with old conserve of roses. When that cannot be obtained, the powder of crabs' claws may be used in its stead. Asses' milk is usually ordered to be drank warm in bed; but as it generally throws the patient in a sweat when taken in this way, it would perhaps be better to give it after he rises.

Some extraordinary cures in consumptive cases have been performed by women's milk. Could this be obtained in a sufficient quantity, we would recommend it in preference to any other. It is better if the patient can suck it from the breast, than to drink it afterwards. I knew a man who was reduced to such a degree of weakness in a consumption, as not to be able to turn himself in bed. His wife was at that time giving suck and the child happening to die, he sucked her breasts, not with a view to reap any advantage from the milk, but to make her easy. Finding himself, however, greatly benefited by it, he continued to suck her till he became perfectly well, and is at present a strong and healthy man.

Some prefer butter-milk to any other, and it is indeed a very valuable medicine, if the stomach be able to bear it. It does not agree with every person at first, and is therefore often laid aside without a sufficient trial. It should at first be taken sparingly, and the quantity gradually increased till it becomes to be almost the sole food. I never knew it succeed, unless where the patient almost lived upon it.

Cow's milk is most readily obtained of any, and, though it be not so easy digested as that of asses or

mares, it may be rendered lighter, by adding to it an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should, notwithstanding, prove heavy to the stomach, a small quantity of brandy or rum, with a little sugar, may be added, which will render it both more light and nourishing.

It is not to be wondered, that milk should for some time disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not, however, advise those who have been accustomed to animal-food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little once a-day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or the like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparative to a diet consisting chiefly of milk and vegetables, which the sooner the patient can be brought to bear, the better. Rice and milk, or barley and milk, boiled with a little sugar, is very proper food. Ripe fruits, roasted, baked, or boiled, are likewise proper, as goose or currant berry tarts, apples roasted, or boiled in milk, &c. The jellies, conserves, and preserves, &c. of ripe subacid fruits ought to be eaten plentifully, as the jelly of currants, conserve of roses, preserved plums, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended upon in a beginning consumption. If the patient has strength and a sufficient resolution to persist in this course, he will be seldom disappointed of a cure.

In a populous town in England,* where consump-

* Sheffield.

tions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected; where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported with strong broths, jellies, and such like. Some recommend shell-fish in this disorder, and with some reason, as they are nourishing and restorative.* All the food and drink, however, ought to be taken in small quantities, lest an overcharge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind should be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial. The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

MEDICINE.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines:—Take fresh squills, gum ammoniac, and powdered cardamom seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass prove too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and

* I have often known persons of a consumptive habit, where the symptoms were not violent, reap great benefit from the use of oysters, they generally eat them raw, and drink the juice along with them.

four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The lac ammoniacum, or milk of gum-ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy.

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a saucepan over a gentle fire, and a tablespoonful of it taken at any time when the cough is troublesome.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These instead of removing the cause of the disease, tend rather to increase it, by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature, as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acid, as apples, oranges, lemons, &c. appear to be the most proper. I have known patient's suck the juice of several lemons every day with manifest advantage, and would for this reason recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

For the patient's drink, we would recommend infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile-flowers, or water trefoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, &c. rectify the blood, and at the same time answer all the purposes of dilution, and quench the thirst much better than things that are luscious or sweet. But if the patient spit blood, he ought to use for his ordinary drink infusions or decoctions of the vulnerary roots, plants, &c.*

* See Appendix, *Volatile Decoction.*

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which infusions and decoctions may be prepared with the same intention; as the orches, the quince-seed, coltsfoot, linseed, sarsaparilla, &c. It is not necessary to mention the different ways in which these may be prepared. Simple infusion or boiling is all that is necessary, and the dose may be at discretion.

The conserve of roses is here peculiarly proper. It may either be put into the decoction above prescribed, or eaten by itself. No benefit is to be expected from trifling doses of this medicine. I never knew it of any service, unless where three or four ounces at least were used daily for a considerable time. In this way I have seen it produce very happy effects, and would recommend it wherever there is a discharge of blood from the lungs.

When the spitting up of gross matter, oppression of the breast, and the hectic symptom, shew that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction.

An ounce of the bark in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day in a little syrup, or a cup of horehound-tea.

If the bark should happen to purge, it may be made into an electuary, with the conserve of roses, thus— Take old conserve of roses, a quarter of a pound; Peruvian bark, half an ounce; syrup of orange or lemon, as much as will make it of the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance may infuse it in cold water. This seems to be the best menstruum for extracting the virtues of that drug. Half an ounce of bark in powder may be infused for twenty-four hours in half an English pint of water. Afterwards let it be passed through a fine strainer, and an ordinary tea-cupful of it taken three or four times a-day.

We would not recommend the bark while there are any symptoms of an inflammation of the breast; but when it is certainly known that matter is collecting there, it is one of the best medicines which can be used. Few patients, indeed, have resolution enough to give the bark a fair trial at this period of the disease, otherwise we have reason to believe that some benefit might be reaped from it.

When it is evident that there is an imposthume in the breast, and the matter can neither be spit up nor carried off by absorption, the patient must endeavour to make it break inwardly, by drawing in the steams of warm water or vinegar with his breath, coughing, laughing, or bawling aloud, &c. When it happens to burst within the lungs, the matter may be discharged by the mouth. Sometimes indeed the bursting of the vomica occasions immediate death, by suffocating the patient. When the quantity of matter is great, and the patient's strength exhausted, this is commonly the case. At any rate, the patient is ready to fall into a swoon, and should have volatile salts or spirits held to his nose.

If the matter discharged be thick, and the cough and breathing become easier, there may be some hopes of a cure. The diet at this time ought to be light, but restorative, as chicken-broths, sago-gruel, rice-milk, &c. the drink butter-milk or whey, sweetened with honey. This is likewise the proper time for using the Peruvian bark, which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out, but by an incision, as has already been observed. As this operation must always be performed by a surgeon, it is not necessary here to describe it. We shall only add, that it is not so dreadful as people are apt to imagine, and that it is the only chance the patient in this case has for his life.

A NERVOUS CONSUMPTION is a wasting or decay of the whole body, without any considerable degree of fever, cough, or difficulty of breathing. It is attended with indigestion, weakness, want of appetite, &c.

Those who are of a fretful temper, who indulge in spirituous liquors, or who breathe an unwholesome air, are most liable to this disease.

We would chiefly recommend, for the cure of a nervous consumption, a light and nourishing diet, plenty of exercise in a free open air, and the use of such bitters as brace and strengthen the stomach; as, the Peruvian bark, gentian-root, camomile, horehound, &c. These may be infused in water or wine, and a glass of it drank frequently.

It will greatly assist the digestion, and promote the cure of this disease, to take twice a-day twenty or thirty drops of the elixir of vitriol in a glass of wine or water. The chalybeate wine is likewise an excellent medicine in this case.* It strengthens the solids, and powerfully assists nature in the preparation of good blood.

Agreeable amusements, cheerful company, and riding about, are however preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption* cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula, or king's evil, from the scurvy, the asthma, the venereal disease, &c. a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and de-

† See Appendix, *Chalybeate Wine.*

licate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise without doors as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of hot punch or other strong liquors. These liquors, when too freely used, not only hurt the digestion and spoil the appetite, but heat and inflame the blood, and set the whole constitution on fire.

It has already been observed, that consumptions, in the time of Dr. Arbuthnot, made one-tenth part of the bills of mortality, and it is probable the proportion is now considerably increased from the effeminate education and enervating mode of the physical treatment of children, which produces a delicacy of habit pregnant with this disorder.

Consumption hardly admits of a cure, unless taken very early; yet here, as in other diseases, the empyric announces his infallible powders or potions. The patient swallows them, and imagines himself better. The quack announces in every newspaper, and innumerable hand-bills, the complete cures he has performed, and the ignorant part of the world, ever ready to be imposed upon, believe in the efficacy of the nostrum, and die in the constant hope and belief of a speedy recovery.

In fact, when a consumption becomes deeply seated, it will baffle the efforts of the best physicians. The best advice we can give is, to be careful to avoid it, by guarding against catching cold, which is too frequently its precursor and immediate cause.

CHAP. XIX.

OF THE SLOW OR NERVOUS FEVER

NERVOUS fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and the increase of sedentary employments, as they commonly attack persons of a weak relaxed habit, or who indulge in spirituous liquors.

CAUSES.—Nervous fevers may be occasioned by whatever depresses the spirits, or impoverishes the blood; as grief, fear, anxiety, want of sleep, intense thought, living on poor watery diet, as unripe fruits, cucumbers, melons, mushrooms, &c. They may likewise be occasioned by damp, confined, or unwholesome air. Hence they are very common in rainy seasons, and prove most fatal to those who live in dirty low houses, crowded streets, hospitals, jails, or such like places.

Persons whose constitutions have been broken by excessive venery, frequent salivations, too free an use of purgative medicines, or any other excessive evacuations, are most liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration, or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall only add, frequent and great irregularities in diet. Too great abstinence, as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state, as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind, than its opposite.

SYMPTOMS.—Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing, and dejection of mind, are generally the forerunners of this disease. They are succeeded by a quick low pulse, a dry tongue without any considerable thirst, chilliness and flushing in turns, &c.

After some time, the patient complains of a giddiness and pain of the head, has a nausea, with reachings and vomiting; the pulse is quick, and sometimes intermitting; the urine pale, resembling dead small-beer, and the breathing is difficult, with oppression of the breast, and slight alienations of mind.

If, towards the ninth, tenth, or twelfth day, the tongue becomes more moist, with a plentiful spitting, a gentle purging, or a moisture upon the skin; or, if a suppuration happen in one or both ears, or large pustules break out about the lips and the nose, there is reason to hope for a favourable crisis.

But, if there be an excessive looseness, or wasting sweats, with frequent fainting fits; if the tongue, when put out, trembles excessively, and the extremities feel cold, with a flattering or low creeping pulse; if there be a starting of the tendons, an almost total loss of sight and hearing, and an involuntary discharge by stool and urine, there is great reason to fear that death is approaching.

REGIMEN.—It is very necessary in this disease to keep the patient cool and quiet; the least motion would fatigue him, and will be apt to occasion weariness, and even faintings; his mind ought not only to be kept easy, but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind, than presenting to the patient's imagination gloomy or frightful ideas. These of themselves often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not keep too low; his strength and spirits ought to be supported by nourishing diet, and generous cordials. For this purpose his gruel, panada, or whatever food he takes, must be mixed with wine, according as the symptoms may require. Pretty strong wine-whey, or small negus sharpened with the juice of orange or lemon, will be proper for his ordinary drink. Mustard-whey is likewise a very proper drink in this fever, and may be rendered an excellent cordial

medicine by the addition of a proper quantity of white wine.*

Wine in this disease, if it could be obtained genuine, is almost the only medicine that would be necessary. Good wine possesses all the virtues, of the cordial medicines, while it is free from many of their bad qualities. I say good wine; for however common this article of luxury is now become, it is rarely to be obtained genuine, especially by the poor, who are obliged to purchase it in small quantities.

I have often seen patients in low nervous fevers, where the pulse could hardly be felt, with a constant delirium, coldness of the extremities, and almost every other mortal symptom, recover by using, in whey, gruel, and negus, a bottle or two of strong wine every day. Good old sound claret is the best, and may be made into negus, or given by itself, as circumstances require.

In a word, the great aim in this disease is to support the patient's strength, by giving him frequently small quantities, of the above, or other drinks of a warm and cordial nature; he is not, however, to be overheated either with liquor or clothes; and his food ought to be light, and given in small quantities.

MEDICINE.—Where a nausea, load, and sickness at the stomach, prevail at the beginning of a fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder, or a few spoonfuls of the vomiting julep,† will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but, by the gentle shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit, may clean the bowels by a small dose of Turkey rhubarb, or an infusion of senna and manna.

* See Appendix, *Mustard Whey*. † See Appendix, *Vomiting Julep*.

In all fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. This, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning an universal stricture upon the vessels, and sometimes on oppression and difficulty of breathing, which suggest the idea of a plethora, or too great quantity of blood. I have known even some of the faculty deceived by their own feelings in this respect so far as to insist upon being bled, when it was evident from the consequences that the operation was improper.

Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blistering-plasters may be applied at all times of the fever with great advantage. If the patient is delirious, he ought to be blistered on the neck or head, and it will be the safest course, when the insensibility continues, as soon as the discharge occasioned by one blistering-plaster abates, to apply another to some other part of the body, and by that means keep up a continual succession of them till he be out of danger.

I have been more sensible of the advantage of blistering in this than in any other disease. Blistering-plasters not only stimulate the solids to action, but likewise occasion a continual discharge which may in some measure supply the want of critical evacuations, which seldom happen in this kind of fever. They are most proper however either towards the beginning, or after some degree of stupor has come on; in which last case it will always be proper to blister the head.

If the patient is costive through the course of the disease, it will be necessary to procure a stool, by giving him every other day a clyster of milk and water, with

a little sugar, to which may be added a spoonful of common salt, if the above does not operate.

Should a violent looseness come on, it may be checked by small quantities of Venice treacle, or giving the patient for his ordinary drink the white decoction.*

A miliary eruption sometimes breaks out about the ninth or tenth day; as eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding, nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel with a little wine in it, and such like. He ought not to be kept too warm, yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the chief things to be depended upon in this kind of fever; yet for those who may choose to use them, we shall mention one or two of the forms of medicine which are commonly prescribed in it.†

In desperate cases, where the hiccup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from large doses of musk frequently repeated. Musk is doubtless an antispasmodic, and may be given to the quantity of a scruple three or four times a-day, or oftener if necessary. Sometimes it may be proper to add to the musk a few grains of camphire and salt of hartshorn, as these tend to promote perspiration and the discharge of urine. Thus, fifteen grains of musk, with three grains of camphire, and six grains of salt of hartshorn, may be made into a bolus with a little syrup, and given as above.

* See Appendix, *White Decoction.*

† When the patient is low, ten grains of Virginian snake-root, and the same quantity of contrayerva-root, with five grains of Russian castor, all in fine powder, may be made into a bolus with a little of the cordial confection or syrup of saffron. One of these may be taken every four or five hours.

The following powder may be used with the same intention:—Take wild Valerian root in powder, one scruple, saffron and castor each four grains; mix these by rubbing them together in a mortar, and give one in a cup of wine-whey, three or four times a-day.

If the fever should happen to intermit, which it frequently does towards the decline, or if the patient's strength should be wasted with colliquative sweats, &c. it will be necessary to give him the Peruvian bark. Half a drachm, or a whole drachm, if the stomach will bear it, of the bark in fine powder, may be given four or five times a-day in a glass of red port or claret. Should the bark in substance not sit easy on the stomach, an ounce of it in powder may be infused in a bottle of Lisbon or Rhenish wine for two or three days: afterwards it may be strained, and a glass of it taken frequently.*

Some give the bark in this and other fevers, where there are no symptoms of inflammation, without any regard to the remission or intermission of the fever. How far future observations may tend to establish this practice we will not pretend to say; but we have reason to believe that the bark is a very universal febrifuge, and that it may be administered with advantage in most fevers, where bleeding is not necessary or where there are no topical symptoms of inflammation.

The nervous fever requires the most particular attention. The patient will certainly sink, even under the most favourable appearances, unless he is supported by cordial and stimulating medicine.

In all stages, and even in the very extremity of this disorder, the care of the patient should be unabated, it being at all times subject to the most sudden alterations to the better, as well as to the worse. A bottle, or even two, of generous wine, given in the course of twenty-four hours, to a person apparently beyond every hope, has produced the most favourable change, and the patient recovered.

* The bark may likewise be very properly administered, along with other cordials, in the following manner:—Take an ounce of Peruvian bark, orange peel half an ounce, Virginian snake-root two drachms, saffron one drachm; let all of them be powdered, and infused in an English pint of the best brandy for three or four days: afterwards the liquor may be strained, and two tea-spoonfuls of it given three or four times a-day in a glass of small wine or negus. I now generally administer Huxham's tincture.

CHAP. XX.

OF THE MALIGNANT, PUTRID, OR SPOTTED FEVER.

THIS may be called the Pestilential Fever of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivation, &c. are most liable to it.

CAUSES.—This fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated; from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries, especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water that has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcases tainting the air, especially in hot seasons, are very apt to occasion putrid diseases. Hence this kind of fever often prevails in countries which are the scenes of war and bloodshed. This shews the propriety of removing burying-grounds, slaughter-houses, &c. at a proper distance from great towns.

Want of cleanliness is a very general cause of putrid fevers. Hence they prevail among the poor inhabitants of large towns, who breathe a confined unwholesome air, and neglect cleanliness. Such mechanics as carry on dirty employments, and are constantly confined within doors, are likewise very liable to this disease.

We shall only add, that putrid, malignant, or spotted, fevers are highly infectious, and are therefore often communicated by contagion. For which reason, all persons ought to keep at a distance from those affected with such diseases, unless their attendance is absolutely necessary.

SYMPTOMS.—The malignant fever is generally preceded by a remarkable weakness or loss of strength, without any apparent cause. This is sometimes so great that the patient can scarce walk, or even sit upright without being in danger of fainting away His mind too is greatly dejected; he sighs, and is full of dreadful apprehensions.

There is a nausea, and sometimes a vomiting of bile, a violent pain in the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious, and often interrupted with a sigh: the patient complains of a pain about the region of the stomach, and in his back and loins; his tongue is at first white, but afterwards it appears black and chapped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremors or shaking, and often becomes delirious.

If blood is let, it appears dissolved, or with a very small degree of cohesion, and soon becomes putrid; the stools smell extremely fœtid, and are sometimes of a greenish, black, or reddish cast. Spots of a pale, purple, dun, or black, colour, often appear upon the skin, and sometimes there are violent hæmorrhages or discharges of blood from the mouth, eyes, nose, &c.

Putrid fevers may be distinguished from the inflammatory, by the smallness of the pulse, the great dejec-

tion of mind, the dissolved state of the blood, the petechiæ or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all other symptoms, more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid, symptoms are so blended together, as to render it very difficult to determine to which class the fever belongs. In this case the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid, by too hot a regimen, or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. The duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm, mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small miliary pustules appearing between the petechiæ or purple spots, are likewise favourable, as also hot scabby eruptions about the mouth and nose. It is a good sign when the pulse rises upon the use of wine or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever, is likewise a favourable symptom,* as are abscesses in the groin, or parotid glands.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large

* Deafness is not always a favourable symptom in this disease. Perhaps it is only so when occasioned by abscesses formed within the ears.

black or livid blotches breaking out upon the skin; apithæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild staring of the eyes; difficulty of swallowing; inability to put out the tongue; and a constant inclination to uncover the breast. When the sweat and saliva are tinged with blood, and the urine is black, or deposits a black sooty sediment, the patient is in great danger. Starting of the tendons, and fœtid, ichorous, involuntary stools, attended with coldness of the extremities, are generally the forerunners of death.

REGIMEN.—In the treatment of this disease, we ought to endeavour as far as possible to counteract the putrid tendency of the humours; to support the patient's strength and spirits, and to assist nature in expelling the cause of the disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should therefore be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours is in a putrid state.

Beside the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most easily obtained. These ought frequently to be sprinkled upon the floor, the bed, and every part of the room. They may also be evaporated with a hot iron or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should likewise be held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would tend to prevent the infection from spreading

among those who attend him. Strong scented herbs, as rue, tansey, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-whey, are all very proper, and may be drank by turns, according to the patient's inclination. They may be rendered cordial by the addition of wine in such quantity as the patient's strength seems to require. When he is very low he may drink negus, with only one half water, and sharpened with the juice of Seville orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish; but if the body be open, red port or claret is to be preferred.

When the body is bound, a tea-spoonful of the cream of tartar may be put into a cup of the patient's drink, as there is occasion; or he may drink a decoction of tamarinds, which will both quench his thirst, and promote a discharge by stool.

If camomile-tea will sit upon his stomach, it is a very proper drink in this disease. It may be sharpened by adding to every cup of tea, ten or fifteen drops of the elixir of vitriol.

The food must be light, as panada, or groat-gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant, or gooseberry tarts, preserved cherries, plums, &c.

Taking a little food or drink frequently, not only supports the spirits, but counteracts the putrid tendency of the humours; for which reason the patient ought

frequently to be sipping small quantities of some of the acid liquors mentioned above, or any that may be more agreeable to his palate, or more readily obtained.

If he be delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This, or an infusion of the bark to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed and taken into the system, they may assist in preventing the putrescency of the humours.

MEDICINE.—If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body, however, is always to be kept gently open, by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering plasters are never used, except in the greatest extremities. If the petechiæ or spots should suddenly disappear, the patient's pulse sink remarkably, and a delirium, with other bad symptoms come on, blistering may be permitted. In this case the blistering plasters are to be applied to the head, and inside of the legs or thighs. But as they are sometimes apt to occasion a gangrene, we would rather recommend warm cataplasms, or poultices of mustard and vinegar, to be applied to the feet, having recourse to blisters only in the utmost extremities.

It is common in the beginning of this fever to give the emetic tartar in small doses, repeated every second or third hour, till it shall either vomit, purge, or throw the patient into a sweat. This practice is very proper, provided it be not pushed so far as to weaken the patient.

A very ridiculous notion has long prevailed, of expelling the poisonous matter of malignant disease by trifling doses of cordial or alexipharmic medicines. In

consequence of this notion, the contrayerva-root, the cordial confection, the mithridate, &c. have been extolled as infallible remedies. There is reason, however, to believe that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it both as the safest and best. Wine, with acids, and antiseptics, are the only things to be relied on in the cure of malignant fevers.

In the most dangerous species of this disease, when it is attended with purple, livid, or black spots, the Peruvian bark must be administered. I have seen it, when joined with acids, prove successful, even in cases where the petechiæ had the most threatening aspect. But, to answer this purpose, it must not only be given in large doses, but duly persisted in.

The best method of administering the bark is certainly in substance. An ounce of it in powder may be mixed with half an English pint of water, and the same quantity of red wine, and sharpened with the elixir or the spirit of vitriol, which will both make it sit easier on the stomach, and render it more beneficial. Two or three ounces of the syrup of lemon may be added, and two table-spoonfuls of the mixture taken every two hours, or oftener, if the stomach is able to bear it.

Those who cannot take the bark in substance, may infuse it in wine, as recommended in the preceeding disease.

If there be a violent looseness, the bark must be boiled in red wine, with a little cinnamon, and sharpened with the elixir of vitriol as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a drachm of the salt of wormwood dissolved in an ounce and a half of fresh lemon juice, and made into a draught, with an ounce of simple cinnamon water, and a bit of sugar, may be given and repeated as often as it is necessary.

If swellings of the glands appear, their suppuration

is to be promoted by the application of poultices, ripening cataplasms, &c.; and, as soon as there is any appearance of matter in them, they ought to be laid open, and the poultices continued.

I have known large ulcerous sores break out in various parts of the body, in the decline of this fever, of a livid gangrenous appearance, and a most putrid cadaverous smell. These gradually healed, and the patient recovered, by the plentiful use of Peruvian bark and wine, sharpened with spirits of vitriol.

For preventing putrid fevers, we would recommend a strict regard to cleanliness; a dry situation; sufficient exercise in the open air; wholesome food, and a moderate use of generous liquors. Infection ought above all things to be avoided. No constitution is proof against it. I have known persons seized with a putrid fever, by only making a single visit to a patient in it; others have caught it by lodging for one night in a town where it prevailed; and some by attending the funerals of such as died of it.*

When a putrid fever seizes any person in a family, the greatest attention is necessary to prevent the disease from spreading. The sick ought to be placed in a large apartment, as remote from the rest of the family as possible; he ought likewise to be kept extremely clean, and should have fresh air frequently let into his chamber; whatever comes from him should be immediately removed, his linen should frequently be changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to

* The late Sir John Pringle expressed a concern lest these cautions should prevent people from attending their friends or relations when afflicted with putrid fevers. I told him, I meant only to discourage unnecessary attendance, and mentioned a number of instances where putrid fevers had proved fatal to persons, who were rather hurtful than beneficial to the sick. The sagacious physician agreed with me, in thinking that a good doctor and careful nurse were the only necessary attendants; and that all others not only endangered themselves, but generally, by their solicitude and ill-directed care, hurt the sick.

work it off by drinking plentifully of camomile-tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile-flowers for his ordinary drink; and before he goes to bed, he may drink an English pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infection; but these are so far from securing them, that they often, by debilitating the body, increase the danger.

Those who wait upon the sick in putrid fevers, ought always to have a piece of sponge or handkerchief dipped in vinegar or juice of lemon, to smell to, while near the patient. They ought likewise to wash their hands, and, if possible, to change their clothes, before they go into company.

The putrid or spotted fever so nearly approaches the plague, that it may well be denominated the pestilential fever of Europe. In the narrow, close, and filthy lanes of this city, and her noisome prisons, its ravages are often most alarming.

The marshy grounds of St. George's-fields, without any proper fall or drain to carry off the filth, and inhabited by near half a million of persons, who continually inhale the most fœtid and poisonous effluvia, can hardly fail, at some period, to produce some terrible putrid disorder. Amidst the many improvements in the various parts of this metropolis, it is equally the cause of wonder and regret that no attempts have been made by proper drains to render salubrious so large and populous a district.

Alarming as this fever is, and nearly resembling the plague, it has nevertheless, even in its worst stages, and where putrefaction has actually taken place, been cured by the use of bark, wine, and other antiseptic medicines.

CHAP. XXI.

OF THE MILIARY FEVER.

THIS fever takes its name from the small pustules or bladders which appear on the skin, resembling in shape and size the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules, but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is more painful and dangerous.

Sometimes this is a primary disease, but it is much oftener only a symptom of some other malady, as the small-pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicines.

The miliary fever generally attacks the idle and the phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigor and prime of life. It is likewise more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak watery diet. Such females are extremely liable to be seized with this disease in child-bed, and often loose their lives by it.

CAUSES.—The miliary fever is sometimes occasioned by violent passion or affections of the mind, as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too freely of cold, crude, and unripe fruits, as plums, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons long keeping, &c. may likewise cause miliary fevers. They may also be occasioned by the stoppage of any

customary evacuations, as issues, setons, ulcers, the bleeding piles in men, or the menstrual flux in women, &c.

This disease in child-bed women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in child-bed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for almost the whole of their time. But among women who are active and laborious, who live in the country, and take sufficient exercise without doors, this disease is very little known.

SYMPTOMS.—When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is restless, and sometimes delirious, the tongue appears white, and the hands shake, with often a burning heat in the palms; and in child-bed women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or white colour begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fœtid smell; the great load on the breast, and oppression of the spirits generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally

come out on the third or fourth day, when the eruption is critical: but when symptomatical, they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger; but when they go in all of a sudden, and do not appear again, the danger is very great.

In child-bed-women, the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red colour. When these only appear, the disease goes by the name of a *rash*.

REGIMEN.—In all eruptive fevers, of whatever kind, the chief point is to prevent the sudden disappearance of the pustules, and to promote their maturation. For this purpose, the patient must be kept in such a temperature, as neither to push out the eruption too fast, nor to cause it to retreat prematurely.

The diet and drink ought therefore to be in a moderate degree nourishing and cordial, but neither strong nor heating. The patient's chamber ought neither to be kept too hot nor cold; and he should not be too much covered with clothes. Above all, the mind is to be kept easy and cheerful. Nothing so certainly makes an eruption go in as fear, or the apprehension of danger.

The food must be weak chicken-broth, with bread, panado, sago, or groat-gruel, &c. to a gill of which may be added a spoonful or two of wine, as the patient's strength requires, with a few grains of salt, and a little sugar. Good apples, roasted or boiled, with other ripe fruits of an opening cooling nature, may be eaten.

The drink may be suited to the state of the patient's strength and spirits. If these be pretty high, the drink ought to be weak, as water-gruel, balm-tea, or the decoction mentioned below.*

When the patient's spirits are low, and the eruption

* Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla; boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

does not rise sufficiently, his drink must be a little more generous; as wine-whey, or small negus, sharpened with the juice of orange or lemon, and made stronger or weaker as circumstances may require.

Sometimes the miliary fever approaches towards a putrid nature, in which case the patient's strength must be supported with generous cordials joined with acids, and if the degree of putrescence be great, the Peruvian bark must be administered. If the head be much affected, the body must be kept open by emollient clysters.*

MEDICINE.—If the food and drink be properly regulated, there will be little occasion for medicine in this disease. Should the eruption, however, not rise, or the spirits flag, it will not only be necessary to support the patient with cordials, but likewise to apply blistering-plasters. The most proper cordial in this case is good wine, which may either be taken in the patient's food or drink; and if there be signs of putrescence, the bark and acids may be mixed with wine, as directed in the putrid fever.

Some recommend blistering throughout the whole course of this disease; and where nature flags, and the eruption comes and goes, it may be necessary to keep up a stimulus, by a continual succession of small blister-

* In the Commericum Literarium for the year 1735, we have the history of an epidemical miliary fever which raged at Strasburg in the months of November, December, and January; from which we learn the necessity of a temperate regimen in this malady, and likewise that physicians are not always the first who discover the proper treatment of diseases. "This fever made terrible havoc even among men of robust constitutions, and all medicines proved in vain. They were seized in an instant with shivering, yawning, stretching, and pains in the back, succeeded by a most intense heat; at the same time there was a great loss of strength and appetite. On the seventh or ninth day the miliary eruptions appeared, or spots like flea-bites, with great anxiety, a dilirium, restlessness and tossing in bed. Bleeding was fatal. While matters were in this unhappy situation, a midwife of her own accord gave to a patient, in the height of the disease, a clyster of rain-water and butter without salt; and for his ordinary drink a quart of spring-water, half a pint of generous wine, the juice of a lemon, and six ounces of the whitest sugar, gently boiled till a scum arose, and this with great success; for the belly was soon loosened, the grievous symptoms vanished, and the patient was restored to his senses, and snatched from the jaws of death."—This practice was imitated by others with the like happy effects.

ing plasters; but we would not recommend above one at a time. If, however the pulse should sink remarkably, the pustules go in, and the head be affected, it will be necessary to apply several blistering-plasters to the most sensible parts, as the inside of the legs, thighs, &c.

Bleeding seldom is necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this, because it has been customary to treat this disease in childbed-women by plentiful bleeding, and other evacuations, as if it were highly inflammatory. But this practice is generally very unsafe. Patients in this situation bear evacuations very ill. And, indeed, the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever is often occasioned in childbed-women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen and large evacuations. We have reason to believe, that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance, or infused in wine and water, as the patient inclines.

The miliary fever, like other eruptive diseases, requires gentle purging, which should not be neglected, as soon as the fever is gone off, and the patient's strength will permit.

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green trashy fruits, and other unwholesome things; and, when in childbed, they ought strictly to observe a cool regimen.

In this fever, the changes are so frequent and sudden, as to require the most constant attention; and, as it often shews altogether new symptoms, and assumes quite a different character, the diet and regimen demand an appropriate change; otherwise the death of the patient must be the inevitable consequence. When this is considered, it will evince very strongly the remarks made in a former Chapter, of the futility and danger of any general strong fever-powders.

CHAP. XXII.

OF THE REMITTING FEVER.

THIS fever takes its name from a remission of the symptoms, which happens sometimes sooner, and sometimes later, but generally before the eighth day. The remission is generally preceded by a gentle sweat, after which the patient seems greatly relieved, but in a few hours the fever returns. These remissions return at very irregular periods, and are sometimes of longer, sometimes of shorter, duration; the nearer, however, that the fever approaches to a regular intermittent, the danger is the less.

CAUSES.—Remitting fevers prevail in low marshy countries abounding with wood and stagnating water; but they prove most fatal in places where great heat and moisture are combined, as in some parts of Africa, the province of Bengal in the East Indies, &c. where remitting fevers are generally of a putrid kind, and prove very fatal. They are most frequent in close calm weather, especially after rainy seasons, great inundations, or the like. No age, sex, or constitution, is exempted from the attack of this fever, but it chiefly seizes persons of a relaxed habit, who live in low dirty habitations, breathe an impure stagnating air, take little exercise, and use unwholesome diet.

SYMPTOMS.—The first symptoms of this fever are generally yawning, stretching, pain, and giddiness

in the head, with alternate fits of heat and cold. Sometimes the patient is affected with a delirium at the very first attack. There is a pain and sometimes a swelling about the region of the stomach, the tongue is white, the eyes and skin frequently appear yellow, and the patient is often afflicted with bilious vomitings. The pulse is sometimes a little hard, but seldom full, and the blood, when let, rarely shews any signs of inflammation. Some patients are exceedingly costive, and others are afflicted with a very troublesome looseness.

It is impossible to describe all the symptoms of this disease, as they vary according to the situation, the season of the year, and the constitution of the patient. They may likewise be greatly changed by the method of treatment, and by many other circumstances too tedious to mention. Sometimes the bilious symptoms predominate, sometimes the nervous, and at other times the putrid. Nor is it at all uncommon to find a succession of each of these, or even a complication of them, at the same time in the same person.

REGIMEN.—The regimen must be adapted to the prevailing symptoms. When there are any signs of inflammation, the diet must be slender, and the drink weak and diluting. But when nervous or putrid symptoms occur, it will be necessary to support the patient with food and liquors of a more generous nature, such as we recommended in the immediately preceding fevers. We must, however, be very cautious in the use of things of a heating quality, as this fever is frequently changed into a CONTINUAL, by a hot regimen and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean; his apartment, if possible, should be large, and frequently ventilated, by letting in fresh air at the doors and windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, bed-clothes, &c. should be frequently changed, and all his excrements immediately removed. Though these things have been recommended before, we think it necessary to repeat them here, as they are

of more importance to the sick than practitioners are apt to imagine.*

MEDICINE.—In order to cure this fever, we must endeavour to bring it to a regular intermission. This intention may be promoted by bleeding, if there be any signs of inflammation; but when that is not the case, bleeding is by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit, however, will seldom be improper, and is generally of great service. Twenty or thirty grains of ipecacuanha will answer this purpose very well; but where it can be obtained, we would rather recommend a grain or two of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea contiue.

The body ought to be kept open either by clysters or gentle laxatives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all potent or drastic purges are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure. It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is, to use a wholesome and nourishing diet, to pay the most scrupulous attention to cleanliness, to keep the body warm, to take sufficient exercise, and in hot countries to avoid damp situations, night air, evening dews, and the like.

* That ingenious physician Dr. Lind, in his inaugural dissertation concerning the putrid remitting fever of Bengal, observes——"The patient's shirt, bed-clothes, and bedding, ought frequently to be changed, and exposed to the air, and all his excrements immediately removed; the bed-chamber should be well ventilated, and frequently sprinkled with vinegar; in short, every attention should be paid to the patient. I can affirm, that a physician who puts them in practice, will much oftener succeed, than one who is even more skilful, but has not opportunity of using these means.

In countries where it is endemical, the best preventive medicine which we can recommend is, the Peruvian bark, which may either be chewed, or infused in brandy or wine, &c. Some recommend smoking tobacco as very beneficial in marshy countries, both for prevention of this and intermitting fevers.

To soldiers in camps, and in the various situations dangerous to health where their duty leads them, every precaution should be used to guard them against these fevers. Thoughtless and careless of their persons, our brave defenders despise disease as much as they do danger; and as disorders of this kind are more to be dreaded than the approach of an enemy, the proper means of prevention should be strictly enforced by the superior officers and medical attendants.

CHAP. XXIII.

OF THE SMALL-POX.

THIS disease, which originally came form Arabia, is now become so general, that very few escape it at one time of life or another. It is a most contagious malady, and has for many years proved the scourge of Europe.

The small-pox generally appears towards the spring. They are very frequent in summer, less so in autumn, and least of all in winter. Children are most liable to this disease; and those whose food is unwholesome, who want proper exercise, and abound with gross humours, run the greatest hazard from it.

The disease is distinguished into the distinct and confluent kind; the latter of which is always attended with danger. There are likewise other distinctions of the small-pox; as the crystalline, the bloody, &c.

CAUSES.—The small-pox is generally caught by infection. Since the disease was first brought into Europe, the infection has never been wholly extinguished, nor have any proper methods, as far as I know, been

taken for that purpose; so that now it has become in a manner constitutional. Children who have overheated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox.

SYMPTOMS.—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, and seem listless and drowsy for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and upon taking exercise, are apt to sweat. These are succeeded by slight fits of cold and heat by turns, which, as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomitting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion fits in very young children.

About the third or fourth day from the time of sickening, the small-pox generally begins to appear; sometimes indeed they appear sooner, but that is no favourable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms, and breast.

The most favourable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox, the pustules seldom appear before the fourth day from the time of sickening, and they generally keep coming out gradually for several days after. Pustules which are distinct, with a florid red basis, and which fill with thick purulent matter, first of a whitish, and afterwards of a yellowish colour, are the best.

A livid brown colour of the pustules is an unfavourable symptom; as also when they are small and flat, with black specks in the middle. Pustules which contain a thin watery ichor are very bad. A great num-

ber of pocks on the side is always attended with danger. It is likewise a bad sign when they run one into another.

It is a most unfavourable symptom when petechiæ, or purple, brown, or black, spots are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and shew the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms; as is also a continual strangury. Pale urine, and a violent throbbing of the arteries of the neck, are signs of an approaching delirium, or of convulsion fits. When the face does not swell, or falls before the pocks come to maturity, it is very unfavourable. If the face begins to fall about the eleventh or twelfth day, and at the same time the hands and feet begin to swell, the patient generally does well; but when these do not succeed each other there is reason to apprehend danger. When the tongue is covered with a brown crust, it is an unfavourable symptom. Cold shivering fits coming on at the height of the disease, are likewise unfavourable. Grinding of the teeth, when it proceeds from an affection of the nervous system, is a bad sign; but sometimes it is occasioned by worms, or a disordered stomach.

REGIMEN.—When the first symptoms of the small-pox appear, people are ready to be alarmed, and often fly to the use of medicine, to the great danger of the patient's life. I have known children, to appease the anxiety of their parents, bled, blistered, and purged, during the fever which preceded the eruption of the small-pox, to such a degree, that Nature was not only disturbed in her operation, but rendered unable to support the pustules after they were out; so that the patient, exhausted by mere evacuations, sunk under the disease.

When convulsions appear, they give a dreadful alarm. Immediately some nostrum is applied, as if this were a primary disease; whereas it is only a symptom, and far from being an unfavourable one, of the approaching eruption. As the fits generally go off before the actual

appearance of the small-pox, it is attributed to the medicine, which by this means acquires a reputation without any merit.*

All that is, generally speaking, necessary during the eruptive fever, is to keep the patient cool and easy, allowing him to drink freely of some weak diluting liquors; as balm-tea, barley-water, clear whey, gruels, &c. He should not be confined to bed, but should sit up as much as he is able, and should have his feet and legs frequently bathed in lukewarm water. His food ought to be very light, and he should be as little disturbed with company as possible.

Much mischief is done at this period by confining the patient too soon in his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood increases the fever, and pushes out the pustules. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great violence, they generally fall in before they come to maturity.

The good women, as soon as they see the small-pox begin to appear, commonly ply their tender charge with cordials, saffron, and marigold teas, wine, punch, and even brandy itself. All these are given with a view, as they term it, to throw out the eruption from the heart. This, like most other popular mistakes, is the abuse of a very just observation—that when there is a moisture on the skin, the pocks rise better, and the patient is easier, than when it continues dry and parched.—But that is no reason for forcing the patient into a sweat. Sweating never relieves, unless where it comes spontaneously, or it is the effect of drinking weak diluting liquors.

* Convulsion fits are no doubt very alarming, but their effects are often salutary. They seem to be one of the means made use of by Nature for breaking the force of a fever. I have always observed a fever abated, and sometimes quite removed, after one or more convulsion fits. This readily accounts for convulsions being a favourable symptom in the fever which precedes the eruption of the small-pox, as every thing which mitigates this fever lessens the eruption.

Children are often so peevish, that they will not lie in bed without a nurse constantly by them. Indulging them in this, we have reason to believe has many bad effects both upon the nurse and child. Even the natural heat of the nurse cannot fail to augment the fever of the child; but if she too proves feverish, which is often the case, the danger must be increased.*

Laying several children who have the small-pox in the same bed has many ill consequences. They ought, if possible, never to be in the same chamber, as the perspiration, the heat, smell, &c. all tend to augment the fever, and to heighten the disease. It is common among the poor to see two or three children lying in the same bed, with such a load of pustules, that even their skins stick together. One can hardly view a scene of this kind without being sickened by the sight; but how must the effluvia affect the poor patients, many of whom perish by this usage.†

A very dirty custom prevails among the lower class of people, of allowing children in the small-pox to keep on the same linen during the whole period of that loathsome disease. This is done lest they should catch cold, but it has many ill consequences. The linen becomes hard by the moisture which it absorbs, and frets the tender skin. It likewise occasions a bad smell, which is very pernicious both to the patient and those

* I have known a nurse, who had the small-pox before, so infected by lying constantly a-bed with a child in a bad kind of small-pox, that she had not only a great number of pustules which broke out all over her body, but afterwards a malignant fever, which terminated in a number of imposthumes or boils, and from which she narrowly escaped with her life. We mention this to put others on their guard against the danger of this virulent infection.

† This observation is likewise applicable to hospitals, workhouses, &c. where numbers of children happen to have the small-pox at the same time. I have seen above forty children cooped up in one apartment all the while they had this disease, without any of them being admitted to breathe the fresh air. No one can be at a loss to see the impropriety of such conduct. It ought to be a rule, not only in hospitals for the small-pox, but likewise for other diseases, that no patient should be within sight or hearing of another. This is a matter to which too little regard is paid. In most hospitals and infirmaries, the sick, the dying, and the dead, are often to be seen in the same apartment.

about him; besides, the filth and sordes which adhere to the linen being resorbed, or taken up again into the body, greatly augment the disease.

A patient should not be suffered to be dirty in an internal disease, far less in the small-pox. Cutaneous disorders are often occasioned by nastiness alone, and are always increased by it. Were the patient's linen to be changed every day, it would greatly refresh him. Care indeed is to be taken that the linen be thoroughly dry. It ought likewise to be put on when the patient is most cool.

So strong is the vulgar prejudice in this country, notwithstanding all that has been said against the hot regimen in the small-pox, that numbers still fall a sacrifice to that error. I have seen poor women travelling in the depth of winter, and carrying their children along with them in the small-pox, and have frequently observed others begging by the way-side with infants in their arms, covered with pustules; yet I could never learn that one of these children died by this sort of treatment. This is certainly a sufficient proof of the safety, at least, of exposing patients in the small-pox to the open air. There can be no reason, however, for exposing them to public view. It is now very common in the environs of great towns to meet patients in the small-pox on the public walks. This practice, however well it may suit the purposes of boasting inoculators, is dangerous to the citizens, and contrary to the laws of humanity and sound policy.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and water, good apples roasted or boiled with milk, and sweetened with a little sugar, or such like.

The drink may be equal parts of milk and water, clear sweet whey, barley-water, or thin gruel, &c. After the pocks are full, butter-milk, being of an opening and cleansing nature, is a very proper drink.

MEDICINE.—This disease is generally divided

into four different periods, viz. the fever which precedes the eruption, the eruption itself, the suppuration or maturation of the pustules, and the secondary fever.

It has already been observed that, little more is necessary during the primary fever than to keep the patient cool and quiet, allowing him to drink diluting liquors, and bathing his feet frequently in warm water. Though this be generally the safest course that can be taken with infants, yet adults of a strong constitution and plethoric habit sometimes require bleeding. When a full pulse, a dry skin, and other symptoms of inflammation render this operation necessary, it ought to be performed; but unless these symptoms are urgent, it is safer to be let alone; if the body is bound, emollient clysters may be thrown in.

If there is a great nausea, or inclination to vomit, weak camomile-tea or lukewarm water may be drank, in order to cleanse the stomach. At the beginning of a fever, Nature generally attempts a discharge, either upwards or downwards; which, if promoted by gentle means, would tend greatly to abate the violence of the disease.

Though every method is to be taken during the primary fever by a cool regimen, &c. to prevent too great an eruption, yet, after the pustules have made their appearance, our business is to promote the suppuration by diluting drink, light food, and, if Nature seems to flag, by generous cordials. When a low creeping pulse, faintishness, and great loss of strength, render cordials necessary, we would recommend good wine, which may be made into negus, with an equal quantity of water, and sharpened with the juice of orange, the jelly of currants, and the like. Wine-whey, sharpened as above, is likewise a proper drink in this case; great care, however, must be taken not to overheat the patient by any of these things. This, instead of promoting, would retard the eruption.

The rising of the small-pox is often prevented by the violence of the fever. In this case the cool regi-

men is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of bed, and to be lightly covered with clothes while in it.

Excessive restlessness often prevents the rising and filling of the small-pox: when this happens, gentle opiates are necessary. These, however, ought always to be administered with a sparing hand. To an infant, a tea-spoonful of syrup of poppies may be given every five or six hours, till it has the desired effect. An adult will require a table-spoonful, in order to answer the same purpose.

If a patient be troubled with a stranguary, or suppression of urine, which often happens in the small-pox, he should frequently be taken out of bed; and, if he be able, should walk across the room with his feet bare. When he cannot do this, he may frequently be set on his knees in bed, and should endeavour to pass his urine as often as he can. When these do not succeed, a tea-spoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought frequently to be washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant-jelly.

During the rising of the small-pox, it frequently happens that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, become acrid, and even putrid; from whence bad consequences must ensue. It will therefore be proper, when the body is bound, to throw in an emollient clyster every second or third day, through the whole course of the disease. This will greatly cool and relieve the patient.

When petechiæ, purple, black, or livid spots, appear among the small-pox, the Peruvian bark must immediately be administered in as large doses as the patient's stomach can bear. For a child, two drachms of the

bark in powder may be mixed in three ounces of common water, one ounce of simple cinnamon-water, and two ounces of the syrup of orange or lemon. This may be sharpened with the spirits of vitriol, and a table-spoonful of it given every hour. If it be given to an adult in the same form, he may take at least three or four spoonfuls every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it; in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatning aspect, rise and fill with laudable matter, by the use of the bark and acids.

The patient's drink ought likewise in this case to be generous, as wine or strong negus acidulated with spirits of vitriol, vinegar, the juice of lemon, jelly of currants, or such like. His food must consist of apples roasted or boiled, preserved cherries, plums, and other fruits of an acid nature.

The bark and acids are not only necessary when the petechiæ or putrid symptoms appear, but likewise in the lymphatic or crystalline small-pox, where the matter is thin and not duly prepared. The Peruvian bark seems to possess a singular power of assisting Nature in preparing laudable pus, or what is called good matter; consequently it must be beneficial both in this and other diseases, where the crisis depends on a suppuration. I have often observed, where the small-pox were flat, and the matter contained in them quite clear and transparent, and where at first they had the appearance of running into one another, that the Peruvian bark, acidulated as above, changed the colour and consistence of the matter, and produced the most happy effects.

When the eruption subsides suddenly, or, as the good women term it, when the small-pox *strike in*, before they have arrived at maturity, the danger is very great. In this case blistering-plasters must be immediately applied to the wrists and ancles, and the patient's spirits supported with cordials.

Sometimes bleeding has a surprising effect in raising

the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it. Sharp cataplasms, however, may be applied to the feet and hands; as they tend to promote the swelling of the parts, and by that means to draw the humours towards the extremities.

The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the small-pox begin to blacken, or turn on the face; and most of those who die of the small-pox are carried off by this fever.

Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours this way are by no means to be counteracted, but promoted, and the patient at the same time supported by food and drink of a nourishing and cordial nature.

If, at the approach of the secondary fever, the pulse be very quick, hard, and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But, in the secondary fever, if the patient be feverish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering-plasters must be applied, and the patient must be supported with generous cordials. Wine, and even spirits, have sometimes been given in such cases with amazing success.

As the secondary fever is in great measure, if not wholly, owing to the absorption of the matter, it would seem highly consonant to reason, that the pustules, as soon as they come to maturity, should be opened. This is every day practised in other phlegmons which tend to suppuration; and there seems to be no cause why it should be less proper here. On the contrary, we have reason to believe that by this means the secondary fever might always be lessened, and often wholly prevented.

The pustules should be opened when they begin to turn of a yellow colour. Very little art is necessary for

this operation. They may either be opened with a lancet or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face, it will be proper to begin with opening these, and the others in course as they become ripe. The pustules generally fill again a second or even a third time; for which cause the operation may be repeated, or rather continued, as long as there is any considerable appearance of matter in the pustules.

We have reason to believe that this operation, rational as it is, has been neglected, from a piece of mistaken tenderness in parents. They believe that it must give great pain to the poor child; and, therefore, would rather see it die than have it thus tortured. This notion, however, is entirely without foundation. I have frequently opened the pustules when the patient did not see me, without his being in the least sensible of it; but suppose it were attended with a little pain, that is nothing in comparison to the advantages which may arise from it.

Opening the pustules not only prevents the resorbtion of the matter into the blood, but likewise takes off the tension of the skin, and by that means greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of no small importance. Acrid matter, by lodging long in the pustules, cannot fail to corrode the tender skin; by which many a handsome face becomes so deformed as hardly to bear a resemblance to the human figure.*

It is generally necessary, after the small-pox are gone off, to purge the patient. If, however, the body has been open through the whole course of the disease, or if butter-milk, and other things of an opening nature, have been drank freely after the height of the small-pox, purging becomes less necessary; but it ought never wholly to be neglected.

* Though this operation can never do harm, yet it is only necessary when the patient has a great deal of small-pox, or when the matter which they contain is of so thin and acrid a nature that there is reason to apprehend bad consequences from its being quickly resorbed, or taken up again into the mass of circulating humours.

For very young children, an infusion of senna and prunes, with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are further advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder over night, and the same quantity of jalap in powder next morning. This may be wrought off with fresh broth or water-gruel, and may be repeated three or four times, five or six days intervening between each dose. For children further advanced, and adults, the dose must be increased in proportion to the age and constitution.*

When imposthumes happen after the small-pox, which is not seldom the case, they must be brought to suppuration as soon as possible, by means of ripening poultices; and when they have been opened, or have broke of their own accord, the patient must be purged. The Peruvian bark and milk diet will likewise be useful in this case.

When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of ass's milk, with such exercise as he can bear. For further directions in this case, see the article *Consumption.*

OF INOCULATION.

Though no disease after it is formed, baffles the powers of medicine more effectually than the small-pox, yet more may be done before-hand to render this disease favourable than any one we know, as almost all the danger from it may be prevented by inoculation. This salutary invention has been known in Europe above half a century; but, like most other useful discoveries,

* I have of late been accustomed, after the small-pox, to give one two, three, or five grains of calomel, according to the age of the patient, over night, and to work it off the next morning with a suitable dose of jalap. Or the jalap and calomel may be mixed together, and given in the morning.

it has till of late made but slow progress. It must, however, be acknowledged, to the honour of this country, that inoculation has met with a more favourable reception here than among any of our neighbours. It is still, however, far from being general, which we have reason to fear will be the case, as long as the practice continues in the hands of the faculty.

No discovery can be of general utility, while the practice of it is kept in the hands of a few. Had the inoculation of the small-pox been introduced as a fashion, and not as a medical discovery, or had it been practised by the same kind of operators here, as it is in those countries from whence we learned it, it had long ago been universal. Fears, jealousies, prejudices, and opposite interests, are, and ever will be, the most effectual obstacles to the progress of any salutary discovery. Hence it is that the practice of inoculation never became in any measure general, even in England, till taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe; and, by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the want of care, but from the excess of it.

They know very little of the matter, who impute the success of modern inoculators to any superior skill, either in preparing the patient, or communicating the disease. Some of them, indeed, from a sordid desire of engrossing the whole practice to themselves, pretend to have extraordinary secrets of nostrums for preparing persons for inoculation, which never fail of success. But this is only a pretence calculated to blind the ignorant and inattentive. Common sense and prudence alone are sufficient, both in the choice of the subject and management of the operation. Whoever is possessed of these may perform this office for his children whenever he finds it convenient, provided they be in a good state of health.

This sentiment is not the result of theory, but of observation. Though few physicians have had more op-

portunities of trying inoculation in all its different forms, so little appears to me to depend upon these, generally reckoned important circumstances, of preparing the body, communicating the infection by this or the other method, &c. that, for several years past, I have persuaded the parents or nurses to perform the whole themselves, and have found that method followed with equal success, while it is free from many inconveniences that attend the other.*

The small-pox may be communicated in a great variety of ways, with nearly the same degree of safety and success. In Turkey, from whence we learnt the practice, the women communicate the disease to children, by opening a bit of the skin with a needle, and putting into the wound a little matter taken from a ripe pustule. On the coast of Barbary, they pass a wet thread with the matter through the skin between the thumb and fore-finger; and, in some of the states of Barbary, inoculation is performed by rubbing the variolous matter between the thumb and fore-finger, or on other parts of the body. The practice of communicating the small-pox, by rubbing the variolous matter upon the skin, has been long known in many parts of Asia and Europe, as well as in Barbary, and has generally gone

* A critical situation, too often to be met with, first put me upon trying this method. A gentleman who had lost all his children except one son, by the natural small-pox, was determined to have him inoculated. He told me his intention, and desired I would persuade the mother and grandmother, &c. of its propriety, but that was impossible; they were not to be persuaded; and either could not get the better of their fears, or were determined against conviction. It was always a point with me not to perform the operation without the consent of the parties concerned, I therefore advised the father, after giving his son a dose or two of rhubarb, to go to a patient who had the small-pox of a good kind, to open two or three of the pustules, taking up the matter with a little cotton, and as soon as he came home to take his son apart, and give his arm a slight scratch with a pin, afterwards to rub the place well with the cotton, and take no further notice of it. All this he punctually performed; and at the usual period the small-pox made their appearance, which were of an exceeding good kind, and so mild as not to confine the boy an hour to his bed. None of the other relations knew but that the disease had come in the natural way, till the boy was well.

by the name of *buying the small-pox*. This custom has long been prevalent in Wales.

The present method of inoculating in Britain is to make two or three slanting incisions in the arm, so superficial as not to pierce quite through the skin, with a lancet, wet with fresh matter taken from a ripe pustule; afterwards the wounds are closed up, and left without any dressing. Some make use of a lancet covered with the dry matter; but this is less certain, and ought never to be used, unless where fresh matter cannot be obtained: when this is the case, the matter ought to be moistened, by holding the lancet for some time in the steam of warm water.*

Indeed, if fresh matter be applied long enough to the skin, there is no occasion for any wound at all. Let a bit of thread about half an inch long, wet with the matter, be immediately applied to the arm, midway between the shoulder and the elbow, and covered with a piece of common sticking-plaster, and kept on for eight or ten days. This will seldom fail to communicate the disease. We mention this method, because many people are afraid of a wound; and doubtless the more easily the operation can be performed, it has the greater chance to become general. Some people imagine that the discharge from a wound lessens the eruption; but there is no great stress to be laid on this notion; besides, deep wounds often ulcerate and become troublesome.

We do not find that inoculation is at all considered as a medical operation in those countries from whence we learned it. In Turkey it is performed by the women, and in the East Indies by the brhamins or priests. In this country the custom is still in its infancy; we make no doubt, however, but it will soon become so familiar, that parents will think no more of inoculating their children, than at present they do of giving them a purge.

* Mr. Tronchin communicates this disease by a little bit of thread dipt in the matter, which he covers with a small blistering-plaster. This method may no doubt be used with advantage in those cases where the patient is very much alarmed at the sight of any cutting instrument.

No set of men have it so much in their power to render the practice of inoculation general as the clergy, the greatest opposition to it still arising from some scruples of conscience, which they alone can remove. I would recommend it to them not only to endeavour to remove the religious objections which weak minds may have to this salutary practice, but to enjoin it as a duty, and to point out the danger of neglecting to make use of a mean which providence has put in our power, for saving the lives of our offspring. Surely such parents as wilfully neglect the means of saving their children's lives, are as guilty as those who put them to death. I wish this matter were duly weighed. No one is more ready to make allowance for human weakness and religious prejudices; yet I cannot help recommending it, in the warmest manner, to parents to consider how great an injury they do their children by neglecting to give them this disease in the early period of life.

The numerous advantages arising from the inoculation of the small-pox have been pretty fully pointed out by the learned Dr. M'Kenzie, in his History of Health.*

* "Many and great," says this humane author, "are the dangers attending the natural infection, from all which the inoculation is quite secure. The natural infection may invade weak or distempered bodies, by no means disposed for its kindly reception. It may attack them at a season of the year either violently hot or intensely cold. It may be communicated from a sort of small-pox impregnated with the utmost virulence. It may lay hold upon people unexpectedly, when a dangerous sort is imprudently imported into a maritine place. It may surprise us soon after excesses committed in luxury, intemperance, or lewdness. It may likewise seize on the innocent after indispensable watchings, hard labour, or necessary journeys. And is it a trivial advantage, that all these unhappy circumstances can be prevented by inoculation? By inoculation numbers are saved from deformity as well as from death. In the natural small-pox, how often are the finest features, and the most beautiful complexions, miserably disfigured? Whereas inoculation rarely leaves any ugly marks of scars, even where the numbers of pustules on the face has been very considerable, and the symptoms by no means favourable. And many other grievous complaints that are frequently subsequent to the natural sort, seldom follow the artificial. Does not inoculation also prevent those inexpressible terrors that perpetually harass persons who never had this disease, insomuch that when the small-pox is epidemical, ea-

To those mentioned by the doctor we shall only add, that such as have not had the small-pox in the early period of life, are not only rendered unhappy, but likewise in a great measure unfit for sustaining many of the most useful and important offices. Few people would choose even to hire a servant who had not had the small-pox, far less to purchase a slave who had the chance of dying of this disease. How could a physician or a surgeon, who had never had the small-pox himself, attend others under that malady? How deplorable is the situation of females, who arrive at mature age without having had the small-pox! A woman with child seldom survives this disease; and if an infant happen to be seized with the small-pox upon the mother's breast who has not had the disease herself, the scene must be distressing! If she continue to suckle the child, it is at the peril of her own life; and if she wean it, in all probability it will perish. How often is the affectionate mother forced to leave her house, and abandon her children at the very time when her care is most necessary? Yet, should parental affection get the better of her fears, the consequences would often prove fatal. I have known the tender mother and her sucking infant laid in the same grave, both untimely victims to this dreadful malady. But these are scenes too shocking even to mention. Let parents who run away with their children to avoid the small-pox, or who refuse to

tire villages are depopulated, markets ruined, and the face of distress spread over the whole country? From this terror it arises, that justice is frequently postponed, or discouraged, at sessions or assizes where the small-pox rages. Witnesses and juries dare not appear; and by reason of the necessary absence of some gentlemen, our honourable and useful judges are not attended with that profound reverence and splendour due to their office and merit. Does not inoculation, in like manner, prevent our brave sailors from being seized with this distemper on shipboard, where they must quickly spread the infection among such of the crew who never had it before, and where they have scarce any chance to escape, being half stifled with the closeness of their cabins, and but very indifferently nursed? Lastly, with regard to the soldiery, the miseries attending these poor creatures when attacked by the small-pox on a march, are inconceivable, without attendance, without lodgings, without acommodation; so that one in three commonly perishes."

inoculate them in infancy, consider to what deplorable situations they may be reduced by this mistaken tenderness!

As the small-pox is now become an epidemical disease in most parts of the known world, no other choice remains but to render the malady as mild as possible. This is the only manner of extirpation now left in our power; and though it may seem paradoxical, the artificial method of communicating the disease, could it be rendered universal, would amount to nearly the same thing as rooting it out. It is a matter of small consequence, whether a disease be entirely extirpated, or rendered so mild as either to destroy nor hurt the constitution; but that this may be done by inoculation, does not now admit of a doubt. The numbers who die under inoculation hardly deserve to be named. In the natural way, one in four or five generally dies; but by inoculation, not one in a thousand. Nay, some can boast of having inoculated ten thousand without the loss of a single patient.

I have often wished to see some plan established for rendering this salutary practice universal; but am afraid I shall never be so happy. The difficulties indeed are many; yet the thing is by no means impracticable. The aim is great: no less than saving the lives of one fourth part of mankind. What ought not to be attempted in order to accomplish so desirable an end?

The first step towards rendering the practice universal must be to remove the religious prejudices against it. This, as already observed, can only be done by the clergy. They must not only recommend it as a duty to others, but likewise practice it on their own children. Example will ever have more influence than precept.

The next thing requisite is, to put it in the power of all. For this purpose, we would recommend it to the Faculty to inoculate the children of the poor *gratis*. It is hard that so useful a part of mankind should, by their poverty, be excluded from such a benefit.

Should this fail, it is surely in the power of any state to render the practice general, at least as far as their dominion extends. We do not mean that it ought to be

enforced by a law. The best way to promote it would be, to employ a sufficient number of operators at the public expence to inoculate the children of the poor. This would only be necessary till the practice became general; afterwards custom, the strongest of all laws, would oblige every individual to inoculate his children, to prevent reflections.

It may be objected to this scheme that the poor would refuse to employ the inoculators: this difficulty is easily removed. A small premium to enable mothers to attend their children while under the disease, would be a sufficient inducement: besides, the success attending the operation would soon banish all objections to it. Even considerations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be useful, they are snatched away by this malady, to the great loss of their parents, and detriment of the public.

The British legislature has of late years shewn great attention to the preservation of infant-lives, by supporting the Foundling Hospital, &c. But we will venture to say, if one tenth part of the sums laid out in supporting that institution, had been bestowed towards promoting the practice of inoculation of the small-pox among the poor, that not only more useful lives had been saved, but the practice, ere now, rendered quite universal in this island. It is not to be imagined what effect example and a little money will have upon the poor; yet if left to themselves they would go on for ever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public spirited. Should such a scheme be approved, a proper plan might easily be laid down for the execution of it.

But as public plans are very difficult to bring about, and often, by the selfish views and misconduct of those entrusted with the execution of them, fail of answering the noble purposes for which they were designed; we shall, therefore, point out some other method by which the benefits of inoculation may be extended to the poor.

There is no doubt but inoculators will daily become more numerous. We would, therefore, have every parish in Britain to allow one of them a small annual salary for inoculating all the children of the parish at a proper age. This might be done at a very trifling expence, and it would enable every one to enjoy the benefit of this salutary invention.

Two things chiefly operate to prevent the progress of inoculation. The one is a wish to put the evil day as far off as possible. This is a principle in our nature; and as inoculation seems rather to be anticipating a future evil, it is no wonder mankind are so averse to it. But this objection is sufficiently answered by the success. Who in his senses would not prefer a lesser evil to-day to a greater to-morrow, provided they were equally certain?

The other obstacle is the fear of reflection. This has a very great weight with the bulk of mankind: Should the child die, they think the world would blame them. This they cannot bear. Here lies the difficulty, and, till that be removed, inoculation will make but small progress. Nothing however can remove it but custom. Make the practice fashionable, and all objections will soon vanish. It is fashion alone that has led the multitude since the beginning of the world, and will lead them to the end. We must, therefore, call upon the more enlightened part of mankind to set a pattern to the rest. Their example, though it may for some time meet with opposition, will at length prevail.

I am aware of an objection to this practice from the expence with which it may be attended; this is easily obviated. We do not mean that every parish ought to employ a Sutton and a Dimsdale as inoculators. These have by their success already recommended themselves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to succeed? They certainly have. Let them make the same trial, and the difficulties will soon vanish. There is not a parish, and hardly a village, in Britain, destitute of some person who can bleed. But this is a far more difficult operation,

and requires both more skill and dexterity than inoculation.

The persons to whom we would chiefly recommend the performance of this operation are the clergy. Most of them know something of medicine. Almost all of them bleed, and can order a purge, which are the qualifications necessary for the practice of inoculation. The priests among the less enlightened Indians perform this office, and why should a Christian teacher think himself above it? Surely the bodies of men, as well as their souls, merit a part of the pastor's care; at least the greatest Teacher who ever appeared among men, seems to have thought so.

Should all other methods fail, we would recommend it to persons to perform the operation themselves. Let them take any method of communicating the disease they please; provided the subjects be healthy, and of a proper age, they will seldom fail to succeed to their wish. I have known many instances even of mothers performing the operation, and never so much as heard of one bad consequence. A planter in one of the West-India islands is said to have inoculated with his own hand, in one year, three hundred of his slaves, who, notwithstanding the warmth of the climate, and other unfavourable circumstances, all did well. Common mechanics have often, to my knowledge, performed the operation with as good success as physicians. We do not, however, mean to discourage those who have it in their power from employing persons of skill to inoculate their children, and attend them while under the disease; but only to shew, that where such cannot be had, the operation ought not, upon that account, to be neglected.

Instead of multiplying arguments to reccommend this practice, I shall beg leave to mention the method which I took with my own son, then an only child. After giving him two gentle purges, I ordered the nurse to take a bit of thread which had been previously wet with fresh matter from a pock, and to lay it upon his arm, covering it with a piece of sticking-plaster. This

remained on six or seven days, till it was rubbed off by accident. At the usual time the small-pox made their appearance, and were exceeding favorable. Surely this, which is all that is generally necessary, may be done without any skill in medicine.

We have been the more full on this subject, because the benefits of inoculation cannot be extended to society by any other means than making the practice general. While it is confined to a few, it must prove hurtful to the whole. By means of it the contagion is spread, and is communicated to many who might otherwise never have had the disease. Accordingly it is found that nearly the same number die of the small-pox now as before inoculation was introduced; and this important discovery, by which alone more lives may be saved than by all the endeavours of the Faculty, is in a great measure lost by its benefits not being extended to the whole community.*

The spring and autumn have been already reckoned the most proper seasons for inoculation, on account of the weather being then most temperate; but it ought to be considered that these are generally the most unhealthy seasons of the whole year. Undoubtedly the best preparation for the disease is a previous good state of health. I have always observed that children in particular are more sickly towards the end of spring and autumn than any other time of the year. On this account, as well as for the advantage of cool air, I would propose winter as the most proper season for inoculation; though, on every other consideration, the spring would seem to be preferable.

The most proper age for inoculation is, between three and five. Many approve of inoculating on the breast, and where no circumstances forbid this practice, I have no objection to it. Children, however, are more liable to convulsions at this time than afterwards; besides, the anxiety of the mother or nurse, should the child be in

* By a well-laid plan for extending inoculation, more lives might be saved at a small expence, than are at present preserved by all the hospitals in England, which cost the public such an amazing sum.

danger, would not fail to heighten it by spoiling the milk.

Children, who have constitutional diseases, must nevertheless be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, pap, water-pap, weak broths, bread, light pudding, mild roots and white meats.

But children who have been accustomed to a hotter diet, who are of a gross habit, or abound with bad humours, ought to be put on spare diet before they are inoculated. Their food should be of a light cooling nature, and their drink whey, butter milk, and such like.

We would recommend no other medicinal preparation, but two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not depend on the preparation of their patients, but on their management of them while under the disease. Their constant care is to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few, and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods above mentioned.

The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed for the natural small-pox. Purging is not less necessary after the small-pox by ino-

culation, than in the natural way, and ought by no means to be neglected.

Inoculation, beneficial as it is, would have been of much more extensive and essential benefit, had it become the fashion for people in general to perform it themselves, without having recourse to professional assistance. In India, where it is performed by the Bramins, not one in a million fails to receive the infection, or suffers from it the least injury. Were this example followed by the clergy of Europe, the practice would become universal, and innumerable lives be saved. This humane act is, however, practised by some of our clergy, whose example it is to be hoped may have an influence on the venerable body in general, and lead them to walk in the steps of their great Master, who—went about curing diseases.

Much as the interested part of the faculty exert themselves in keeping this beneficial operation in their own hands, experience shews that it requires no professional knowledge, nor any medicine to be administered either previous or posterior to the operation, and that a proper regimen and abstinence from certain articles that may prove injurious, is all that is requisite. What used to be formerly so general, of preparing the body, as it was called, that is, reducing its strength by repeated doses of physic, cannot fail to be injurious instead of being beneficial. Common sense tells us, that a person in full health is always best prepared to meet a disease. One perfectly well, attempting to make himself better, is preposterous in the highest degree; and, as we have so often had occasion to observe, nothing can be so hurtful to the constitution as making the belly a druggist's shop.

The clergy have it certainly most in their power to render inoculation universal, but should they decline this benevolent office, every encouragement should be given to induce mothers to perform it themselves; a moderate premium would at first have this effect, and in a short time experience and example would render the practice general, and supersede the necessity of any pe-

cuniary inducement. Even at this day, when the management of the patient under this disorder has in a considerable degree reduced the number of its victims, we still see many left by its ravages as spectacles of deformity; many ruined in their constitution, and not a few losing their lives. Were the practice of inoculation universal, which it never can be while deemed a medical operation, all the evils attending the small-pox would speedily disappear.

The introduction of the *Cow-pox*, if by experience it proves a complete and infallible preventative against the small-pox, is doubtless an improvement of immense importance. The invention and promulgation of a discovery, which combines ease, safety, and simplicity, deserves the highest praise; and, patronized as it is by the most distinguished medical characters, we may fondly expect in its general adoption the complete abolition of a disease which has heretofore proved so fatal to mankind.—This subject, however, will be fully treated of in a separate Chapter, which will be found in a subsequent part of this work.

CHAP. XXIV.

OF THE MEASLES.

THE measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal: but its consequences are often very troublesome.

CAUSE.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous, according to the constitution of the patient, the season of the year, the climate, &c.

SYMPTOMS.—The measles, like other fevers, are preceeded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white, but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes, indeed, the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of sharp rheum, and great acuteness of sensation, so that they cannot bear the light without pain. The eye-lids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common, both before and in the progress of the disease.

About the fourth day, small spots, resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities; these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases.

About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever, however, and difficulty of breathing, often continue, especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles, generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are, a moderate looseness, a moist skin, and a plentiful discharge of urine,

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist Nature, by proper cordials, in throwing out the eruption, if her efforts be too languid, but when they are too violent, they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

REGIMEN.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small-beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice with marshmallow roots and sarsaparilla, infusions of linseed or of the flowers of elder, balm-tea, clarified whey, barley-water, and such like. These, if the patient be costive, may be sweetened with honey; or, if that should disagree with the stomach, a little manna may occasionally be added to them.

MEDICINE.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is commonly necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. But if the disease be of a mild kind, bleeding may be omitted.*

Bathing the feet and legs frequently in lukewarm water, both tends to abate the violence of the fever, and to promote the eruption.

* I do not know any disease wherein bleeding is more necessary than in the measles, especially when the fever runs high; in this case I have always found it relieve the patient.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought to be promoted by drinking lukewarm water, or weak camomile-tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar-candy pounded together: or, take now and then a spoonful of the oil of sweet almonds, with sugar-candy dissolved in it. These will soften the throat, and relieve the tickling cough.

If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, the patient must be bled according to his strength, and blistering-plasters applied, with a view to prevent the load from being thrown on the lungs, where, if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering-plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the putrid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children, the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given, according to the patient's age, or the violence of the symptoms.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeed the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles, should be careful what they eat or drink. The food for some time ought to be light and in small quantities, and their drink diluting, and rather of an opening nature, as butter-milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asmath, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses' milk, to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and, lastly, if these do not succeed, let him remove to a warmer climate.*

* Attempts have been made to communicate the measles, as well as the small-pox, by inoculation, and we make no doubt but in time the practice may succeed. Dr. Home of Edinburgh says, he communicated the disease by the blood. Others have tried this method, and have not found it succeed. Some think the disease would be more certainly communicated by rubbing the skin of a patient who has the measles with cotton, and afterwads applying the cotton to a wound as in the small-pox; while others recommend a bit of flannel which had been applied to the patient's skin all the time of the disease, to be afterwards laid upon the arm or leg of the person to whom the infection is to be communicated. There is no doubt but this disease, as well as the small-pox, may be communicated various ways; the most probable, however, is either from cotton rubbed upon the skin, as mentioned above, or by introducing a little of the sharp humour which distils from the eyes of the patient into the blood. It is agreed on all hands, that such patients as have been inoculated had the disease very mildly; we therefore wish the practice were more general, as the measles have of late become very fatal.

OF THE SCARLET FEVER.

The scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of the summer, at which time it often seizes whole families; children and young persons are most subject to it.

It begins like other fevers with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin, falls off.

There is seldom any occasion for medicine in this disease. The patient ought, however, to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool diluting liquors. If the fever runs high, the body must be kept gently open by emollient clysters, or small doses of nitre and rhubarb. A scruple of the former, with five grains of the latter, may be taken thrice a-day, or oftener, if necessary.

Children and young persons are sometimes seized at the beginning of this disease with a kind of stupor and epileptic fits. In this case, the feet and legs should be bathed in warm water, a large blistering-plaster applied to the neck, and a dose of the syrup of poppies given every night till the patient recovers.*

The scarlet fever however, is not always of so mild a nature. It is sometimes attended with putrid or malignant symptoms, in which case it is always dangerous. In the malignant scarlet fever, the patient is not only affected with coldness and shivering, but with langour, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin

* Sydenham.

not, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When the disease is mistaken for a simple inflammation, and treated with repeated bleedings, purging, and cooling medicines, it generally proves fatal. The only medicines that can be depended on, in this case, are cordials and antiseptics, as the Peruvian bark, wine, snake-root, and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.*

OF THE BILIOUS FEVER.

When a continual, remitting, or intermitting, fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in camps, or who are exposed to the night air, are most liable to this kind of fever.

If there are symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever. The saline draught may likewise be frequently administered, and the patient's body kept open by clysters and mild purga-

* In the year 1774, during winter, a very bad species of this fever prevailed in Edinburgh. It raged chiefly among young people. The eruption was generally accompanied with a quinsey, and the inflammatory symptoms were so blended with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swelling of the submaxillary glands, and not a few had a suppuration in one or both ears.

tives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken-broths, jellies of hartshorn, and the like; and he may use the *white decoction* for his ordinary drink.* If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article of *Dysentery*.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him, three or four times a-day a table-spoonful of Mindererus's spirit † mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

We cannot forbear here repeating, what we have so often endeavoured to inculcate, namely, the impossibility of prescribing for a fever, without attending to the particulars of the patient's case. Not only can no general rule or universal medicine be recommended, but the most able physician cannot pretend to prescribe for a person in this disease, without personally judging of the patient's situation. Bleeding may certainly be beneficial when the symptoms run high, with a full hard pulse and other signs of inflammation; but to judge of this requires the best medical skill.

* See Appendix, *White Decoction.*
† See Appendix, *Spirit of Mindererus.*

CHAP. XXV.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THIS disease, which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine and plethoric habit are most liable to it. It often attacks young people, and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequetnly seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

CAUSES.—The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue.* It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like.

SYMPTOMS.---The erysipelas attacks with a shivering, thirst, loss of strength, pain in the head and

* The country people, in many parts of Britain, call this disease a *blast*, and imagine it proceeds from foul air, or ill wind, as they term it. The truth is, they often lie down to rest them, when warm and fatigued, upon the damp ground, where they fall asleep, and lie so long as to catch cold, which occasions the erysipelas. This disease may indeed proceed from other causes, but we may venture to say, that nine times out of ten it is occasioned by cold caught after the body has been greatly heated or fatigued.

back, heat, restlessness, and a quick pulse; to which may be added, vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear, at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous smell, the skin shines; and, if the pain be violent it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with a swelling; and there is a difficulty of breathing. If the mouth and nostrils be very and dry, the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

This disease seldom proves fatal; yet when the habit is impaired, and the legs swell to an enormous size, the complaint then becomes difficult of cure: much, however, depends upon the constitution of the patient. To persons far advanced in years, and of a scorbutic habit, and whose humours are tainted by a bad course of diet, it has sometimes proved incurable.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangreen, or a mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

REGIMEN.---In the erysipelas the patient must neither be kept too hot nor too cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality, as groat-gruel, panado, chicken or barley broth, with cooling herbs and fruits, &c. avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood; the drink may be barley-water, an infusion of elder-flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negus, and other things of a cordial nature. His food may be sago-gruel, with a little wine and nourishing broths, taken in small quantities, and often repeated. Great care, however, must be taken not to overheat him.

MEDICINE.—In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel, than promote, any discharge from the part. At the beginning of this disease, it is neither safe to promote a suppuration, nor to repel the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool, or very soft flannel, are the safest applications to the part. These not only defend it from the external air, but likewise promote the perspiration, which has a great tendency to carry off the disease. In Scotland the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is common to bleed in the erysipelas; but this

likewise requires caution. If, however, the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emolient clysters, or small doses of nitre and rhubarb. Some, indeed, recommend very large doses of nitre in the erysipelas, but nitre seldom sits easy on the stomach when taken in large doses. It is, however, one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink several times a-day.

When the erysipelas leaves the extremities, and seizes the head, so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and mild purgatives fail to have this effect, stronger ones must be given. Blistering plasters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices, with saffron, warm fomentations, and such like.

When the black, livid, or blue colour of the part shews a tendency to mortification, the Peruvian bark must be administered. It may be taken along with acids, as recommended in the small-pox, or in any other form

more agreeable to the patient. It must not, however, be trifled with, as the patient's life is at stake. A drachm may be given every two hours, if the symptoms be threatening, and cloths dipped in warm camphorated spirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, the decoction of woods* may be drank, after which a course of bitters will be proper.

Such as are liable to frequent attacks of the erysipelas, ought carefully to guard against all violent passions; to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality; and their drink ought to be small beer, whey, butter-milk, and such like. They should never suffer themselves to be long costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

The applications so constantly recurred to, of poultices, embrocations, and fomentations, in cases of erysipelas, are generally hurtful, and can only be serviceable where the suppuration is inevitable. Absorbents, to take up the moisture and cool the skin, are greatly preferable, and for this purpose we would reccommend hair-powder, spread on a soft rag, and laid over the parts affected two or three times a-day; an application attended with no danger, and extremely gratifying to the patient.

* See Appendix, *Decoction of Woods*.

Erysipelas, when driven from the part affected, is apt to fly to another, where it may be more dangerous. Applications, especially violent ones, for its removal, should be used with caution, and not without proper advice. There are not wanting instances of its being expelled from the face, and fixing on other parts, where it has proved fatal.

CHAP. XXVI.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

THIS is sometimes a primary disease, but oftener only a symptom of some other malady; as the inflammatory, eruptive, or spotted fever, &c. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigour of life. The passionate, the studious, and those whose nervous system is irritable in a high degree, are most liable to it.

CAUSES.—This disease is often occasioned by night-watching, especially when joined with hard study; it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season, with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

SYMPTOMS.---The symptoms which usually precede a true inflammation of the brain are, pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the

skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse, indeed, is often weak, irregular, and trembling; but sometimes it is hard and contracted. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia mater, it is hard. A remarkable quickness of hearing is a common symptom of this disease; but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes, from a sullen silence, the patient becomes all on a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom; as are also a suppression of urine; a total want of sleep; a constant spitting; a grinding of the teeth; which last may be considered as a kind of convulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c. it is owing to a translation of the disease from these parts to the brain, and generally proves fatal. This shews the necessity of proper evacuations, and the danger of repellants in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine, which lets fall a copious sediment. Sometimes this disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged or improperly treated, it sometimes ends in madness, or a kind of stupidity, which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses or disturbs the imagination, increases the disease. Even too much light is hurtful: for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not, however, necessary to exclude the company of an agreeable friend, as this has a tendency to sooth and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind and increase his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be obtained, or by some other excuse. A little of any thing that the mind is set upon, though not quite proper will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to sooth the passions, and compose the mind. Boerhave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a bason, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado and water-gruel, sharpened with jelly of currants, or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c. The drink small, diluting, and cooling; as whey, barley-water, or decoctions of barley and tamarinds, which latter not only render the liquor more palatable, but are more beneficial, as they are of an opening nature.

MEDICINE.—In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked by putting a straw, or any other sharp body up the nostril.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular vein. When the patient's pulse and spirits are so low that he cannot bear bleeding with a lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but by being applied to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steam of warm water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations, either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them, as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaved, and frequently rubbed with vinegar and rose-water. Cloths dipped in this mixture may likewise be applied to the temples. The feet ought frequently to be bathed in luke-warm water, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering-plaster to the whole head.

The inflammation requires particular attention that the patient be kept as easy, composed, and tranquil as possible; and an attentive and sensible nurse will here frequently be found as serviceable as the most enlightened physician. The smallest irritation, even light, noise, or any thing that may suddenly or strongly impress the senses, is carried so rapidly to the brain, as to increase the inflammation, and disorder even the organs by which it was conveyed.

CHAP. XXVII.

OF THE OPTHALMIA, OR INFLAMMATION OF THE EYES.

THIS disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quicklime, or other substances getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes. Viewing snow or other white bodies for a long time, or looking stedfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light, will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery, are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflamma-

tion of the eyes proceeds from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eye-lids turning inwards, and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient. It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrophulous habit.

SYMPTOMS.—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no favorable symptom. But when the disease is accompanied with a violent pain in the head, and continues long, the patient is in danger of losing his sight.

REGIMEN.—The diet, unless in scrophulous cases, can hardly be too spare, especially at the beginning. The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vege-

tables, weak broths and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

MEDICINE.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications which do mischief twenty times for once they do good. People ought, therefore, to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of Glauber's salts and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little lenitive electuary, or any other mild purgative, will answer the same end. The patient at the

same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take at bed-time a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in luke-warm water, and his head shaved twice or thrice a-week, and afterwards washed in cold water. This has often a remarkably good effect.

If the inflammation does not yield to these evacuations, blistering-plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder-blades. It may be dressed twice a-day with yellow basilicon. I have known patients who had been blind for a considerable time, recover their sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonfuls of the syrup of poppies every night, more or less, according to his age, r the violence of the symptoms.

After the inflammation has gone off, if the eyes still remain weak and tender, they m be bathed every

night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived, by which the eye may be quite immersed in the brandy and water, and where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scrophulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negus, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may be either given in substance, or prepared in the following manner:

Take an ounce of the bark in powder, with two drachms of Winter's bark, and boil them in an English quart of water to a pint: when it has boiled nearly long enough, add half an ounce of liquorice-root sliced. Let the liquor be strained. Two, three, or four tablespoonfuls, according to the age of the patient, may be taken three or four times a-day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than in others; but, in general it requires a considerable time to produce any lasting effects.

Dr. Cheyne says, "that Æthiop's mineral never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in." There is no doubt but this and other preparations of mercury may be made of singular service in opthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards, or pressing upon them.* These ought to be removed by plucking them out with a pair of small pincers.

* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair-pencil between the eye-lids and the ball of the eye. In some places, the peasants do this very effectually by using their tongue in the same manner.

Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor, and every thing of a heating quality. Above all, let them avoid the night air and late studies.*

Among the numerous classes of quacks, the oculists, or *eye-doctors*, hold a very prominent rank; but, like their brethren in other disorders, often in the end totally destroy the organ they pretend to cure. Without being acquainted with the structure of the eye, they boldly administer the same remedy, and perform the same surgical operation of scarifying, scratching, and cutting, whether the inflammation proceeds from a scrophulous habit or specific infection.

CHAP. XXVIII.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

THIS disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperature.

CAUSES.—In general, it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats and inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat, and parts adjacent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

* As most people are fond of using eye-waters and ointments in this and other diseases of the eyes, we have inserted some of the most approved forms of these medicines in the Appendix. See Appendix, *Eye-water* and *Eye-salve*.

Singing, speaking aloud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companies, who, after sitting long in a warm room, drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat, if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat, and occasion a quinsey. It may also proceed from bones, pins or other sharp substances, sticking in the throat, or from the caustic fumes of metals or minerals, as arsenic, antimony, &c. taken in by the breath. This disease is sometimes epidemical and infectious.

SYMPTOMS.—The inflammation from the throat is evident from inspection, the parts appearing red and swelled; besides, the patient complains of pains in swallowing. His pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult, the pain affects the ears, the eyes generally appear red, and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea or inclination to vomit, and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last, merely from an inability to swallow any kind of food.

When the breathing is laborious, with straitness of the breast and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the

patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsey is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale ghastly countenance, and coldness of the extremities, are fatal symptoms.

REGIMEN.—The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light and in small quantities, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is particularly necessary that the neck be kept warm, for which purpose several folds of soft flannel may be wrapt round it. That alone may often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants of this country. When they feel any uneasines of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies; the custom however is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief or a piece of flannel be kept about it till the inflamma ion be removed.

The jelly of black currants is a medicine very much in esteem for complaints in the throat, and indeed it is of some use. It should be almost constantly kept in

the mouth and swallowed down leisurely. It may likewise be mixed with the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half an English pint of pectoral decoction, two or three spoonfuls of honey, and the same quantity of currant-jelly. This may be used three or four times a day; and, if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing, by adding to it a teaspoonful of the spirit of sal ammoniac. Some recommend gargles made of the decoction of the leaves or bark of the black currant-bush; but where the jelly can be had, these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in luke-warm water is more apparent; that practice ought therefore never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

MEDICINE.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This may either be done, by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of sal prunel, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of saliva, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jews' ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no farther notice of it.

Some recommend the gum guaiacum as a specific in this disease. Half a drachm of the gum in powder may be made into an electuary with the rob of elder-berries, or the jelly of currants, for a dose, and repeated occasionally.*

Blistering upon the neck or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue-ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This however is sometimes the case, in spite of all endeavours to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel, or the like. Soft poultices

* Dr. Home.

ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

It sometimes happens, before the tumour breaks, that the swelling is so great, as entirely to prevent any thing from getting down into the stomach. In this case, the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel, with milk, &c. Patients have often been supported by these for several days, till the tumour has broke; and afterwards they have recovered.

Not only the swallowing but the breathing, is often prevented by the tumour. In this case, nothing can save the patient's life, but opening the *trachœa* or windpipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any direction about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *anguina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift up the patient by the hair of the head, and thrust their fingers under his jaws, &c. all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperately. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought, likewise, to beware of catching cold, and should abstain

from aliment and medicines of an astringent or stimulating nature.

Violent exercise by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought, therefore, after speaking loud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats, entirely freed from that complaint by only wearing a ribband, or a piece of flannel, constantly about their necks, or by wearing thicker shoes, a flannel waistcoat, or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconvenience of using such things for life is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a-day with a decoction of figs sharpened a little with the elixir or spirit of vitriol.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCEROUS SORE THROAT.

This kind of quinsey is but little known in the northern parts of Britain, though for some time past it has been fatal in the more southern counties. Children are more liable to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails chiefly in autumn, and is most frequent after a long course of damp or sultry weather.

CAUSES.—This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. This ought to put people upon their guard against going near such patients as labour under the disorder, as by that means they endanger not only their own lives, but likewise those of their friends and connexions. Whatever tends to produce putrid or malignant fevers, may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c.

SYMPTOMS.—It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast, his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude, but as the disease advances it turns more of a yellowish colour. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat it appears swelled, and of a florid red colour. Pale or ash-coloured spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An effloresence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

danger, would not fail to heighten it by spoiling the milk.

Children, who have constitutional diseases, must nevertheless be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of the most simple and wholesome kind, as milk, pap, water-pap, weak broths, bread, light pudding, mild roots and white meats.

But children who have been accustomed to a hotter diet, who are of a gross habit, or abound with bad humours, ought to be put on spare diet before they are inoculated. Their food should be of a light cooling nature, and their drink whey, butter-milk, and such like.

We would recommend no other medicinal preparation, but two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not depend on the preparation of their patients, but on their management of them while under the disease. Their constant care is to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few, and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods above mentioned.

The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed for the natural small-pox. Purging is not less necessary after the small-pox by ino-

culation, than in the natural way, and ought by no means to be neglected.

Inoculation, beneficial as it is, would have been of much more extensive and essential benefit, had it become the fashion for people in general to perform it themselves, without having recourse to professional assistance. In India, where it is performed by the Bramins, not one in a million fails to receive the infection, or suffers from it the least injury. Were this example followed by the clergy of Europe, the practice would become universal, and innumerable lives be saved. This humane act is, however, practised by some of our clergy, whose example it is to be hoped may have an influence on the venerable body in general, and lead them to walk in the steps of their great Master, who—went about curing diseases.

Much as the interested part of the faculty exert themselves in keeping this beneficial operation in their own hands, experience shews that it requires no professional knowledge, nor any medicine to be administered either previous or posterior to the operation, and that a proper regimen and abstinence from certain articles that may prove injurious, is all that is requisite. What used to be formerly so general, of preparing the body, as it was called, that is, reducing its strength by repeated doses of physic, cannot fail to be injurious instead of being beneficial. Common sense tells us, that a person in full health is always best prepared to meet a disease. One perfectly well, attempting to make himself better, is preposterous in the highest degree; and, as we have so often had occasion to observe, nothing can be so hurtful to the constitution as making the belly a druggist's shop.

The clergy have it certainly most in their power to render inoculation universal, but should they decline this benevolent office, every encouragement should be given to induce mothers to perform it themselves; a moderate premium would at first have this effect, and in a short time experience and example would render the practice general, and supersede the necessity of any pe-

cuniary inducement. Even at this day, when the management of the patient under this disorder has in a considerable degree reduced the number of its victims, we still see many left by its ravages as spectacles of deformity; many ruined in their constitution, and not a few losing their lives. Were the practice of inoculation universal, which it never can be while deemed a medical operation, all the evils attending the small-pox would speedily disappear.

The introduction of the *Cow-pox*, if by experience it proves a complete and infallible preventative against the small-pox, is doubtless an improvement of immense importance. The invention and promulgation of a discovery, which combines ease, safety, and simplicity, deserves the highest praise; and, patronized as it is by the most distinguished medical characters, we may fondly expect in its general adoption the complete abolition of a disease which has heretofore proved so fatal to mankind.—This subject, however, will be fully treated of in a separate Chapter, which will be found in a subsequent part of this work.

CHAP. XXIV.

OF THE MEASLES.

THE measles appeared in Europe about the same time with the small-pox, and have a great affinity to that disease. They both came from the same quarter of the world, are both infectious, and seldom attack the same person more than once. The measles are most common in the spring season, and generally disappear in summer. The disease itself, when properly managed, seldom proves fatal: but its consequences are often very troublesome.

CAUSE.—This disease, like the small-pox, proceeds from infection, and is more or less dangerous, according to the constitution of the patient, the season of the year, the climate, &c.

SYMPTOMS.—The measles, like other fevers, are preceeded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white, but generally moist. There is a short cough, a heaviness of the head and eyes, drowsiness, and a running at the nose. Sometimes, indeed, the cough does not come before the eruption has appeared. There is an inflammation and heat in the eyes, accompanied with a defluxion of sharp rheum, and great acuteness of sensation, so that they cannot bear the light without pain. The eye-lids frequently swell so as to occasion blindness. The patient generally complains of his throat; and a vomiting or looseness often precedes the eruption. The stools in children are commonly greenish; they complain of an itching of the skin, and are remarkably peevish. Bleeding at the nose is common, both before and in the progress of the disease.

About the fourth day, small spots, resembling flea-bites, appear, first upon the face, then upon the breast, and afterwards on the extremities; these may be distinguished from the small-pox by their scarcely rising above the skin. The fever, cough, and difficulty of breathing, instead of being removed by the eruption, as in the small-pox, are rather increased; but the vomiting generally ceases.

About the sixth or seventh day from the time of sickening, the measles begin to turn pale on the face, and afterwards upon the body; so that by the ninth day they entirely disappear. The fever, however, and difficulty of breathing, often continue, especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles; in which case the patient's life is in imminent danger.

Such as die of the measles, generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are, a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist Nature, by proper cordials, in throwing out the eruption, if her efforts be too languid, but when they are too violent, they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

REGIMEN.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small-beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice with marshmallow roots and sarsaparilla, infusions of linseed or of the flowers of elder, balm-tea, clarified whey, barley-water, and such like. These, if the patient be costive, may be sweetened with honey; or, if that should disagree with the stomach, a little manna may occasionally be added to them.

MEDICINE.—The measles being an inflammatory disease, without any critical discharge of matter, as in the small-pox, bleeding is commonly necessary, especially when the fever runs high, with difficulty of breathing, and great oppression of the breast. But if the disease be of a mild kind, bleeding may be omitted.*

Bathing the feet and legs frequently in lukewarm water, both tends to abate the violence of the fever, and to promote the eruption.

* I do not know any disease wherein bleeding is more necessary than in the measles, especially when the fever runs high; in this case I have always found it relieve the patient.

The patient is often greatly relieved by vomiting. When there is a tendency this way, it ought to be promoted by drinking lukewarm water, or weak camomile-tea.

When the cough is very troublesome, with dryness of the throat, and difficulty of breathing, the patient may hold his head over the steam of warm water, and draw the steam into his lungs.

He may likewise lick a little spermaceti and sugar-candy pounded together: or, take now and then a spoonful of the oil of sweet almonds, with sugar-candy dissolved in it. These will soften the throat, and relieve the tickling cough.

If at the turn of the disease the fever assumes new vigour, and there appears great danger of suffocation, the patient must be bled according to his strength, and blistering-plasters applied, with a view to prevent the load from being thrown on the lungs, where, if an inflammation should fix itself, the patient's life will be in imminent danger.

In case the measles should suddenly disappear, it will be necessary to pursue the same method which we have recommended when the small-pox recede. The patient must be supported with wine and cordials. Blistering-plasters must be applied to the legs and arms, and the body rubbed all over with warm flannels. Warm poultices may likewise be applied to the feet and palms of the hands.

When purple or black spots appear, the patient's drink should be sharpened with spirits of vitriol; and if the putrid symptoms increase, the Peruvian bark must be administered in the same manner as directed in the small-pox.

Opiates are sometimes necessary, but should never be given except in cases of extreme restlessness, a violent looseness, or when the cough is very troublesome. For children, the syrup of poppies is sufficient. A tea-spoonful or two may be occasionally given, according to the patient's age, or the violence of the symptoms.

After the measles are gone off, the patient ought to be purged. This may be conducted in the same manner as directed in the small-pox.

If a violent looseness succeed the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles, should be careful what they eat or drink. The food for some time ought to be light and in small quantities, and their drink diluting, and rather of an opening nature, as butter-milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, lest a suffocating catarrh, an asmath, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses' milk, to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and, lastly, if these do not succeed, let him remove to a warmer climate.*

* Attempts have been made to communicate the measles, as well as the small-pox, by inoculation, and we make no doubt but in time the practice may succeed. Dr. Home of Edinburgh says, he communicated the disease by the blood. Others have tried this method, and have not found it succeed. Some think the disease would be more certainly communicated by rubbing the skin of a patient who has the measles with cotton, and afterwads applying the cotton to a wound as in the small-pox; while others recommend a bit of flannel which had been applied to the patient's skin all the time of the disease, to be afterwards laid upon the arm or leg of the person to whom the infection is to be communicated. There is no doubt but this disease, as well as the small-pox, may be communicated various ways; the most probable, however, is either from cotton rubbed upon the skin, as mentioned above, or by introducing a little of the sharp humour which distils from the eyes of the patient into the blood. It is agreed on all hands, that such patients as have been inoculated had the disease very mildly; we therefore wish the practice were more general, as the measles have of late become very fatal.

OF THE SCARLET FEVER.

THE scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of the summer, at which time it often seizes whole families; children and young persons are most subject to it.

It begins like other fevers with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin, falls off.

There is seldom any occasion for medicine in this disease. The patient ought, however, to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool diluting liquors. If the fever runs high, the body must be kept gently open by emollient clysters, or small doses of nitre and rhubarb. A scruple of the former, with five grains of the latter, may be taken thrice a-day, or oftener, if necessary.

Children and young persons are sometimes seized at the beginning of this disease with a kind of stupor and epileptic fits. In this case, the feet and legs should be bathed in warm water, a large blistering-plaster applied to the neck, and a dose of the syrup of poppies given every night till the patient recovers.*

The scarlet fever however, is not always of so mild a nature. It is sometimes attended with putrid or malignant symptoms, in which case it is always dangerous. In the malignant scarlet fever, the patient is not only affected with coldness and shivering, but with langour, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin

* Sydenham.

not, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When the disease is mistaken for a simple inflammation, and treated with repeated bleedings, purging, and cooling medicines, it generally proves fatal. The only medicines that can be depended on, in this case, are cordials and antiseptics, as the Peruvian bark, wine, snake-root, and the like. The treatment must be in general similar to that of the putrid fever, or of the malignant ulcerous sore throat.*

OF THE BILIOUS FEVER.

When a continual, remitting, or intermitting, fever is accompanied with a frequent or copious evacuation of bile, either by vomit or stool, the fever is denominated bilious. In Britain the bilious fever generally makes its appearance about the end of summer, and ceases towards the approach of winter. It is most frequent and fatal in warm countries, especially where the soil is marshy, and when great rains are succeeded by sultry heats. Persons who work without doors, lie in camps, or who are exposed to the night air, are most liable to this kind of fever.

If there are symptoms of inflammation at the beginning of this fever, it will be necessary to bleed, and to put the patient upon the cool diluting regimen recommended in the inflammatory fever. The saline draught may likewise be frequently administered, and the patient's body kept open by clysters and mild purga-

* In the year 1774, during winter, a very bad species of this fever prevailed in Edinburgh. It raged chiefly among young people. The eruption was generally accompanied with a quinsey, and the inflammatory symptoms were so blended with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swelling of the submaxillary glands, and not a few had a suppuration in one or both ears.

tives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and, if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken-broths, jellies of hartshorn, and the like; and he may use the *white decoction* for his ordinary drink.* If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article of *Dysentery*.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him, three or four times a-day a table-spoonful of Mindererus's spirit † mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

We cannot forbear here repeating, what we have so often endeavoured to inculcate, namely, the impossibility of prescribing for a fever, without attending to the particulars of the patient's case. Not only can no general rule or universal medicine be recommended, but the most able physician cannot pretend to prescribe for a person in this disease, without personally judging of the patient's situation. Bleeding may certainly be beneficial when the symptoms run high, with a full hard pulse and other signs of inflammation; but to judge of this requires the best medical skill.

* See Appendix, *White Decoction.*
† See Appendix, *Spirit of Mindererus.*

CHAP. XXV.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THIS disease, which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine and plethoric habit are most liable to it. It often attacks young people, and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequetnly seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

CAUSES.—The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the perspiration is suddenly checked, an erysipelas will often ensue.* It may also be occasioned by drinking to excess, by continuing too long in a warm bath, or by any thing that overheats the blood. If any of the natural evacuations be obstructed, or in too small quantity, it may cause an erysipelas. The same effect will follow from the stoppage of artificial evacuations; as issues, setons, or the like.

SYMPTOMS.---The erysipelas attacks with a shivering, thirst, loss of strength, pain in the head and

* The country people, in many parts of Britain, call this disease a *blast*, and imagine it proceeds from foul air, or ill wind, as they term it. The truth is, they often lie down to rest them, when warm and fatigued, upon the damp ground, where they fall asleep, and lie so long as to catch cold, which occasions the erysipelas. This disease may indeed proceed from other causes, but we may venture to say, that nine times out of ten it is occasioned by cold caught after the body has been greatly heated or fatigued.

back, heat, restlessness, and a quick pulse; to which may be added, vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear, at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous smell, the skin shines; and, if the pain be violent it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with a swelling; and there is a difficulty of breathing. If the mouth and nostrils be very and dry, the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

This disease seldom proves fatal; yet when the habit is impaired, and the legs swell to an enormous size, the complaint then becomes difficult of cure: much, however, depends upon the constitution of the patient. To persons far advanced in years, and of a scorbutic habit, and whose humours are tainted by a bad course of diet, it has sometimes proved incurable.

When the erysipelas is large, deep, and affects a very sensible part of the body, the danger is great. If the red colour changes into a livid or black, it will end in a mortification. Sometimes the inflammation cannot be discussed, but comes to a suppuration; in which case fistulas, a gangreen, or a mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

REGIMEN.---In the erysipelas the patient must neither be kept too hot nor too cold, as either of these extremes will tend to make it retreat, which is always to be guarded against. When the disease is mild, it will be sufficient to keep the patient within doors, without confining him to his bed, and to promote the perspiration by diluting liquors, &c.

The diet ought to be slender, and of a moderately cooling and moistening quality, as groat-gruel, panado, chicken or barley broth, with cooling herbs and fruits, &c. avoiding flesh, fish, strong drink, spices, pickles, and all other things that may heat and inflame the blood; the drink may be barley-water, an infusion of elder-flowers, common whey, and such like.

But if the pulse be low, and the spirits sunk, the patient must be supported with negus, and other things of a cordial nature. His food may be sago-gruel, with a little wine and nourishing broths, taken in small quantities, and often repeated. Great care, however, must be taken not to overheat him.

MEDICINE.—In this disease much mischief is often done by medicine, especially by external applications. People, when they see an inflammation, immediately think that something ought to be applied to it. This indeed is necessary in large phlegmons; but in an erysipelas the safer course is to apply nothing. Almost all ointments, salves, and plasters, being of a greasy nature, tend rather to obstruct and repel, than promote, any discharge from the part. At the beginning of this disease, it is neither safe to promote a suppuration, nor to repel the matter too quickly. The erysipelas in many respects resembles the gout, and is to be treated with the greatest caution. Fine wool, or very soft flannel, are the safest applications to the part. These not only defend it from the external air, but likewise promote the perspiration, which has a great tendency to carry off the disease. In Scotland the common people generally apply a mealy cloth to the parts affected, which is far from being improper.

It is common to bleed in the erysipelas; but this

likewise requires caution. If, however, the fever be high, the pulse hard and strong, and the patient vigorous, it will be proper to bleed; but the quantity must be regulated by these circumstances, and the operation repeated as the symptoms may require. If the patient has been accustomed to strong liquors, and the disease attacks his head, bleeding is absolutely necessary.

Bathing the feet and legs frequently in lukewarm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emolient clysters, or small doses of nitre and rhubarb. Some, indeed, recommend very large doses of nitre in the erysipelas, but nitre seldom sits easy on the stomach when taken in large doses. It is, however, one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink several times a-day.

When the erysipelas leaves the extremities, and seizes the head, so as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and mild purgatives fail to have this effect, stronger ones must be given. Blistering plasters must likewise be applied to the neck, or behind the ears, and sharp cataplasms laid to the soles of the feet.

When the inflammation cannot be discussed, and the part has a tendency to ulcerate, it will then be proper to promote suppuration, which may be done by the application of ripening poultices, with saffron, warm fomentations, and such like.

When the black, livid, or blue colour of the part shews a tendency to mortification, the Peruvian bark must be administered. It may be taken along with acids, as recommended in the small-pox, or in any other form

more agreeable to the patient. It must not, however, be trifled with, as the patient's life is at stake. A drachm may be given every two hours, if the symptoms be threatening, and cloths dipped in warm camphorated spirits of wine, or the tincture of myrrh and aloes, may be applied to the part, and frequently renewed. It may likewise be proper in this case to apply poultices of the bark, or to foment the part affected with a strong decoction of it.

In what is commonly called the *scorbutic erysipelas*, which continues for a considerable time, it will only be necessary to give gentle laxatives, and such things as purify the blood and promote the perspiration. Thus, after the inflammation has been checked by opening medicines, the decoction of woods* may be drank, after which a course of bitters will be proper.

Such as are liable to frequent attacks of the erysipelas, ought carefully to guard against all violent passions; to abstain from strong liquors, and all fat, viscid, and highly nourishing food. They should likewise take sufficient exercise, carefully avoiding the extremes of heat or cold. Their food should consist chiefly of milk, and such fruits, herbs, and roots, as are of a cooling quality; and their drink ought to be small beer, whey, butter-milk, and such like. They should never suffer themselves to be long costive. If that cannot be prevented by suitable diet, it will be proper to take frequently a gentle dose of rhubarb, cream of tartar, the lenitive electuary, or some other mild purgative.

The applications so constantly recurred to, of poultices, embrocations, and fomentations, in cases of erysipelas, are generally hurtful, and can only be serviceable where the suppuration is inevitable. Absorbents, to take up the moisture and cool the skin, are greatly preferable, and for this purpose we would reccommend hair-powder, spread on a soft rag, and laid over the parts affected two or three times a-day; an application attended with no danger, and extremely gratifying to the patient.

* See Appendix, *Decoction of Woods.*

Erysipelas, when driven from the part affected, is apt to fly to another, where it may be more dangerous. Applications, especially violent ones, for its removal, should be used with caution, and not without proper advice. There are not wanting instances of its being expelled from the face, and fixing on other parts, where it has proved fatal.

CHAP. XXVI.

OF THE PHRENITIS, OR INFLAMMATION OF THE BRAIN.

THIS is sometimes a primary disease, but oftener only a symptom of some other malady; as the inflammatory, eruptive, or spotted fever, &c. It is very common, however, as a primary disease in warm climates, and is most incident to persons about the prime or vigour of life. The passionate, the studious, and those whose nervous system is irritable in a high degree, are most liable to it.

CAUSES.—This disease is often occasioned by night-watching, especially when joined with hard study; it may likewise proceed from hard drinking, anger, grief, or anxiety. It is often occasioned by the stoppage of usual evacuations; as the bleeding piles in men, the customary discharges of women, &c. Such as imprudently expose themselves to the heat of the sun, especially by sleeping without doors in a hot season, with their heads uncovered, are often suddenly seized with an inflammation of the brain, so as to awake quite delirious. When repellents are imprudently used in an erysipelas, an inflammation of the brain is sometimes the consequence. It may likewise be occasioned by external injuries, as blows or bruises upon the head, &c.

SYMPTOMS.---The symptoms which usually precede a true inflammation of the brain are, pain of the head, redness of the eyes, a violent flushing of the face, disturbed sleep, or a total want of it, great dryness of the

skin, costiveness, a retention of urine, a small dropping of blood from the nose, singing of the ears, and extreme sensibility of the nervous system.

When the inflammation is formed, the symptoms in general are similar to those of the inflammatory fever. The pulse, indeed, is often weak, irregular, and trembling; but sometimes it is hard and contracted. When the brain itself is inflamed, the pulse is always soft and low; but when the inflammation only affects the integuments of the brain, viz. the dura and pia mater, it is hard. A remarkable quickness of hearing is a common symptom of this disease; but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes, from a sullen silence, the patient becomes all on a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom; as are also a suppression of urine; a total want of sleep; a constant spitting; a grinding of the teeth; which last may be considered as a kind of convulsion. When a phrenitis succeeds an inflammation of the lungs, of the intestines, or of the throat, &c. it is owing to a translation of the disease from these parts to the brain, and generally proves fatal. This shews the necessity of proper evacuations, and the danger of repellants in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine, which lets fall a copious sediment. Sometimes this disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged or improperly treated, it sometimes ends in madness, or a kind of stupidity, which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses or disturbs the imagination, increases the disease. Even too much light is hurtful: for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not, however, necessary to exclude the company of an agreeable friend, as this has a tendency to sooth and quiet the mind. Neither ought the patient to be kept too much in the dark, lest it should occasion a gloomy melancholy, which is often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind and increase his malady. Even when he calls for things which are not to be obtained, or which might prove hurtful, he is not to be positively denied them, but rather put off with the promise of having them as soon as they can be obtained, or by some other excuse. A little of any thing that the mind is set upon, though not quite proper will hurt the patient less than a positive refusal. In a word, whatever he was fond of, or used to be delighted with, when in health, may here be tried; as pleasing stories, soft music, or whatever has a tendency to sooth the passions, and compose the mind. Boerhave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a bason, and the patient trying to reckon them, &c. Any uniform sound, if low and continued, has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado and water-gruel, sharpened with jelly of currants, or juice of lemons, ripe fruits roasted or boiled, jellies, preserves, &c. The drink small, diluting, and cooling; as whey, barley-water, or decoctions of barley and tamarinds, which latter not only render the liquor more palatable, but are more beneficial, as they are of an opening nature.

MEDICINE.—In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked by putting a straw, or any other sharp body up the nostril.

Bleeding in the temporal arteries greatly relieves the head; but as this operation cannot always be performed, we would recommend in its stead bleeding in the jugular vein. When the patient's pulse and spirits are so low that he cannot bear bleeding with a lancet, leeches may be applied to the temples. These not only draw off the blood more gradually, but by being applied to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that discharge has been stopped, every method must be tried to restore it; as the application of leeches to the parts, sitting over the steam of warm water, sharp clysters, or suppositories made of honey, aloes, and rock-salt.

If the inflammation of the brain be occasioned by the stoppage of evacuations, either natural or artificial, as the menses, issues, setons, or such like, all means must be used to restore them, as soon as possible, or to substitute others in their stead.

The patient's body must be kept open by stimulating clysters or smart purges; and small quantities of nitre ought frequently to be mixed with his drink. Two or three drachms, or more, if the case be dangerous, may be used in the space of twenty-four hours.

The head should be shaved, and frequently rubbed with vinegar and rose-water. Cloths dipped in this mixture may likewise be applied to the temples. The feet ought frequently to be bathed in luke-warm water, and soft poultices of bread and milk may be kept constantly applied to them.

If the disease proves obstinate, and does not yield to these medicines, it will be necessary to apply a blistering-plaster to the whole head.

The inflammation requires particular attention that the patient be kept as easy, composed, and tranquil as possible; and an attentive and sensible nurse will here frequently be found as serviceable as the most enlightened physician. The smallest irritation, even light, noise, or any thing that may suddenly or strongly impress the senses, is carried so rapidly to the brain, as to increase the inflammation, and disorder even the organs by which it was conveyed.

CHAP. XXVII.

OF THE OPTHALMIA, OR INFLAMMATION OF THE EYES.

THIS disease may be occasioned by external injuries; as blows, burns, bruises, and the like. It may likewise proceed from dust, quicklime, or other substances getting into the eyes. It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes. Viewing snow or other white bodies for a long time, or looking stedfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light, will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light. Drinking spirituous liquors, and excess of venery, are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflamma-

tion of the eyes proceeds from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eye-lids turning inwards, and hurting the eyes. Sometimes the disease is epidemic, especially after wet seasons; and I have frequently known it prove infectious, particularly to those who lived in the same house with the patient. It may be occasioned by moist air, or living in low damp houses, especially in persons who are not accustomed to such situations. In children it often proceeds from imprudently drying up of scabbed heads, a running behind the ears, or any other discharge of that kind. Inflammations of the eyes often succeed the small-pox or measles, especially in children of a scrophulous habit.

SYMPTOMS.—An inflammation of the eyes is attended with acute pain, heat, redness, and swelling. The patient is not able to bear the light, and sometimes he feels a pricking pain, as if his eyes were pierced with a thorn. Sometimes he imagines his eyes are full of motes, or thinks he sees flies dancing before him. The eyes are filled with a scalding rheum, which rushes forth in great quantities, whenever the patient attempts to look up. The pulse is generally quick and hard, with some degree of fever. When the disease is violent, the neighbouring parts swell, and there is a throbbing or pulsation in the temporal arteries, &c.

A slight inflammation of the eyes, especially from an external cause, is easily cured; but when the disease is violent and continues long, it often leaves specks upon the eyes, or dimness of sight, and sometimes blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another, as it were by infection, it is no favorable symptom. But when the disease is accompanied with a violent pain in the head, and continues long, the patient is in danger of losing his sight.

REGIMEN.—The diet, unless in scrophulous cases, can hardly be too spare, especially at the beginning. The patient must abstain from every thing of a heating nature. His food should consist chiefly of mild vege-

tables, weak broths and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire, or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

MEDICINE.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications which do mischief twenty times for once they do good. People ought, therefore, to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may lose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of Glauber's salts and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little lenitive electuary, or any other mild purgative, will answer the same end. The patient at the

same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor. He ought likewise to take at bed-time a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in luke-warm water, and his head shaved twice or thrice a-week, and afterwards washed in cold water. This has often a remarkably good effect.

If the inflammation does not yield to these evacuations, blistering-plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder-blades. It may be dressed twice a-day with yellow basilicon. I have known patients who had been blind for a considerable time, recover their sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark, and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonfuls of the syrup of poppies every night, more or less, according to his age, or the violence of the symptoms.

After the inflammation has gone off, if the eyes still remain weak and tender, they may be bathed every

night and morning with cold water and a little brandy, six parts of the former to one of the latter. A method should be contrived, by which the eye may be quite immersed in the brandy and water, and where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a scrophulous habit, it generally proves very obstinate. In this case the patient's diet must not be too low, and he may be allowed to drink small negus, or now and then a glass of wine. The most proper medicine is the Peruvian bark, which may be either given in substance, or prepared in the following manner:

Take an ounce of the bark in powder, with two drachms of Winter's bark, and boil them in an English quart of water to a pint: when it has boiled nearly long enough, add half an ounce of liquorice-root sliced. Let the liquor be strained. Two, three, or four table-spoonfuls, according to the age of the patient, may be taken three or four times a-day. It is impossible to say how long this medicine should be continued, as the cure is sooner performed in some than in others; but, in general it requires a considerable time to produce any lasting effects.

Dr. Cheyne says, "that Æthiop's mineral never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in." There is no doubt but this and other preparations of mercury may be made of singular service in opthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic.

It will be proper frequently to look into the eyes, to see if any hairs be turned inwards, or pressing upon them.* These ought to be removed by plucking them out with a pair of small pincers.

* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair-pencil between the eye-lids and the ball of the eye. In some places, the peasants do this very effectually by using their tongue in the same manner.

Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquor, and every thing of a heating quality. Above all, let them avoid the night air and late studies.*

Among the numerous classes of quacks, the oculists, or *eye-doctors*, hold a very prominent rank; but, like their brethren in other disorders, often in the end totally destroy the organ they pretend to cure. Without being acquainted with the structure of the eye, they boldly administer the same remedy, and perform the same surgical operation of scarifying, scratching, and cutting, whether the inflammation proceeds from a scrophulous habit or specific infection.

CHAP. XXVIII.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

THIS disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperature.

CAUSES.—In general, it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats and inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat, and parts adjacent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

* As most people are fond of using eye-waters and ointments in this and other diseases of the eyes, we have inserted some of the most approved forms of these medicines in the Appendix. See Appendix, *Eye-water* and *Eye-salve*.

Singing, speaking aloud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companies, who, after sitting long in a warm room, drinking hot liquors, and singing with vehemence, were so imprudent as to go abroad in the cold night air. Sitting with wet feet, or keeping on wet clothes, are very apt to occasion this malady. It is likewise frequently occasioned by continuing long in a moist place, sitting near an open window, sleeping in a damp bed, sitting in a room that has been newly plastered, &c. I know people who never fail to have a sore throat, if they sit even but a short time in a room that has been lately washed.

Acrid or irritating food may likewise inflame the throat, and occasion a quinsey. It may also proceed from bones, pins or other sharp substances, sticking in the throat, or from the caustic fumes of metals or minerals, as arsenic, antimony, &c. taken in by the breath. This disease is sometimes epidemical and infectious.

SYMPTOMS.—The inflammation from the throat is evident from inspection, the parts appearing red and swelled; besides, the patient complains of pains in swallowing. His pulse is quick and hard, with other symptoms of a fever. If blood be let, it is generally covered with a tough coat of a whitish colour, and the patient spits a tough phlegm. As the swelling and inflammation increase, the breathing and swallowing become more difficult, the pain affects the ears, the eyes generally appear red, and the face swells. The patient is often obliged to keep himself in an erect posture, being in danger of suffocation; there is a constant nausea or inclination to vomit, and the drink, instead of passing into the stomach, is often returned by the nose. The patient is sometimes starved at last, merely from an inability to swallow any kind of food.

When the breathing is laborious, with straitness of the breast and anxiety, the danger is great. Though the pain in swallowing be very great, yet while the

patient breathes easy, there is not so much danger. An external swelling is no unfavourable symptom; but if it suddenly falls, and the disease affects the breast, the danger is very great. When a quinsey is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale ghastly countenance, and coldness of the extremities, are fatal symptoms.

REGIMEN.—The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light and in small quantities, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is particularly necessary that the neck be kept warm, for which purpose several folds of soft flannel may be wrapt round it. That alone may often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants of this country. When they feel any uneasines of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with particular ceremonies; the custom however is undoubtedly a good one, and should never be neglected. When the throat has been thus wrapped up all night, it must not be exposed to the cold air through the day, but a handkerchief or a piece of flannel be kept about it till the inflamma ion be removed.

The jelly of black currants is a medicine very much in esteem for complaints in the throat, and indeed it is of some use. It should be almost constantly kept in

the mouth and swallowed down leisurely. It may likewise be mixed with the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half an English pint of pectoral decoction, two or three spoonfuls of honey, and the same quantity of currant-jelly. This may be used three or four times a day; and, if the patient be troubled with tough viscid phlegm, the gargle may be rendered more sharp and cleansing, by adding to it a teaspoonful of the spirit of sal ammoniac. Some recommend gargles made of the decoction of the leaves or bark of the black currant-bush; but where the jelly can be had, these are unnecessary.

There is no disease wherein the benefit of bathing the feet and legs in luke-warm water is more apparent; that practice ought therefore never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

MEDICINE.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This may either be done, by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in the erysipelas. These may be increased according to the age of the patient, and repeated till they have the desired effect.

I have often known very good effects from a bit of sal prunel, or purified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of saliva, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jews' ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no farther notice of it.

Some recommend the gum guaiacum as a specific in this disease. Half a drachm of the gum in powder may be made into an electuary with the rob of elder-berries, or the jelly of currants, for a dose, and repeated occasionally.*

Blistering upon the neck or behind the ears, in violent inflammations of the throat, is very beneficial; and in bad cases it will be necessary to lay a blistering-plaster quite across the throat, so as to reach from ear to ear. After the plasters are taken off, the parts ought to be kept running by the application of issue-ointment, till the inflammation is gone; otherwise, upon their drying up, the patient will be in danger of a relapse.

When the patient has been treated as above, a suppuration seldom happens. This however is sometimes the case, in spite of all endeavours to prevent it. When the inflammation and swelling continue, and it is evident that a suppuration will ensue, it ought to be promoted by drawing the steam of warm water into the throat through a tunnel, or the like. Soft poultices

* Dr. Home.

ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

It sometimes happens, before the tumour breaks, that the swelling is so great, as entirely to prevent any thing from getting down into the stomach. In this case, the patient must inevitably perish, unless he can be supported in some other way. This can only be done by nourishing clysters of broth, or gruel, with milk, &c. Patients have often been supported by these for several days, till the tumour has broke; and afterwards they have recovered.

Not only the swallowing but the breathing, is often prevented by the tumour. In this case, nothing can save the patient's life, but opening the *trachœa* or windpipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any direction about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *anguina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift up the patient by the hair of the head, and thrust their fingers under his jaws, &c. all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperately. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought, likewise, to beware of catching cold, and should abstain

from aliment and medicines of an astringent or stimulating nature.

Violent exercise by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease ought, therefore, after speaking loud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats, entirely freed from that complaint by only wearing a ribband, or a piece of flannel, constantly about their necks, or by wearing thicker shoes, a flannel waistcoat, or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconvenience of using such things for life is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep it warm, and to gargle it twice a-day with a decoction of figs sharpened a little with the elixir or spirit of vitriol.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCEROUS SORE THROAT.

This kind of quinsey is but little known in the northern parts of Britain, though for some time past it has been fatal in the more southern counties. Children are more liable to it than adults, females than males, and the delicate than those who are hardy and robust. It prevails chiefly in autumn, and is most frequent after a long course of damp or sultry weather.

CAUSES.—This is evidently a contagious distemper, and is generally communicated by infection. Whole families, and even entire villages, often receive the infection from one person. This ought to put people upon their guard against going near such patients as labour under the disorder, as by that means they endanger not only their own lives, but likewise those of their friends and connexions. Whatever tends to produce putrid or malignant fevers, may likewise occasion the putrid ulcerous sore throat, as unwholesome air, damaged provisions, neglect of cleanliness, &c.

SYMPTOMS.—It begins with alternate fits of shivering and heat. The pulse is quick, but low and unequal, and generally continues so through the whole course of the disease. The patient complains greatly of weakness and oppression of the breast, his spirits are low, and he is apt to faint away when set upright; he is troubled with a nausea, and often with a vomiting or purging. The two latter are most common in children. The eyes appear red and watery, and the face swells. The urine is at first pale and crude, but as the disease advances it turns more of a yellowish colour. The tongue is white, and generally moist, which distinguishes this from an inflammatory disease. Upon looking into the throat it appears swelled, and of a florid red colour. Pale or ash-coloured spots, however, are here and there interspersed, and sometimes one broad patch or spot, of an irregular figure, and pale white colour, surrounded with florid red, only appears. These whitish spots or sloughs cover so many ulcers.

An effloresence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed. The patient complains of a disagreeable putrid smell, and his breath is very offensive.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the guts, that we shall not insist upon it. The body is to be opened by mild purgatives given in small doses, and frequently repeated, and their operation must be assisted by soft oily clysters, fomentations, &c. The castor oil is reckoned peculiarly proper in this disease. It may both be mixed with the clysters and given by the mouth; a table-spoonful to two or three is a sufficient dose.

The Barbadoes tar is said to be an efficacious medicine in this complaint. It may be taken to the quantity of two drachms three times a-day, or oftener, if the stomach will bear it. This tar, mixed with an equal quantity of strong rum, is likewise proper for rubbing the spine, in case any tingling, or other symptoms of the palsy, are felt. When the tar cannot be obtained, the back may be rubbed with strong spirits, or a little oil of nutmegs, or of rosemary.

If the patient remain weak and languid after this disease, he must take exercise on horseback, and use an infusion of the Peruvian bark in wine. When the disease ends in a palsy, the Bath waters are found to be extremely proper.

To avoid this kind of colic, people must shun all sour fruits, acid and austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad-oil, with a little brandy or rum, every morning, but should never take spirits alone. Liquid aliment is best for them, as fat broths, &c. but low living is bad. They should frequently go a little out of the tainted air, and should never suffer themselves to be costive. In the West-Indies, and on the coast of Guinea, it has been found of great use, for preventing this colic, to wear a piece of flannel round the waist, and to drink an infusion of ginger by way of tea.

a small expence, and will be of service in several other cases, as the recovery of drowned persons, &c.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be of great service to patients in colics of every kind, by only observing the following general rules, viz. to bathe the feet and legs in warm water, to apply bladders filled with warm water, or cloths dipped in it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in warm water.

INFLAMMATION OF THE KIDNEYS.

CAUSES.—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys, small stones or gravel lodging within them, by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys may occasion this malady. It may likewise proceed from lying too soft, too much on the back, involuntary contractions, or spasms in the urinary vessels, &c.

SYMPTOMS.—There is a sharp pain about the region of the kidneys, with some degree of fever, and a stupor or dull pain in the thigh of the affected side. The urine is at first clear, and afterwards of a reddish colour; but in the worst kind of the disease it generally continues pale, is passed with difficulty, and commonly in small quantities at a time. The patient feels great uneasiness when he endeavours to walk or sit upright. He lies with more ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic.

This disease, however, may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine, with which it is constantly attended.

REGIMEN.—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm-tea sweetened with honey, decoctions of marsh-mallow roots, with barley and liquorice, &c. The patient, notwithstanding the vomiting, must constantly keep sipping small quantities of these or other diluting liquors. Nothing so safely and certainly abates the inflammation, and expels the obstructing cause, as copious dilution. The patient must be kept easy, quiet, and free from cold, as long as any symptoms of inflammation remain.

MEDICINE.—Bleeding is generally necessary, especially at the beginning. Ten or twelve ounces may be let from the arm or foot with a lancet; and if the pain and inflammation continue, the operation may be repeated in twenty-four hours, especially if the patient be of a full habit. Leeches may likewise be applied to the hæmorrhoidal veins, as a discharge from these will greatly relieve the patient.

Cloths dipped in warm water, or bladders filled with it, must be applied as near as possible to the part affected, and renewed as they grow cool. If the bladders be filled with a decoction of mallows and camomile-flowers, to which a little saffron is added, and mixed with about a third part of new milk, it will be still more beneficial.

Emollient clysters ought frequently to be administered; and if these do not open the body, a little salt and honey or manna may be added to them.

The same course is to be followed where gravel or stone is lodged in the kidneys; but when the gravel or stone is separated from the kidney, and lodges in the ureter,*

* The ureters are two long and small canals, one on each side, which carry the urine from the bason of the kidneys to the bladder. They are sometimes obstructed by small stones or gravel falling down from the kidneys, and lodging in them.

it will be proper, besides the fomentations, to rub the small of the back with sweet-oil, and to give gentle diuretics; as juniper-water sweetened with the syrup of marsh-mallows; a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put in a cup of the patient's drink; he ought likewise to take exercise on horseback, or in a carriage, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chilliness, shivering, &c. there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shews that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acid, sour, and salted provisions, and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley, and common pot-herbs, &c. His drink may be whey, and butter-milk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character, however, it must be drank for a considerable time. Chalybeate waters have likewise been beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great Britain; it must likewise be used for a considerable time, in order to produce any salutary effects.

Those who are liable to frequent returns of inflammation, or obstructions of the kidneys, must abstain from wines, especially such as abound with tartar; and their food ought to be light and easy of digestion. They should use moderate exercise, not lie too hot, nor too much on their back.

INFLAMMATION OF THE BLADDER.

The inflammation of the bladder proceeds in a great measure from the same causes as that of the kidneys. It is known by an acute pain towards the bottom of the belly, and difficulty of passing urine, with some degree

of fever, a constant inclination to go to stool, and a perpetual desire to make water.

This disease must be treated on the same principles as the one immediately preceding. The diet must be light and thin, and the drink of a cooling nature. Bleeding is very proper at the beginning, and in robust constitutions it will often be necessary to repeat it. The lower part of the belly should be fomented with warm water, or a decoction of mild vegetables; and emollient clysters ought frequently to be administered, &c.

The patient should abstain from every thing that is of a hot, acrid, and stimulating quality; and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from others causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins; hard fæces lodged in the rectum; a stone in the bladder; excrescences in the urinary passages; a palsy of the bladder, hysteric affections, &c. Each of these requires particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes in the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

The liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or scirrhus.

CAUSES.—Besides the common causes of inflammation, we may here reckon the following, viz. ex-

cessive fatness, a scirrhus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust, or atrabilious state of the blood, any thing that suddenly cools the liver after it has been gently heated, stones obstructing the course of the bile, drinking strong wine and spirituous liquors, using hot spicy aliment, obstinate hypochondriacal affections, &c.

SYMPTOMS.—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes.

The symptoms here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that an inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hiccup, and a pain extending to the shoulder, with difficulty of lying on the left side, &c.

This disease may be distinguished from the pleurisy by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriacal disorders by the degree of fever with which it is always attended.

This disease, if properly treated, is seldom mortal. A constant hiccuping, violent fever, and excessive thirst, are bad symptoms. If it ends in a suppuration, and the matter cannot be discharged outwardly, the danger is great. When the scirrhus of the liver ensues, the patient, if he observes a proper regimen, may nevertheless live a number of years tolerably easy; but if he indulge in strong animal-food and strong liquors, or take medicines of an acrid or irritating nature, the scirrhus will be converted into a cancer, which must infallibly prove fatal.

REGIMEN.—The same regimen is to be observed in this as in other inflammatory disorders. All hot things are to be carefully avoided; and cool diluting liquors, as whey, barley-water, &c. drank freely. The food must be light and thin, and the body, as well as the mind, kept easy and quiet.

MEDICINE.—Bleeding is proper at the beginning of this disease, and it will often be necessary, even though the pulse should not feel hard, to repeat it. All violent purgatives are to be avoided; the body, however, must be kept gently open. A decoction of tamarinds, with a little honey or manna, will answer this purpose very well. The side affected must be fomented in the manner directed in the foregoing diseases. Mild laxative clysters should be frequently administered, and if the pain should notwithstanding continue violent, a blistering-plaster may be applied over the part affected.

Medicines which promote the secretion of urine have a very good effect here. For this purpose, half a drachm of purified nitre, or a tea-spoonful of the sweet spirits of nitre, may be taken in a cup of the patient's drink three or four times a-day.

When there is an inclination to sweat, it ought to be promoted, but not by warm sudorifics. The only thing to be used for that purpose is plenty of diluting liquor drank about the warmth of the human blood. Indeed the patient in this case, as well as in all the other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If an abscess or imposthume is formed in the liver, all methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, ripening cataplasms, &c. Sometimes indeed the matter of an abscess comes away in the urine, and sometimes it is discharged by stool; but these are efforts of Nature which no means can promote. When

the abscess bursts into the cavity of the abdomen at large, death must ensue; nor will the event be more favorable when the abscess is opened by an incision, unless in cases where the liver adheres to the peritonæum, so as to form a bag for the matter, and prevent it from falling into the cavity of the abdomen; in which case opening the abscess by a sufficiently large incision, will probably save the patient's life.*

If the disorder, in spite of all endeavours to the contrary, should end in a scirrhus, the patient must be careful to regulate his diet, &c. in such a manner as not to aggravate the disease. He must not indulge in flesh, fish, strong liquors, or any highly seasoned or salted provisions; but should, for the most part, live on mild vegetables, as fruits and roots, taking gentle exercise, and drinking whey, barley-water, or butter-milk. If he takes any thing stronger, it should be fine mild ale, which is less heating than wines or spirits.

We shall take no notice of inflammations of the other viscera. They must, in general, be treated upon the same principles as those already mentioned. The chief rule with respect to all of them is, to let blood, to avoid every thing that is strong, or of a heating nature, to apply warm fomentations to the part affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

Warm fomentations frequently repeated are the best means of relief for the diseases here treated of. Of these the anodyne fomentation, specified in the Appendix, with the occasional addition of a handful of camomile-flowers, may be particularly recommended.

If the fomentations are not effectual, the warm-bath may be resorted to with advantage, in which the patient ought to remain while his strength will permit. For want of a proper bath, a cask or tub may be used.

The costiveness accompanying inflammations of the stomach and bowels will be better removed by a perseverance in mild and gentle medicines, than by the

* I know a gentleman who had several abscesses of the liver opened, and is now a strong and healthy man, though above eighty years of age.

use of strong purgatives; different medicines, however, should be tried and persisted in, till the effect be produced, and even external applications may sometimes be administered with effect when the best intermitting remedies have failed.

CHAP. XXXI.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

THE cholera morbus is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used for removing it.

CAUSES.—It is occasioned by a redundancy and putrid acrimony of the bile, cold, food that easily turns rancid or sour on the stomach, as butter, bacon, sweetmeats, cucumbers, melons, cherries, and other cold fruits.* It is sometimes the effect of strong acrid purges or vomits, or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind, as fear, anger, &c.

SYMPTOMS.—It is generally preceded by a cardialgia, or heart-burn, sour belching, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting and purging of green, yellow, or blackish coloured bile, with a distension of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick, unequal pulse, and often a fixed acute pain about the region of the naval. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold or cramped, and are often covered with a clammy

* I have been twice brought to the gates of death by this disease, and both times it was occasioned by eating rancid bacon.

sweat, the urine is obstructed, and there is a palpitation of the heart. Violent hiccuping, fainting, and convulsions, are the signs of approaching death.

MEDICINE.—At the beginning of this disease, the efforts of Nature to expel the offending cause should be assisted, by promoting the purging and vomiting. For this purpose, the patient must drink freely of diluting liquors, as whey, butter-milk, warm water, thin water-gruel, small posset, or, what is perhaps preferable to any of them, very weak chicken-broth. This should not only be drank plentifully to promote the vomiting, but a clyster of it given every hour in order to promote the purging.

After these evacuations have been continued for some time, a decoction of toasted oat-bread may be drank to stop the vomiting; the bread should be toasted till it is of a brown colour, and afterwards boiled in spring-water. If oat-bread cannot be had, wheat-bread, or oatmeal well toasted, may be used in its stead. If this does not put a stop to the vomiting, two table-spoonsful of the saline julep, with ten drops of laudanum, may be taken every hour till it ceases.

The vomiting and purging, however, ought never to be stopped too soon; as long as these discharges do not weaken the patient, they are salutary, and may be allowed to go on, or rather ought to be promoted. But when the patient is weakened by the evacuations, which may be known from the sinking of his pulse, &c. recourse must immediately be had to opiates, as recommended above; to which may be added strong wines, with spirituous cinnamon-waters, and other generous cordials. Weak negus, or strong wine-whey, will likewise be necessary to support the patient's spirits, and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel-cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spirituous fomentations should likewise be applied to the regions of the stomach.

When the violence of the disease is over, to prevent

a relapse, it will be necessary for some time to continue the use of some small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise: as the stomach and intestines are generally much weakened, an infusion of the bark or other bitters, in small wine, sharpened with the elixir of vitriol, may be drank for some time.

Though phycisians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking proof in an old man and his son, who had been both seized with it about the middle of the night. I did not see them till the next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid, the countenance was ghastly, and the strength almost quite exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

OF A DIARRHŒA, OR, LOOSENESS.

A looseness, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped, unless when it continues too long, or evidently weakens the patient; as this, however, sometimes happens, we shall point out the most common causes of a looseness, with the proper method of treatment.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, or drink freely of weak diluting liquors, to bathe his feet and legs frequently in luke-warm water, to wear flannel next his skin, and to take every other method to restore the perspiration.

In a looseness, which proceeds from excess or repletion, a vomit is the proper medicine. Vomits not only cleanse the stomach, but promote all the secretions,

which renders them of great importance in carrying off a debauch. Half a drachm of ipecacuanha in powder will answer this purpose very well; a day or two after the vomit, the same quantity of rhubarb may be taken, and repeated two or three times if the looseness continues. The patient ought to live upon light vegetable food of easy digestion, and to drink whey, thin gruel, or barley-water.

A looseness occasioned by the obstruction of any customary evacuation, generally requires bleeding. If that does not succeed, other evacuations may be substituted in the room of those which are obstructed; at the same time every method is to be taken to restore the usual discharges, as not only the cure of the disease, but the patient's life, may depend on this.

A periodical looseness ought never to be stopped. It is always an effort of Nature to carry off some offending matter, which, if retained in the body, might have fatal effects. Children are very liable to this kind of looseness, especially while teething; it is, however, so far from being hurtful to them, that such children generally get their teeth with least trouble. If these loose stools should at any time prove sour or griping, a tea-spoon of magnesia alba, with four or five grains of rhubarb, may be given to the child with a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools.

A diarrhœa or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits, in this case, are highly improper; nor are purges safe, unless they are very mild, and given in small quantities. Opiates and other antispasmodic medicines are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or pennyroyal-tea every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind, are here of the greatest importance.

When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must

drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging; afterwards; if there be reason to suspect that the bowels be inflamed, bleeding will be necessary; small doses of laudanum may likewise be taken to remove their irritation.

When the gout, repelled from the extremities, occasions a looseness, it ought to be repelled by gentle doses of rhubarb, or other mild purgatives; the gouty matter is likewise to be solicited towards the extremities by warm fomentations, cataplasms, &c. the perspiration ought at the same time to be promoted by warm diluting liquors, as wine-whey, with spirits of hartshorn, or a few drops of liquid laudanum, in it.

When a looseness proceeds from worms, which may be known by the sliminess of the stools, mixed with pieces of decayed worms, &c. medicines may be given to kill and carry off these vermin, as the powder of tin, with purges of rhubarb and calomel; afterwards lime-water, either alone, or with a small quantity of rhubarb infused, will be proper to strengthen the bowels, and prevent the new generation of worms.

A looseness is often occasioned by drinking bad water; when this is the case, the disease generally proves epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected, by mixing with it quicklime, chalk, or the like.

In people whose stomachs are weak, violent exercise immediately after eating will cause a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent ingredients, in white wine. Such persons ought likewise to take frequently a glass or two of old red port, or good claret.

From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of

rice boiled with milk, and flavoured with cinnamon; rice-jelly, sago, with red-port; and the lighter sorts of flesh meats roasted. The drink may be thin water-gruel, rice-water, or thin broth made from lean veal or with a sheep's head, as being more gelatinous than mutton, beef, or chicken-broth.

Persons who, from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome foods, and meats of hard digestion; they ought likewise to beware of cold, moisture, or whatever may obstruct the perspiration, and should wear flannel next the skin; all violent passions, as fear, anger, &c. are likewise carefully to be guarded against.

OF VOMITING.

Vomiting may proceed from various causes, as excess in eating and drinking, foulness of the stomach, the acrimony of the aliment, a translation of the morbific matter of ulcers, of the gout, the erysipelas, or other diseases of the stomach. It may likewise proceed from a looseness being too suddenly stopped, from the stoppage of any customary evacuation, as the bleeding piles, the menses, &c. from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the gravel, worms, or from any kind of poison taken into the stomach. It is an usual symptom of injuries done to the brain; as contusions, compressions, &c. It is likewise a symptom of wounds, or inflammation of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unsual motions, as sailing, by being drawn backwards in a cart or coach, &c. It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting; sometimes it produces from a regurgitation of the bile into the stomach; in this case what the patient vomits is generally of a yellow or greenish colour, and has a bitter taste. Persons who are subject to nervous affections

are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a general symptom of pregnancy. In this case it generally comes on about two weeks after the stoppage of the menses, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought, therefore, to be promoted by drinking luke-warm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea.

When the retrocession of the gout, or the obstruction of customary evacuations, occasion vomiting, all means must be used to restore their discharges; or if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding, and keeping the body gently open. The bleeding, however, ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna, or senna. Pregnant women are most apt to vomit in the morning immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach. It may generally be prevented, by taking a dish of coffee, tea, or some light breakfast in bed. Pregnant women, who are afflicted with vomiting, ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if the stomach be weak, a little brandy may be added to it. If the spirits be low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep

the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine. It may be taken in the dose of fifteen or twenty drops, twice or thrice-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting, which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a dish of tea, or a little milk, three or four times a-day, or oftener, if necessary, to keep the body open.

When vomiting proceeds from violent passions or affections of the mind, all evacuants must be carefully avoided, especially vomits. These are exceedingly dangerous. The patient in this case ought to be kept perfectly easy and quiet, to have the mind soothed, and to take some gentle cordial, as negus, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines are of use. Warm and aromatic plasters have likewise a good effect. The stomach-plaster of the London or Edinburgh dispensatory, may be applied to the pit of the stomach, or a plaster of theriaca will answer rather better; aromatic medicines may likewise be taken inwardly, as cinnamon or mint tea, wine and spices boiled in it, &c. The region of the stomach may be rubbed with æther, or, if that cannot be had, with strong brandy or other spirits. The belly should be fomented with warm water, or the patient immersed up to the breast in a warm bath.

I have always found the saline draughts, taken in the act of effervescence, of singular use in stopping a vomiting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the salt of tartar, in an ounce and half of fresh lemon-juice, and adding to it an ounce of peppermint-water, the same quantity of simple cinnamon-water, and a little white sugar.

This draught may be swallowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach, after all other means have failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not, however, mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAP. XXXII.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

THE diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people; but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

CAUSES.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c. where the patient has suffered by excessive evacuations: it may also be occasioned by great fatigue, or riding long journeys upon a hard-trotting horse, carrying heavy burdens, running, &c. It may be brought on by hard drinking, or the use of strong stimulating diuretic medicines, as tincture of cantharides, spirits of turpentine, and such like. It is often the effect of drinking too great quantities of mineral waters. Many imagine that these will do them no service unless they be drank in great quantities, by which mistake it often happens that they occasion worse diseases than those they were intended to

cure. In a word, this disease may either proceed from too great laxity of the organs which secrete the urine, from something that stimulates the kidneys too much, or from a thin dissolved state of the blood, which makes too great a quantity of it run off by the urinary passages.

SYMPTOMS.—In a diabetes, the urine generally exceeds in quantity all the liquid food which the patient takes. It is thin and pale, of a sweetish taste, and an agreeable smell. The patient has a continual thirst, with some degree of fever; his mouth is dry, and he spits frequently a frothy spittle. The strength fails, the appetite decays, and the flesh wastes away, till the patient is reduced to skin and bone. There is a heat of the bowels; and frequently the loins, testicles, and feet, are swelled.

This disease may generally be cured at the beginning; but after it has continued long, the cure becomes very difficult. In drunkards, and very old people, a perfect cure is not to be expected.

REGIMEN.—Every thing that stimulates the urinary passages, or tends to relax the habit, must be avoided. For this reason the patient should live chiefly on solid food. His thirst may be quenched with acids; as sorrel, juice of lemon, or vinegar. The mucilaginous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shellfish are to be preferred; oysters, crabs, &c.

The drink may be Bristol-water. When that cannot be obtained, lime-water, in which a due proportion of oak-bark has been macerated, may be used. The white decoction,* with isinglass dissolved in it, is likewise a very a proper drink.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or mattress. Nothing hurts the kidneys more than lying too soft. A warm dry air, the use of the flesh brush, and every thing that promotes

* See Appendix, *White Decoction.*

perspiration, is of service. For this reason the patient ought to wear flannel next his skin. A large strengthening-plaster may be applied to the back; or, what will answer better, a great part of the body may be wrapped in plaster.

MEDICINE.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum-seeds, or any other spiceries infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a drachm of powder made of equal parts of alum and the inspissated juice, commonly called terra japonica, may be taken four times a-day, or oftener, if the stomach will bear it. The alum must first be melted in a crucible; afterwards they may both be pounded together. Along with every dose of this powder the patient may take a tea-cupful of the tincture of roses.*

If the patient's stomach cannot bear the alum in substance, whey may be made of it, and taken in the dose of a teacupful three or four times a-day. The alum-whey is prepared by boiling two English quarts of milk over a slow fire, with three drachms of alum, till the curd separates.

Opiates are of service in this disease, even though the patient rests well. They take off spasm and irritation, and at the same time lessen the force of the circulation. Ten or twelve drops of liquid laudanum may be taken in a cup of the patient's drink three or four times a-day.

The best corroborants which we know, are the Peruvian bark and wine. A drachm of bark may be taken in a glass of red port, or claret, three times a-day. The medicine will be both more efficacious and less disagreeable, if fifteen or twenty drops of the acid elixir of vitriol be added to each dose. Such as cannot take the bark in substance, may use the decoction, mixed

* See Appendix, *Tincture of Roses.*

with an equal quantity of red wine, and sharpened as above.

There is a disease incident to labouring people in the decline of life, called an Incontinency of Urine. But this is very different from a diabetes, as the water passes off involuntary by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts, or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occasioned by a long use of strong diuretics, or of stimulating medicines injected into the bladder.

This disease may be mitigated by the use of astringent and corroborating medicines, such as have been mentioned above; but we do not remember ever to have seen it cured.

In an incontinency of urine, from whatever cause, a piece of sponge ought to be worn, or a bladder applied in such a manner as to prevent the urine from galling and excoriating the parts.

OF A SUPPRESSION OF URINE.

It has already been observed that a suppression of urine may proceed from various causes; as an inflammation of the kidneys, or bladder; small stones or gravel lodging in the urinary passages, hard fœces lying in the rectum, pregnancy, a spasm or contraction of the neck of the bladder, clotted blood in the bladder itself, a swelling of the hæmorrhoidal veins, &c.

Some of these cases require the catheter, both to remove the obstructing matter, and to draw off the urine; but as this instrument can only be managed with safety by persons skilled in surgery, we shall say nothing further of its use. A bougee may be used by any cautious hand, and will often succeed better than the catheter.

We would chiefly recommend in all obstructions of urine, fomentations and evacuants. Bleeding, as far as

the patient's strength will permit, is necessary, especially where there are symptoms of topical inflammation. Bleeding in this case not only abates the fever, by lessening the force of the circulation, but, by relaxing the solids, it takes off the spasm or stricture upon the vessels, which occasioned the obstruction.

After bleeding, fomentations must be used. These may either consist of warm water alone, or of decoctions of mild vegetables; as mallows, camomile-flowers, &c. Cloths dipped in these may either be applied to the part affected, or a large bladder filled with the decoction may be kept continually upon it. Some put the herbs themselves into a flannel bag, and apply them to the part, which is far from being a bad method. These continue longer warm than cloths dipped in the decoction, and at the same time keep the part equally moist.

In all obstructions of urine, the body ought to be kept open. This is not, however, to be attempted by strong purgatives, but by emollient clysters, or gentle infusions of senna and manna. Clysters in this case not only open the body, but answer the purpose of an internal fomentation, and greatly assist in removing the spasms of the bladder and parts adjacent.

The food must be light, and taken in small quantities. The drink may be weak broth, or decoctions and infusions of mucilaginous vegetables, as marsh-mallow roots, lime-tree buds, &c. A tea-spoonful of the sweet spirits of nitre, or a drachm of Castile soap, may be frequently put into the patient's drink; and, if there be no inflammation, he may drink small gin-punch.

Persons subject to a suppression of urine, ought to live very temperate. Their diet should be light, and their liquor diluting. They should avoid all acid and austere wines, should take sufficient exercise, lie hard, and avoid study and sedentary occupations.

OF THE GRAVEL AND STONE.

When small stones are lodged in the kidneys, or

discharged along with the urine, the patient is said to be afflicted with the gravel. If one of these stones happen to make a lodgment in the bladder for some time, it accumulates fresh matter, and at length becomes too large to pass off with the urine. In this case the patient is said to have the stone.

CAUSES.—The stone and gravel may be occasioned by high living; the use of strong astringent wines; a sedentary life; lying too hot, soft, or too much on the back; the constant use of water impregnated with earthy or stony particles; aliments of an astringent or windy nature, &c. It may likewise proceed from an hereditary disposition. Persons in the decline of life, and those who have been much afflicted with the gout or rheumatisms are not liable to it.

SYMPTOMS.—Small stones or gravel in the kidneys occasion pain in the loins, sickness, vomiting, and sometimes bloody urine. When the stone descends into the ureter, and is too large to pass alone with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles are drawn upwards, and the urine is obstructed.

A stone in the bladder is known from a pain at the time, as well as before and after making water; from the urine coming away by drops, or stopping suddenly when it was running in full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage, on a rough road; from a white, thick, copious stinking mucous sediment in the urine; from an itching in the top of the penis; from bloody urine; from an inclination to go to stool during the discharge of urine; from the patient's passing his urine more easily when lying than in an erect posture; from a kind of convulsive motion occasioned by the sharp pain in discharging the last drops of the urine; and lastly, from sounding or searching with the catheter.

REGIMEN.—Persons afflicted with the gravel or stone should avoid aliments of a windy or heating nature, as salt meats, sour fruits, &c. Their diet ought chiefly

to consist of such things as tend to promote the secretion of urine, and to keep the body open. Artichokes, asparagus, spinage, lettuce, parsley, succory, purslane, turnips, potatoes, carrots, and radishes, may be safely eaten. Onions, leeks, and cellery, are in this case, reckoned medicinal. The most proper drinks are whey, butter-milk, milk and water, barley-water; decoctions or infusions of the roots of marsh-mallows, parsley, liquorice, or of other mild mucilaginous vegetables, as linseed, lime-tree buds or leaves, &c. If the patient has been accustomed to generous liquors, he may drink weak gin and water.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons afflicted with gravel often pass a great number of stones after riding on horseback, or in a carriage, but those who have a stone in the bladder are seldom able to bear these kinds of exercise. Where there is a hereditary tendancy to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of the gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from encreasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

MEDICINE.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the ureter, or some part of the urinary passages, the patient must be bled; warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles inflammations of the kidneys and bladder, to which we refer.

Dr. Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The doctor very justly ob-

serves, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the doctor recommends Spanish soap, and oyster or cockle-shell lime-water,* to be taken in the following manner: The patient must swallow every day, in any form that is least disagreeable, an ounce of the internal part of Alicant soap, and drink three or four English pints of oyster or cockle-shell lime-water; the soap is to be divided into three doses; the largest to be taken fasting in the morning early, the second at noon, and the third at seven in the evening, drinking above each dose a large draught of lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former, and three drachms of the latter, may be taken daily; this quantity, however, he may increase by degrees, and ought to persevere in the use of these medicines, especially if he finds any abatement of his complaints, for several months; nay, if the stone be very large, for years. It may likewise be proper for the patient, if he be severely pained, not only to begin with the soap and lime-water in small quantities, but to take the second or third lime-water instead of the first. However, after he has been for some time accustomed to these medicines, he may not only take the first water, but if he finds he can easily bear it, heighten its dissolving power still more by pouring it a second time on fresh calcined shells.

The caustic alkali, or soap-lees, is the medicine chiefly in vogue at present for the stone; it is of a very acrid nature, and ought therefore to be given in some gelatinous or mucilaginous liquor, as veal broth, new milk, linseed-tea, a solution of gum-arabic, or a decoction of marsh-mallow roots. The patient must begin with small

* See Appendix, *Lime-Water.*

doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach can bear it.*

Though the soap-lees and lime water are the most powerful medicines which have hitherto been discovered for the stone; yet there are some things of a more simple nature, which in certain cases are found to be beneficial, and therefore deserve a trial. An infusion of the seeds of daucus sylvestris, or wild carrot, sweetened with honey, has been found to give considerable ease in cases where the stomach could not bear any thing of an acrid nature. A decoction of raw coffee-berries taken morning and evening, to the quantity of eight or ten ounces, with ten drops of sweet spirits of nitre, has likewise been found very efficacious in bringing away large quantities of earthy matter in flakes. Honey is likewise found to be of considerable service, and may be taken in gruel, or in any other form that is more agreeable.

The only other medicine which we shall mention is the uva ursi. It has been greatly extolled of late, both for the gravel and stone. It seems, however, to be in all respects inferior to the soap and lime-water; but it is less disagreeable, and has frequently to my knowledge relieved gravelly complaints. It is generally taken in powder, from half a drachm to a whole drachm, two or three times a-day. It may, however, be taken to the quantity of seven or eight drachms a-day with great safety and good effect.

No means have hitherto been devised for removing the tormenting disorder of the stone in the bladder. There is on record a fact on this subject, which conspicuously proves with what caution the efficacy of specifics is to be believed. The British parliament paid five thousand pounds for a pretended solvent for the stone, long since totally forgotten. If they suffered

* The caustic alkali may be prepared by mixing two parts of quick-lime with one of pot-ashes, and suffering them to stand till the lixivium be performed, which must be carefully filtrated before it be used. If the solution does not happen readily, a small quantity of water may be added to the mixture.

themselves to be deceived, how much more easy is it to delude the public in general, who take the lies and forgeries of the quacks as gospel.

It is by no means, however, intended to be asserted, that experiments should be discontinued, as a solvent may yet be discovered; though there is little reason to hope that any medicine will be discovered, so powerful as to dissolve the harder stones without destroying the bladder.

Small stones having got into the urethra, have been brought away by means of a bent probe: and they have been sometimes brought down by riding on a hard-trotting horse, or in a carriage on a rough road.

Persons troubled with this disorder should not too long delay the operation of cutting. When it is ascertained that there is a stone in the bladder, too large to get along the urethra, it should be cut out immediately, as it will quickly increase, so that it cannot be extracted without a laceration of the parts, and that too at a time when the patient's habit has become too irritable.

CHAP. XXXIII.

OF INVOLUNTARY DISCHARGES OF BLOOD.

SPONTANEOUS or involuntary discharges of blood often happen from various parts of the body. These, however, are so far from being always dangerous, that they often prove salutary. When such discharges are critical, which is frequently the case in fevers, they ought not to be stopped. Nor, indeed, is it proper at any time to stop them, unless they be so great as to endanger the patient's life. Most people, afraid of the smallest discharge of blood from any part of the body, fly immediately to the use of styptic and astringent medicines, by which means an inflammation of the brain, or some other fatal disease, is occasioned, which, had

the discharge been allowed to go on, might have been prevented.

Periodical discharges of blood, from whatever part of the body they proceed, must not be stopped. They are always the efforts of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may, indeed, be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping of small periodical flux of blood from one of the fingers has proved fatal.

In the early period of life, bleeding at the nose is very common. Those who are further advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period of life, hæmorrhoidal fluxes are most common; and, in the decline of life, discharges of blood from the urinary passages.

Involuntary fluxes of blood may proceed from very different, and often from quite opposite, causes. Sometimes they are owing to a particular construction of the body, as a sanguine temperament, a laxity of the vessels, a plethoric habit, &c. At other times they proceed from a determination of the blood towards one particular part, as the head, the hæmorrhoidal veins, &c. They may likewise proceed from an inflammatory disposition of the blood, in which case there is generally some degree of fever: this likewise happens when the flux is occasioned by an obstructed perspiration, or a stricture upon the skin, the bowels, or any particular part of the system.

But a dissolved state of the blood will likewise occasion hæmorrhages. Thus, in putrid fevers, the dysentery, the scurvy, the malignant small-pox, &c. there are often very great discharges of blood from different parts of the body. They may likewise be brought on by too liberal an use of medicines which tend to dissolve the blood, as cantharides, the volatile alkaline salts, &c. Food of an acrid or irritating quality may likewise occasion hæmorrhages; as also strong purges and vomits, or any thing that greatly stimulates the bowels.

Violent passions or agitations of the mind will likewise have this effect. These often cause bleeding at the nose, and I have known them sometimes occasion an hæmorrhage in the brain. Violent efforts of the body, by overstraining or hurting the vessels, may have the same effect, especially when the body is long kept in an unnatural posture, as hanging the head very low, &c.

The cure of an hæmorrhage must be adapted to its cause. When it proceeds from too much blood, or a tendency to inflammation, bleeding, with gentle purges and other evacuations, will be necessary. It will, likewise, be proper for the patient in this case to live chiefly upon a vegetable diet, to avoid all strong liquors, and food that is of an acrid, hot, or stimulating quality. The body should be kept cool, and the mind easy.

When an hæmorrhage is owing to a putrid or dissolved state of the blood, the patient ought to live chiefly upon acrid fruits, with milk, and vegetables of a nourishing nature, as sago, salop, &c. His drink may be wine diluted with water, and sharpened with the juice of lemon, vinegar, or spirits of vitriol. The best medicine in this case is the Peruvian bark, which may be taken according to the urgency of the symptoms.

When a flux of blood is the effect of acrid food, or of strong stimulating medicines, the cure is to be effected by soft and mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam, or the same quantity of spermaceti.

When an obstructed perspiration, or a stricture upon any part of the system, is the cause of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water, &c.

OF BLEEDING AT THE NOSE.

Bleeding at the nose is commonly preceded by some degree of quickness at the pulse, flushing in the face, pulsation in the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound in blood, this discharge is very salutary. It often cures a vertigo, the head-ach, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lancet.

In a discharge of blood from the nose, the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease, or the cure of a disease. This conduct proceeds from fear; but it has often bad, and sometimes fatal, consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary: and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped, especially if the symptoms of plethora, mentioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in luke-warm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with

nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop, and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint, dipped in strong spirits of wine, may be put up the nostrils, or if that cannot be had, they may be dipped in brandy. Blue vitriol dissolved in water may likewise be used for this purpose, or a tent dipped in the white of an egg well beat up, may be rolled in a powder made of equal parts of white sugar, burnt alum, and white vitriol, and put up the nostrils from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not, however, be amiss to give the patient half an ounce of Glauber's salt, and the same quantity of manna, dissolved in four or five ounces of barley-water. This may be taken at a draught, and repeated if it does not operate in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener, if the stomach will bear it. If a stronger medicine be necessary, a tea-cupful of the tincture of roses, with twenty or thirty drops of the weak spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may drink water with a little common salt in it, or equal parts of water and vinegar.

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have not known this fail.

Sometimes, when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very ready to do after losing a great quantity of blood.

When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils, and bringing them out at the mouth, then fastening pieces of sponge,

or small rolls of linen cloth to their extremities, afterwards drawing them back, and tying them to the outside with a sufficient degree of tightness.

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose, nor take away the tents or clotted blood till they fall off of their own accord, and should not lie with his head low.

Those who are afflicted with frequent bleeding at the nose, ought to bathe their feet often in warm water, and keep them warm and dry. They ought to wear nothing tight about their necks, to keep the body as much in an erect posture as possible, and never to view any object obliquely. If they have too much blood, a vegetable diet, with now and then a cooling purge, is the safest way to lessen it.

But when the disease proceeds from a thin dissolved state of the blood, the diet should be rich and nourishing, as strong broths and jellies, sago-gruel, with wine and sugar, &c. Infusions of the Peruvian bark in wine ought likewise to be taken, and persisted in for a considerable time.

OF THE BLEEDING AND BLIND PILES.

A discharge of blood from the hæmorrhoidal vessels is called the bleeding piles. When the vessels only swell, and discharge no blood, but are exceeding painful, the disease is called the Blind Piles.

Persons of a loose spongy fibre, of a bulky size, who live high, and lead a sedentary inactive life, are most subject to this disease. It is often owing to an hereditary disposition. When this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine, plethoric, or a scorbutic habit, or of a melancholy disposition.

The piles may be occasioned by an excess of blood, by strong aloetic purges, high-seasoned food, drinking great quantities of sweet wines, the neglect of bleeding or other customary evacuations, much riding, great

costiveness, or any thing that occasions hard or difficult stools. Anger, grief, or other violent passions, will likewise occasion the piles. I have often known them brought on by sitting on the damp ground; a pair of thin breeches will excite the disorder in a person who is subject to it, and sometimes even in those who never had it before. Pregnant women are often afflicted with the piles.

A flux of blood from the anus is not always to be treated as a disease. It is even more salutary than bleeding at the nose, and often prevents or carries off diseases. It is peculiarly beneficial in the gout, rheumatism, asthma, and hypochondriacal complaints, and often proves critical in colics and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate and even salutary to another. That only is to be esteemed dangerous which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.

When this is the case, the discharge must be checked by a proper regimen and astringent medicines. The DIET must be cool and nourishing, consisting chiefly of bread, milk, cooling vegetables, and broths. The DRINK may be chalybeate water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormentil-root, bistort and marsh-mallow-roots, &c.

Old conserve of red roses is a very good medicine in this case. It may be mixed with new milk, and taken in the quantity of an ounce three or four times a-day. This medicine is in no great repute, owing to its being seldom taken in such quantity as to produce any effects; but when taken as here directed, and duly persisted in, I have known it perform very extraordinary cures in violent hæmorrhages, especially when assisted by the tincture of roses; a tea-cupful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case,

as a strengthener and astringent. Half a drachm of it may betak en in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a-day.

The bleeding piles are sometimes periodical, and return regularly once a-month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hæmorrhoidal veins.

In the blind piles, bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flower of brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a-day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the anus, that they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or, if they will fix upon the piles themselves, so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger.

Various ointments, and other external applications, are recommended in the piles; but I do not remember to have seen any effects from these worth mentioning.

Their principal use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain, however, is very great, a liniment made of two ounces of emollient ointments, and half an ounce of liquid laudanum, beaten up with the yolk of an egg, may be applied.

Aloes, which form a principal ingredient of most of the advertised purgative pills, very frequently occasion the piles. A spoonful of castor oil, taken occasionally at night, is a much better, as well as a safer, remedy for habitual costiveness.

A weak solution of lead with a little laudanum, is a good external remedy; as is also an ointment of two-third hog's-lard, and one-third galls finely pulverised. An injection of lime-water, or of an infusion of galls, may be used with advantage when the piles are seated high.

The pain may be removed by an emetic, or by taking twice a-day thirty drops of balsam of copaiva on a bit of sugar. A pile having a narrow neck is best extirpated by the knife; if it be large, or its basis broad, a double ligature may be passed through, and tied on each side.

Piles ought to be duly attended to, otherwise they often produce a fistula. This painful disorder may be discovered by stains on the linen, proceeding from a small orifice near the anus. In this complaint, such stimulants should be applied as produce a more active inflammation on the sides of the ulcer, so as to make them adhere together. With this view, irritating injections, properly persisted in, have been successfully used. A wine-glass of sea-water, taken every night for several weeks, has also been found useful.

But the only certain and radical cure is the knife. By the operation of cutting, the ulcer is reduced to a simple wound, and healed as such. The sooner this operation is recurred to, the better; because the disorder gradually spreads in different directions through the cellular substance which surrounds the rectum, and new orifices are formed, which render it more difficult to be cured.

The best means of performing this operation is by incision. It is, however, also done by passing a thread of silk, or flexible gold wire, in at the external orifice of the fistula, and bringing it out at the anus, then

twisting the ends together, and daily repeating this till it cuts its way out.

SPITTING OF BLOOD.

We mean here to treat of that discharge of blood from the lungs only which is called an hæmoptoe or spitting of blood. Persons of a slender make, and a lax fibre, who have long necks and strait breasts, are more liable to this disease. It is most common in the spring, and generally attacks people before they arrive at the prime or middle of life. It is a common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to an hæmoptoe.

CAUSES.—An hæmoptoe may proceed from excess of blood, from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking loud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against violent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs. These may either be received from without, or they may be occasioned by hard bodies getting into the wind-pipe, and so falling down upon the lungs, and hurting that tender organ. The obstructions of any customary evacuation may occasion a spitting of blood; as neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, scirrhus concretions, or any thing that obstructs the circulation of the blood in the lungs. It is often the effect of a long and violent cough; in which case it is generally the forerunner of a consumption. A violent degree of cold suddenly applied to the external parts of the body will occasion an hæmoptoe. It may likewise be occasioned by breathing air which

is too much rarified to be able properly to expand the lungs. This is often the case with those who work in hot places, as furnaces, glass-houses, or the like. It is likewise said to happen to such as ascend to the top of very high mountains, as the Peak of Teneriffe, &c.

Spitting of blood is not always to be considered as a primary disease. It is often only a symptom, and in some diseases not an unfavourable one. This is the case in pleurisies, peripneumonies, and sundry other fevers. In a dropsy, scurvy, or consumption, it is a bad symptom, and shews that the lungs are ulcerated.

SYMPTOMS.—Spitting of blood is generally preceded by sense of weight, and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pain of the back and loins, &c. As these shew a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunner of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means these may always be distinguished from an hæmoptoe. Sometimes the blood that is spit up is thin, and of a florid red colour; and at other times it is thick, and of a dark or blackish colour; nothing however can be inferred from this circumstance, but that the blood has lain a longer or shorter time in the breast before it was discharged.

Spitting of blood, in a strong healthy person of a sound constitution, is not very dangerous; but when it attacks the tender and delicate, or persons of a weak lax fibre, it is with difficulty removed. When it proceeds from a scirrhus or polypus of the lungs, it is bad. The danger is greater when the discharge proceeds from the rupture of a large vessel, than of a small one. When the extravasated blood is not spit up, but lodges in the breast, it corrupts, and greatly increases the danger. When the blood proceeds from an ulcer in the lungs, it is generally fatal.

REGIMEN.—The patient ought to be kept cool and easy. Every thing that heats the blood, or quickens the circulation, increases the danger. The mind ought likewise to be smoothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender; as rice boiled with milk, small broths, barley-gruels, panado, &c. The diet, in this case, can scarcely be too low. Even water-gruel is sufficient to support the patient for some days. All strong liquors must be avoided. The patient may drink milk and water, barley-water, whey, butter-milk, and such like. Every thing, however, should be drank cool, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

MEDICINE.—This, like other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines. More mischief is often done by these, than if it were suffered to go on. It may, however, proceed so far as to weaken the patient, and even endanger his life; in which case proper means must be used for restraining it.

The body should be kept gently open by laxative diet; as roasted apples stewed prunes, and such like. If these should not have the desired effect, a tea-spoonful of the lenitive electuary may be taken twice or thrice a-day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed for the bleeding at the nose.

If the patient be hot or feverish, bleeding and small doses of nitre will be of use; a scruple, or half a drachm, of nitre may be taken in a cup of his ordinary drink twice or thrice a-day. His drink may likewise be sharpened with acids, as juice of lemon, or a few drops of the spirits of vitriol; or he may take frequently a cup of the tincture of roses.

Bathing the feet and legs in luke-warm water has likewise a very good effect in this disease. Opiates, too are sometimes beneficial; but these must be administered with caution. Ten or twelve drops of laudanum may be given in a cup of barley-water twice a-

day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity, and long enough persisted in. It may be taken to the quantity of three or four ounces a-day; and, if the patient be troubled with a cough, it should be made into an electuary, with balsamic syrup, and a little of the syrup of poppies.

If stronger astringents be necessary, fifteen or twenty drops of the elixir of vitriol may be taken in a glass of water three or four times a-day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body, and violent agitations of the mind.

VOMITING OF BLOOD.

This is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women; and sometimes from the stopping of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poisons, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera. It may likewise proceed from external violence, as blows or bruises, or from any of the causes which produce inflammation. In hysteric women, vomiting of blood is a very common, but by no means a dangerous, symptom.

A great part of the danger in this disease arises from

the extravasated blood lodging in the bowels, and becoming putrid, by which means a dysentery or putrid fever may be occasioned. The best way of preventing this is, to keep the body gently open, by frequently exhibiting emollient clysters. Purges must not be given till the discharge is stopt, otherwise they will irritate the stomach, and increase the disorder. All the food and drink must be of a mild cooling nature, and taken in small quantities. Even drinking cold water has sometimes proved a remedy, but it will succeed better when sharpened with the weak spirits of vitriol. When there are signs of an inflammation, bleeding may be necessary; but the patient's weakness will seldom permit it. Opiates may be of use; but they must be given in very small doses, as four or five drops of liquid laudanum, twice or thrice a-day.

After the discharge is over, as the patient is generally troubled with gripes, occasioned by the acrimony of the blood lodging in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

This is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly, without interruption and without pain, it proceeds from the kidneys, but if the blood be in small quantities, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the ureter, it is attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone, and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard

riding, or any violent motion. It may also proceed from ulcers of the bladder, from a stone lodging in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger: but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge, however, be very great, it may waste the patient's strength, and occasion an ill habit of body, a dropsy, or a consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure depends upon an operation, a description of which would be foreign to our purpose.

If it be attended with a plethora, and symptoms of inflammation, bleeding will be necessary. The body must likewise be kept open by emollient clysters, or cooling purgative medicines, as cream of tartar, rhubarb, manna, or small doses of lenitive electuary.

When bloody urine proceeds from a dissolved state of the blood, it is commonly the symptom of some malignant disease, as the small-pox, a putrid fever, or the like. In this case the patient's life depends upon the liberal use of the Peruvian bark and acids, as has already been shown.

Where there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and the drink of a soft, healing balsamic quality, as decoctions of marshmallow-roots with liquorice, solutions of gum arabic, &c. Three ounces of marshmallow-roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces of gum arabic, and half an ounce of purified nitre, may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day.

The early use of astringents in this disease has often

bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If, however, the case be urgent, or the patient seem to suffer from the loss of blood, gentle astringents may be necessary. In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a day.

OF THE DYSENTERY, OR BLOODY FLUX.

This disease prevails in the spring and autumn. It is most common in marshy countries, where after hot and dry summers it is apt to become epidemic. Persons are most liable to it who are much exposed to the night air, or who live in places where the air is confined and unwholesome. Hence it often proves fatal in camps, on ship-board, in jails, hospitals, and such like places.

CAUSE.—The dysentery may be occasioned by any thing that obstructs the perspiration, or renders the humours putrid; as damp beds, wet clothes, unwholesome diet, bad air, &c. but it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labour under the disease. Even the smell of the patient's excrements have been known to communicate the infection.

SYMPTOMS.—It is known by a flux of the belly, attended by violent pain of the bowels, a constant inclination to go to stool, and generally more or less blood in the stools. It begins, like other fevers, with chilliness, loss of strength, a quick pulse, great thirst, and an inclination to vomit. The stools are at first greasy and frothy, afterwards they are streaked with blood, and at last have frequently the appearance of pure blood, mixed with small filaments resembling bits of skin. Worms are sometimes passed both upwards and downwards through the whole course of the disease. When the patient goes to stool, he feels a bearing down, as if

the whole bowels were falling out, and sometimes a part of the intestine is actually protruded, which proves exceeding troublesome, especially in children. Flatulency is likewise a troublesome symptom, especially towards the end of the disease.

This disease may be distinguished from a diarrhœa, or looseness, by the acute pain of the bowels, and the blood which generally appears in the stools. It may be distinguished from the cholera morbus by its not being attended with such violent and frequent fits of vomiting, &c.

When the dysentery attacks the old, the delicate, or such as have been wasted by the gout, the scurvy, or other lingering diseases, it generally proves fatal. Vomiting and hiccuping are bad signs, as they shew an inflammation of the stomach. When the stools are green, black, or have an exceeding disagreeable cadaverous smell, the danger is very great, and it shews the disease to be of the putrid kind. It is an unfavourable symptom when clysters are immediately returned; but still more so when the passage is so obstinately shut, that they cannot be injected. A feeble pulse, coldness of the extremities, with difficulty of swallowing, and convulsions are signs of approaching death.

REGIMEN.—Nothing is of more importance in this disease than cleanliness. It contributes greatly to the recovery of the patient, and no less to the safety of such as attend him. In all contagious diseases the danger is increased, and the infection spread, by the neglect of cleanliness; but in no one more than this. Every thing about the patient should be frequently changed. The excrement should never be suffered to continue in his chamber, but removed immediately, and buried under ground. A constant stream of fresh air should be admitted into the chamber; and it ought frequently to be sprinkled with vinegar, juice of lemon, or some other strong acid.

The patient must not be discouraged, but his spirits kept up in hopes of a cure. Nothing tends more to render any putrid disease mortal, than the fears and

apprehensions of the sick. All diseases of this nature have a tendency to sink and depress the spirits, and when that is increased by fears and alarms from those whom the patient believes to be persons of skill, it cannot fail to have the worst effects.

A flannel-waistcoat worn next the skin has often a very good effect in the dysentery. This promotes the perspiration without over-heating the body. Great caution, however, is necessary in leaving it off. I have often known a dysentery brought on by imprudently throwing off a flannel waistcoat before the season was sufficiently warm. For whatever purpose this piece of dress is worn, it should never be left off but in a warm season.

In this disease the greatest attention must be paid to the patient's diet. Flesh, fish, and every thing that has a tendency to turn putrid or rancid on the stomach, must be abstained from. Apples boiled in milk, water-pap, and plain light pudding, with broth made of the gelatinous parts of animals, may constitute the principal part of the patient's food. Gelatinous broth not only answers the purpose of food, but likewise of medicine. I have often known dysenteries, which were not of a putrid nature, cured by it, after pompous medicines had proved ineffectual.*

Another kind of food very proper in the dysentery, which may be used by such as cannot take the broth

* The manner of making this broth is, to take a sheep's head and feet with the skin upon them, and to burn the wool off with a hot iron; afterwards to boil them till the broth is quite a jelly. A little cinnamon or mace may be added, to give the broth an agreeable flavour, and the patient may take a little of it warm with toasted bread, three or four times a day. Such as cannot use the broth made in this way, may have the head and feet skinned; but we have reason to believe that this hurts the medicine. It is not our business here to reason upon the nature and qualities of medicine, otherwise this might be shown to possess virtues every way suited to the cure of a dysentery which does not proceed from a putrid state of the humours. One thing we know, which is preferable to all reasoning, that whole families have often been cured by it, after they had used many other medicines in vain. It will, however, be proper that the patient take a vomit, and a dose or two of rhubarb, before he begins to use the broth. It will likewise be necessary to continue the use of it for a considerable time, and to make it the principle food.

mentioned above, is made by boiling a few handfuls of fine flour, tied in a cloth, for six or seven hours, till it becomes as hard as starch. Two or three table-spoonfuls of this may be grated down, and boiled in such a quantity of new milk and water as to be of the thickness of pap. This may be sweetened to the patient's taste, and taken for his ordinary food.*

In a putrid dysentery the patient may be allowed to eat freely of most kinds of good ripe fruit; as apples, grapes, gooseberries, currant-berries, strawberries, &c. These may either be eaten raw or boiled, with or without milk, as the patient chooses. The prejudice against fruit in this disease is so great, that many believe it to be the common cause of dysenteries. This, however, is an egregious mistake. Both reason and experience shew, that good fruit is one of the best medicines, both for the prevention and cure of the dysentery. Good fruit is in every respect calculated to counteract that tendency to putrefaction, from whence the most dangerous kind of dysentery proceeds.† The patient,

* The learned and humane Dr. Rutherford, late professor of medicine in the university of Edinburgh, used to mention this food in his public lectures with great encomiums. He directed it to be made by tying a pound or two of the finest flour, as tight as possible, in a linen rag, afterwards to dip it frequently in water, and to dredge the outside with flour, till a cake or crust was formed round it, which prevents the water from soaking into it while boiling. It is then to be boiled till it becomes a hard dry mass, as directed above. This, when mixed with milk and water, will not only answer the purpose of food, but may likewise be given in clysters.

† I lately saw a young man who had been seized with a dysentery in North America. Many things had been tried there for his relief, but to no purpose. At length, tired out with disappiontments from medicine, and reduced to skin and bone, he came over to Britain, rather with a view to die among his relations, than with any hopes of a cure. After taking sundry medicines here with no better success than abroad, I advised him to leave off the use of drugs, and to trust entirely to a diet of milk and fruits, with gentle exercise. Strawberries was the only fruit he could procure at that season. These he ate with milk twice, and sometimes thrice a day. The consequence was, that in a short time his stools were reduced from upwards of twenty in a day, to three or four, and sometimes not so many. He used the other fruits as they came in, and was in a few weeks so well as to leave that part of the country where I was, with a view to return to America.

in such a case, ought therefore to be allowed to eat as much fruit as he pleases, provided it be ripe.

The most proper drink in this disorder is whey. The dysentery has often been cured by the use of clear whey alone. It may be taken both for drink, and in form of a clyster. When whey cannot be had, barley-water sharpened with cream of tartar may be drank, or a decoction of barley and tamarinds; two ounces of the former and one of the latter may be boiled in two English quarts of water to one. Warm water, water-gruel, or water wherein hot iron has been frequently quenched, are all very proper, and may be drank in turns. Camomile-tea, if the stomach will bear it, is an exceeding proper drink. It both strengthens the stomach, and, by its antiseptic quality, tends to prevent a mortification of the bowels.

MEDICINE.—At the beginning of this disease it is always necessary to cleanse the first passages. For this purpose a vomit of ipecacuanha must be given, and wrought off with weak camomile-tea. Strong vomits are seldom necessary here. A scruple, or at most half a drachm, of ipecacuanha, is generally sufficient for an adult, and sometimes a very few grains will suffice. The day after the vomit, half a drachm, or two scruples, of rhubarb must be taken; or, what will answer the purpose rather better, an ounce, or an ounce and a half of Epsom salts. This dose may be repeated every other day for two or three times. Afterwards small doses of ipecacuanha may be taken for some time. Two or three grains of the powder may be mixed in a table-spoonful of the syrup of poppies, and taken three times a day.

These evacuations, and the regimen prescribed above, will often be sufficient to effect a cure. Should it, however, happen otherwise, the following astringent medicines may be used.

A clyster of starch, or fat mutton-broth, with thirty or forty drops of liquid laudanum in it, may be administered twice a day. At the same time an ounce of gum arabic, and half an ounce of gum tragacanth, may be

dissolved in an English pint of barley-water over a slow fire, and a table-spoonful of it taken every hour.

If these have not the desired effect, the patient may take, four times a day, about the bulk of a nutmeg of the Japonic confection, drinking after it a tea-cupful of the decoction of logwood.*

Persons who have been cured of this disease are very liable to relapse; to prevent which, great circumspection with respect to diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt-liquor. He should also abstain from animal food, as fish and flesh, and live principally on milk and vegetables.

Gentle exercise and wholesome air are likewise of importance. The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback, or in a carriage. He may likewise use bitters infused in wine or brandy, and may drink twice a day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits, and other vegetables. The night air is to be carefully avoided, and all communications with the sick. Bad smells are likewise to be shunned, especially those which arise from putrid animal substances. The necessaries where the sick go are carefully to be avoided.

When the first symptoms of the dysentery appear, the patient ought immediately to take a vomit, to go to bed and drink plentifully of weak warm liquor, to promote a sweat. This, with a dose or two of rhubarb at the beginning, would often carry off the disease. In countries where dysenteries prevail, we would advise such as are liable to them, to take either a vomit or a purge every spring or autumn, as a preventative.

There are sundry other fluxes of the belly, as the

* See Appendix, *Decoction of Logwood.*

LIENTERY and CŒLIAC PASSION, which, though less dangerous than the dysentery, yet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great, that the food passes through them with scarcely any sensible alteration; and the patient dies merely from the want of nourishment.

When the lientery or cœliac passion succeeds to a dysentery, the case is bad. They are always dangerous in old age, especially when the constitution has been broken by excess or acute diseases. If the stools be very frequent and quite crude, the thirst great, with little urine, the mouth ulcerated, and the face marked with spots of different colours, the danger is very great.

The treatment of the patient is in general the same as in the dysentery. In all obstinate fluxes of the belly, the cure must be attempted, by first cleansing the stomach and bowels with gentle vomits and purges; afterwards such a diet as has a tendency to heal and strengthen the bowels, with opiates and astringent medicines, will generally complete the cure.

The same observation holds with respect to a TENESMUS, or frequent desire of going to stool. This disease resembles the dysentery so much, both in its symptoms and method of cure, that we think it needless to insist upon it.

CHAP. XXXIV.

OF THE HEAD-ACH.

ACHES and pains proceed from very different causes, and may affect any part of the body; but we shall point out those only which occur most frequently, and are attended with the greatest danger.

When the head-ach is slight, and affects a particular part of the head only, it is called cephalagia; when the whole head is affected, cephalœa; and when one side only, hemicrania. A fixed pain in the forehead,

which may be covered with the end of the thumb, is called the clavius hystericus.

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the head-ach proceeds from a hot bilious habit, the pain is very acute and throbbing, with a considerable heat of the part affected. When from a cold phlegmatic habit, the patient complains of a dull heavy pain, and has a sense of coldness in the part. This kind of head-ach is sometimes attended with a degree of stupidity or folly.

Whatever obstructs the free circulation of the blood through the vessels of the head, may occasion a head-ach. In persons of full habit, who abound with blood, or other humours, the head-ach often proceeds from the suppression of customary evacuations; as bleeding at the nose, sweating of the feet, &c. It may likewise proceed from any cause that determines a great flux of blood towards the head; as coldness of the extremities, or hanging down the head for a long time. Whatever prevents the return of the blood from the head, will likewise occasion a head-ach; as looking long obliquely at any object, wearing any thing tight about the neck, or the like.

When a head-ach proceeds from the stoppage of a running at the nose, there is a heavy, obtuse, pressing pain in the fore-part of the head, in which there seems to be such a weight, that the patient can scarcely hold it up. When it is occasioned by the caustic matter of the venereal disease, it generally affects the skull, and often produces a caries of the bones.

Sometimes the head-ach proceeds from the repulsion or retrocession of the gout, the erysipelas, the small-pox, measles, itch, or other eruptive diseases. What is called the hemicrania generally proceeds from crudities or indigestion. Inanition, or emptiness, will also occasion head-ach. I have often seen instances of this in nurses who gave suck too long, or who did not take a sufficient quantity of solid food.

There is likewise a most violent, fixed, constant, and

almost intolerable head-ach, which occasions great debility both of body and mind, prevents sleep, destroys the appetite, causes a vertigo, dimness of sight, a noise in the ears, convulsions, epileptic fits, and sometimes vomiting, costiveness, coldness of the extremities, &c.

The head-ach is often symptomatic in continual and intermitting fevers, especially quartans. It is likewise a very common symptom in hysteric and hypochondriac complaints.

When a head-ach attends an acute fever, with pale urine, it is an unfavourable symptom. In excessive head-achs, coldness of the extremities is a bad sign.

When the disease continues long, and is very violent, it often terminates in blindness, an apoplexy, deafness, a vertigo, the palsy, or the epilepsy.

In this disease the cold regimen in general is to be observed. The diet ought to consist of such emollient substances, as will correct the acrimony of the humours, and keep the body open; as apples boiled in milk, spinage, turnips, and such like. The drink ought to be diluting: as barley-broth, infusions of mild mucilaginous vegetables, decoctions of the sudorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in lukewarm water; the head should be shaved, and bathed with water and vinegar. The patient ought, as much as possible, to keep in an erect posture, and not to lie with his head too low.

When the head-ach is owing to excess of blood, or a hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples, and behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues or perpetual blisters will be of service. The body ought likewise to be kept open by gentle laxatives.

But when the head ach proceeds from a copious vitiated serum stagnating in the membranes, either within

or without the skull, with a dull, heavy, continual pain, which will neither yield to bleeding nor gentle laxatives, then more powerful purgatives are necessary, as pills made of aloes, resin of jalap, or the like. It will also be necessary in this case to blister the whole head, and to keep the back part of the neck open for a considerable time by a perpetual blister.

When the head-ach is occasioned by the stoppage of a running at the nose, the patient must frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it; as the herb mastich, ground ivy, &c.

A hemicrania, especially a periodical one, is generally owing to a foulness in the stomach, for which gentle vomits must be administered, as also the purges of rhubarb; after the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be necessary.

When the head-ach arises from a vitiated state of the humours, as in the scurvy and venereal disease, the patient, after proper evacuations, must drink freely of the decoction of woods, or the decoction of sarsaparilla with raisins and liquorice. * These, if duly persisted in, will produce very happy effects. When a collection of matter is felt under the skin, it must be discharged by an incision, otherwise it will render the bone carious.

When the head-ach is so intolerable as to endanger the patient's life, or is attended with continual watching and delirium, recourse must be had to opiates. These, after proper evacuations by clysters, or mild purgatives, may be applied both externally and internally. The affected part may be rubbed with Bate's anodyne balsam, or a cloth dipped in it may be applied to the part. The patient may at the same time take twenty drops of laudanum, in a cup of valerian or penny-royal tea, twice or thrice a day. This is only to be

* See Appendix, *Decoction of Sarsaparilla.*

done in case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.*

When the patient cannot bear the loss of blood, his feet ought to be frequently bathed in lukewarm water, and well rubbed with a coarse cloth. Cataplasms, with mustard or horse-radish, ought likewise to be applied to them. This course is peculiarly necessary when the pain proceeds from a gouty humour affecting the head.

When the head-ach is occasioned by great heat, hard labour, or violent exercise of any kind, it may be allayed by cooling medicines; as the saline draughts, with nitre and the like.

A little of Ward's essence, dropped in the palm of the hand, and applied to the forehead, will sometimes remove a violent head-ach; æther will also have the same effect.

OF THE TOOTH-ACH

This disease is so well known, that it needs no description. It has great affinity with the rheumatism, and often succeeds pains of the shoulders and other parts of the body.

It may proceed from obstructed perspiration, or any of the other causes of inflammation. I have often known the tooth-ach occasioned by neglecting some part of the usual covering of the head, by sitting with the head bare near an open window, or exposing it to a draught of cold air. Food or drink taken either too hot or too cold, is very hurtful to the teeth. Great quantities of sugar, or other sweetmeats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts, or chewing any kind of hard substances. Picking the teeth with pins, needles, or any thing that may hurt the enamel with which they are

* When the pain is very violent, and does not yield to small doses of laudanum, the quantity may be increased. I have known a patient in extreme pain take three hundred drops in twenty-four hours; but such doses ought only to be administered by a person of skill.

covered, does great mischief, as the tooth is sure to be spoiled whenever the air gets to it. Breeding women are very subject to the tooth-ach, especially during the first three or four months of pregnancy. The tooth-ach often proceeds from scorbutic humours affecting the gums. In this case the teeth are sometimes wasted, and fall out without any considerable degree of pain. The more immediate cause of the tooth-ach is a rotten or carious tooth.

In order to relieve the tooth-ach, we must first endeavour to lessen the flux of humours on the part affected. This may be done by mild purgatives, scarifying the gums, or applying leeches to them, and bathing the feet frequently with warm water. The perspiration ought likewise to be promoted by drinking freely of weak wine whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the tooth-ach. It is seldom safe to administer opiates or any kind of heating medicines, or even to draw a tooth, till proper evacuations have been premised, and these alone will frequently effect a cure.

If this fail, and the pain and inflammation still increase; a suppuration may be expected, to promote which, a toasted fig should be held between the gum and the cheek; bags filled with mild camomile-flowers, flowers of elder, and the like, may be applied near the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cold; the patient may likewise receive the steams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water. Gargles made of rob of elder, infused in small beer, may be given to promote a discharge.

Such things as promote the discharge of saliva, or cause the patient to spit, are generally of service. For this purpose bitter, hot, or pungent, vegetables may be chewed; as gentian, calamus aromaticus, or pellitory of Spain. Allen recommends the root of yellow water flower de luce in this case. This root may either be

rubbed upon the teeth, or a little of it chewed. Brookes says, he hardly ever new it fail to ease the tooth-ach. It ought, however, to be used with caution.

Many other herbs, roots, and seeds, are recommended for curing the tooth-ach; as the leaves or roots of millefoil or yarrow chewed, tobacco smoked or chewed, staves acre, or the seeds of mustard chewed, &c. These bitter, hot, and pungent things, by occasioning a great flow of saliva, frequently give ease in the tooth-ach.

Opiates often relieve the tooth-ach. For this purpose, a little cotton wet with laudanum may be held between the teeth; or a piece of sticking plaster, about the bigness of a shilling, with a bit of opium in the middle of it, of a size not to prevent the sticking of the other, may be laid on the temporal artery, where the pulsation is most sensible. De la Motte affirms, that there are few cases wherein this will not give relief. If there be a hollow tooth, a small pill made of equal parts of camphire and opium, put into the hollow, is often beneficial. When this cannot be had, the hollow tooth may be filled with gum mastich, wax, lead, cork, or any substance that will stick in it, and keep out the external air.

Few applications give more relief in the tooth-ach than blistering plasters. These may be applied between the shoulders; but they have the best effect when put behind the ears, and made so large as to cover a great part of the lower jaw. The application of hot iron to the nerve has often given relief; but this should be done with great caution.

After all, when a tooth is carious, it is often impossible to remove the pain without extracting it; and as a spoiled tooth never becomes sound again, it is prudent to draw it soon, lest it should affect the rest. Tooth-drawing, like bleeding, is very much practised by mechanics, as well as persons of the medical profession. The operation, however, is not without danger, and ought always to be performed with care. A person unacquainted with the structure of the parts, will be in danger

of hurting the jaw-bone, or of drawing a sound tooth instead of a rotten one.*

When the tooth-ach returns periodically, and the pain chiefly affects the gums, it may be cured by the bark.

Some pretend to have found great benefit in the tooth-ach, from the application of an artificial magnet to the affected tooth. We shall not attempt to account for its mode of operation; but if it be found to answer, though not in particular cases, it certainly deserves a trial, as it is attended with no expence, and cannot do any harm. Electricity has likewise been recommended, and particular instruments have been invented for sending a shock through the affected tooth.

Persons who have returns of the tooth-ach at certain seasons, as spring and autumn, might often prevent it by taking a purge at these times.

Keeping the teeth clean has no doubt a tendency to prevent the tooth-ach. The best method of doing this is to wash them daily with salt and water, a decoction of the bark, or with cold water alone. All brushing and scraping of the teeth is dangerous, and unless it be performed with great care, does michief.

OF THE EAR-ACH.

This disorder chiefly affects the membrane which lines the inner cavity of the ear, called the meatus auditorius. It is often so violent as to occasion great restlessness, anxiety, and even delirium. Sometimes epileptic fits, and other convulsive disorders, have been brought on by extreme pain in the ear.

The ear-ach may proceed from any of the causes which produce inflammation. It often proceeds from a sudden suppression of perspiration, or from the head being exposed to the cold when covered with sweat. It may also be occasioned by worms, or other insects getting into the

* This may always be prevented by the operator striking upon the teeth with any piece of metal, as this never fails to excite the pain in the carious tooth.

ear, or being bred there; or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbific matter to the ear. This often happens in the decline of malignant fevers, and occasions deafness, which is generally reckoned a favourable symptom

When the ear-ach proceeds from insects, or any hard body sticking in the ear, every method must be taken to remove them as soon as possible. The membranes may be relaxed by dropping into the ear oil of sweet almonds, or olive oil. Afterwards the patient must be made to sneeze by taking snuff, or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have seen insects, which had got into the ear, come out by their own accord by pouring in oil.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck will be proper. The ear may likewise be fomented with steams of warm water; or flannel-bags filled with boiled mallows and camomile-flower may be applied to it warm, or bladders filled with warm milk and water. An exceeding good method of fomenting the ear, is to apply it close to the mouth of a jug filled with warm water, or a strong decoction of camomile-flowers.

The patient's feet should be frequently bathed in lukewarm water, and he ought to take small doses of nitre and rhubarb, viz. a scruple of the former and ten grains of the latter three times a day. His drink may be whey, or decoction of barley and liquorice, with figs and raisins. The part behind the ears ought frequently to be rubbed with camphorated oil, or a little of the volatile liniment. The application of blisters at the back part of the ear frequently gives relief.

When the inflammation cannot be discussed, a poultice of bread and milk, or roasted onions, may be applied to the ear, and frequently renewed, till the abscess

breaks or can be opened. Afterwards the humours may be diverted from the part by gentle laxatives, blisters, or issues; but the discharge must not be suddenly dried up by any external application.

PAIN OF THE STOMACH, &c.

This may proceed from various causes, as indigestion; wind; the acrimony of the bile; sharp, acrid, or poisonous substances taken into the stomach, &c. It may likewise be occasioned by worms; the stoppage of customary evacuations; or from a translation of gouty matter to the stomach, the bowels, &c.

Women in the decline of life are very liable to pains of the stomach and bowels, especially such as are afflicted with hysteric complaints. It is likewise very common to hypochondriac men of a sedentary and luxurious life. In such persons it often proves so extremely obstinate as to baffle all the powers of medicine.

When the pain of the stomach is most violent after eating, there is reason to suspect that it proceeds from some fault either in the digestion or the food. In this case the patient ought to change his diet, till he finds what kind of food agrees best with his stomach, and should continue chiefly to use it. If a change of diet does not remove the complaint, the patient may take a gentle vomit, and afterwards a dose or two of rhubarb. He ought likewise to take an infusion of camomile-flowers, or some other stomachic bitter, either in wine or water. I have often known exercise remove this complaint, especially sailing, or a long journey on horseback, or in a carriage.

When a pain of the stomach proceeds from flatulency, the patient is constantly belching up wind, and feels an uneasy distension of the stomach after meals. This is a most deplorable disease, and is seldom thoroughly cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule, however, admits of some exceptions. There are many instances of persons very much troubled with wind, who have received great benefit

from eating parched peas, though that grain is generally supposed to be of a windy nature. *

This complaint may likewise be greatly relieved by labour, especially digging, reaping, mowing, or any kind of active employment by which the bowels are alternately compressed and dilated. The most obstinate case of this kind I ever met with was in a person of a sedentary occupation, whom I advised, after he had tried every kind of medicine in vain, to turn gardener; which he did, and has ever since enjoyed good health.

When a pain in the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit: this may be excited by butter, oils, or other soft things, which sheath and defend the stomach from the acrimony of its contents.

When pain of the stomach proceeds from translation of gouty matter, warm cordials are necessary, as generous wine, French brandy, &c. Some have drank a whole bottle of brandy or rum in this case in a few hours, without being the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantity necessary upon these occasions. This must be left to the feelings and discretion of the patient. The safer way, however, is, not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile flowers, or *carduus benedictus*.

If a pain of the stomach proceeds from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the body gently open by mild purgatives; as rhubarb, or senna. When this disease affects women in the decline of life, after the stoppage of the *menses*, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must

* These are prepared by steeping or soaking peas in water, and afterwards drying them in a pot or kiln till they are hard. They may be used at pleasure.

be destroyed, or expelled by such means as are recommended in the following section.

When the stomach is greatly relaxed, and the digestion bad, which often occasions flatulencies, the elixir of vitriol will be of singular service. Fifteen or twenty drops of it may be taken in a glass of wine or water twice or thrice a-day.

Persons afflicted with flatulency are generally unhappy unless they be taking some purgative medicines: these, though they may give immediate ease, tend to weaken and relax the stomach and bowels, and consequently increase the disorder. Their best method is to mix purgatives and stomachics together. Equal parts of Peruvian bark and rhubarb may be infused in brandy or wine, and taken in such quantity as to keep the body gently open.

Although it is difficult to prescribe a general medicine for a disorder proceeding from such a diversity of causes; a plaster may be recommended, which will give relief in most cases. Let it be made of any adhesive plaster, with the addition of a drachm and a half, or two drachms, of powdered opium when warm, and spread on a piece of leather large enough to cover the whole stomach, where it should be kept as long as it will stick.

CHAP. XXXV.

OF WORMS.

THESE are chiefly of three kinds, viz. the *tænia*, or tape-worm; the *teres*, or round and long worm; and the *ascarides*, or round and short worm. There are many other kinds of worms found in the human body; but as they proceed, in a great measure, from similar causes, have nearly the same symptoms, and require almost the same method of treatment as these already mentioned, we shall not spend time in enumerating them.

The tape-worm is white, very long and full of joints. It is generally bred either in the stomach or small in-

testines. The round and long worm is likewise bred in the small gut, and sometimes in the stomach. The round and short worms commonly lodge in the *rectum*, or what is called the end gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite, a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particulary attend the *solium*, which is a species of the tape-worm, viz. swoonings, privation of speech, and a voracious appetite. The round worms, called *ascarides*, besides an itching of the *anus*, cause swooning and tenesmus, or an inclination to go to stool.

CAUSES.—Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family nursed by one woman have often worms, when those nursed by another have none.

SYMPTOMS.—The common symptoms of worms are, paleness of the countenance, and, at other times, an universal flushing of the face; itching of the nose; (this, however, is doubtful, as children pick their noses in all diseases;) starting, and grinding of the teeth in sleep; swelling of the upper lip; the appetite some-

times bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping, or colic pains; an involuntary discharge of *saliva*, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart; swoonings; drowsiness; cold sweats; palsy; epileptic fits; with many other unaccountable nervous symptoms, which were formerly attributed to witchcraft, or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seeds, are symptoms of the tape-worm.

I lately saw some very surprising effects of worms in a girl about five years of age, who used to lie for whole hours as if dead. She at last expired, and, upon opening her body, a number of the *teres*, or long round worms, were found in her guts, which were considerably inflamed; and what anatomists call an *inter susceptio*, or involving of one part of the gut with another, had taken place in no less than four different parts of the intestinal canal. *

MEDICINE.—Though numberless medicines are extolled for expelling and killing worms, † yet no disease more frequently baffles the physician's skill. In general, the most proper medicines for their expulsion are strong purgatives; and, to prevent their breeding, stomachic bitters, with now and then a glass of good wine.

The best purge for an adult is jalap and calomel. Five and twenty or thirty grains of the former, with six

* That worms exist in the human body there can be no doubt, and that they must sometimes be considered as a disease is equally certain; but this is not the case so often as people imagine. The idea that worms occasion many diseases, gives an opportunity to the professed worm-doctors of imposing on the credulity of mankind, and doing much mischief. They find worms in every case, and liberally throw in their antidotes, which generally consist of strong drastic purges. I have known these given in delicate constitutions to the destruction of the patient, where there was not the least symptom of worms.

† A medical writer of the present age has enumerated upwards of fifty British plants, all celebrated for killing and expelling worms.

or seven of the latter, mixed in syrup, may be taken early in the morning, for a dose. It will be proper that the patient keep the house all day, and drink nothing cold. The dose may be repeated once or twice a-week, for a fortnight or three weeks. On the intermediate days, the patient may take a drachm of the powder of tin, twice or thrice a-dav. mixed with syrup, honey, or treacle.

Those who do not choose to take calomel, may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna, and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of salad-oil and a tablespoonful of common salt may be taken in a glass of red port wine thrice a-day, or oftener, if the stomach will bear it. But the more common form of using oil is in clysters. Oily clysters, sweetened with sugar or honey, are very efficacious in bringing away the short round worms called *ascarides*, and likewise the *teres*.

The Harrowgate-water is an excellent medicine for expelling worms, especially the *ascarides*. As this water is impregnated with sulphur, we may hence infer, that sulphur alone must be a good medicine in this case, which is found to be a fact. Many practitioners give flour of sulphur in very large doses, and with great success. It should be made into an electuary with honey or treacle, and taken in such quantity as to purge the patient.

Where Harrowgate-water cannot be obtained, sea-water may be used, which is far from being a contemptible medicine in this case. If sea-water cannot be had, common salt dissolved in water may be drank. I have often seen this used by country nurses with very good effect. Some flour of sulphur may be taken over night, and the salt-water in the morning.

But worms, though expelled, will soon breed again, if the stomach remain weak and relaxed; to prevent which, we would recommend the Peruvian bark. Half a drachm of bark in powder may be taken in a glass of red port wine three or four times a-day, after the above medicines have been used. Lime-water is likewise

good for this purpose, or a table-spoonful of the chalybeate wine taken twice or thrice a day. Infusions or decoctions of bitter herbs may likewise be drank; as the infusion of tansy, water-trefoil, camomile-flowers, tops of worm-wood, the lesser centaury, &c.

The directions stated above are for adults; but the medicines for children must be more palatable, and the doses less. For a child of four or five years old, six grains of rhubarb, five of jalap, and two of calomel. may be mixed in a spoonful of syrup or honey, and given in the morning. The child should keep the house all day, and take nothing cold. This dose may be repeated twice a-week for three or four weeks. On the intermediate days, the child may take a scruple of powdered tin, and ten grains of æthiops mineral, in a spoonful of treacle, twice a-day. This dose must be increased or diminished according to the age of the patient.

Bisset says, the great bastard black helebore, or *bear's foot,* is a most powerful vermifuge for the long round worms. He orders the decoction of about a drachm of the green leaves, or about fifteen grains of the dried leaves in powder, for a dose to a child between four and seven years of age. This dose is to be repeated two or three times. He adds, that the green leaves made into a syrup with coarse sugar, is almost the only medicine he has used for round worms for three years past. Before pressing out the juice, he moistens the bruised leaves with vinegar which corrects the medicine. The dose is a spoonful at bed-time, and one or two the next morning.

I have frequently known those big bellies, which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage, or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, as the cabbage-bark, &c. but think the powder of tin, with æthiops mineral, and the purges of rhubarb and calomel, are more to be depended on.

Ball's purging vermifuge powder is a very powerful medicine. It is made of equal parts of rhubarb, scammony, and calomel, with as much double-refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to fine powder. The dose for a child is from ten grains to twenty, once or twice a week. An adult may take a drachm for a dose.*

Parents who would preserve their children from worms, ought to allow them plenty of exercise in the open air; to take care that their food by wholesome and sufficiently solid; and, as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms, a glass of red wine after meals; as every thing that braces and strengthens the stomach, is good both for preventing and expelling these vermin.†

In recommending *solid* food, it is by no means to be understood, that children should be crammed twice or thrice a-day with meat, but that they should not be fed with *slops*. Meat should be given them only at dinner, and in a moderate quantity, for excess would promote instead of preventing worms. The meat should always be accompanied with plenty of bread, and wholesome, tender, and well-boiled vegetables, which serve to keep the body gently open, without having recourse to purgatives. *Ripe* fruit is also in this respect eminently beneficial.

When symptoms of worms appear, parents would

* A powder for the tape-worn resembling this, was long kept a secret on the continent; it was lately purchased by the French king, and will be found under the article *powder* in the Appendix.

† We think it necessary here to warn people of their danger who buy cakes, powders, and other worm-medicines, at random from quacks, and give them to their children without proper care. The principal ingredients in most of these medicines is mercury, which is never to be trifled with. I lately saw a shocking instance of this conduct. A girl who had taken a dose of worm-powder, bought of a travelling quack, went out, and perhaps was so imprudent as to drink cold water during its operation; she immediately swelled, and died on the following day, with all the symptoms of having been poisoned.

do well to confine themselves at first to a proper diet and regimen, and not apply to the apothecary till unequivocal proofs have ascertained the complaint. The danger of quack-medicines has been already exemplified.

CHAP. XXXVI.

OF THE JAUNDICE.

THIS disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a yellowish appearance. The urine too is of a saffron hue, and dyes a white cloth of the same colour. There is likewise a species of this disease called the Black Jaundice.

CAUSES.—The immediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c. the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants, it is occasioned by the *meconium* not being sufficienty purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fever. Catching cold, or the stoppage of customary evacuations, as the *menses*, the bleeding piles, issues, &c. will occasion the jaundice.

SYMPTOMS.—The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish clay-colour, and the urine, as was observed above, is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression of the breast. There is a heat in the nostrils, a bitter taste in the mouth, loathing of food, sickness at

sickness at the stomach, vomiting, flatulency, and other symptoms of indegestion.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, and is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

REGIMEN.—The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables; as apples boiled or roasted, stewed prunes, preserved plums, boiled spinage, &c. Veal or chicken-broth, with light bread, are likewise very proper. Many have been cured by living almost wholly for some days on raw eggs. The drink should be butter-milk, whey sweetened with honey, or decoctions of cool opening vegetables; as marsh-mallow roots, with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback, or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey after medicines have proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull melancholy disposition. Whatever therefore tends to promote the circulation, and to cheer the spirits, must have a good effect; as dancing, laughing, singing, &c.

MEDICINE.—If the patient be young, of a full sanguine habit, and complains of pain in the right side about the region of the liver, bleeding will be necessary. After this, a vomit must be administered; and if the disease proves obstinate, it may be repeated once or twice. No medicines are more beneficial in the jaundice than vomits, especially where it is not attended with inflammation. Half a drachm of ipecacuanha in powder will be a sufficient dose for an adult. It

may be wrought off with weak camomile-tea, or luke-warm water. The body must likewise be kept open by taking a sufficient quantity of Castile soap, or the pills for the jaundice recommended in the Appendix.

Fomenting the parts about the region of the stomach and liver, and rubbing them with a warm hand or flesh-brush, are likewise beneficial; but it is still more so for the patient to sit in a bath of warm water up to the breast. He ought to do this frequently, and should continue in it as long as his strength will permit.

Many dirty things are recommended for the cure of the jaundice; as lice, millipedes, &c. But these do more harm than good, as people trust to them, and neglect more valuable medicines; besides, they are seldom taken in sufficient quantity to produce any effects. People always expect that such things should act as charms, and consequently seldom persist in the use of them. Vomits, purges, fomentations, and exercise, will seldom fail to cure the jaundice, when it is a simple disease; and when complicated with the dropsy, a scirrhous liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the Medicina Britannica mentions near an hundred, all famous for curing the jaundice. The fact is, the disease often goes off of its own accord; in which case the last medicine is always said to have performed the cure. I have sometimes, however, seen considerable benefit, in a very obstinate jaundice, from a decoction of hemp-seed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetned with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have likewise known Harrowgate sulphur-water cure jaundice of very long standing. It should be used for some weeks, and the patient must both drink and bathe.

The soluble tartar is a very proper medicine in the jaundice. A drachm of it may be taken every night

and morning in a cup of tea or water-gruel. If it does not open the body, the dose may be increased.

Persons subject to the jaundice ought to take as much exercise as possible, and to avoid all heating and astringent aliments.

This cannot be too strongly inculcated. The disease arising most usually from an obstruction of the biliary ducts, nothing can be so efficacious as keeping the body open, and taking a great deal of exercise. Though some medicine, particularly the decoction of hemp-seed, as before-mentioned, may be of considerable service, yet exercise is the grand specific, which may be taken with safety and benefit in every stage of this disorder.

CHAP. XXXVII.

OF THE DROPSY.

THE dropsy is a preternatural swelling of the whole body, or some part of it, occasioned by a collection of watery humour. It is distinguished by different names, according to the part affected, as the anasarca, or a collection of water under the skin; the ascites, or a collection of water in the belly; the hydrops pectoris, or dropsy of the breast; the hydrocephalus, or dropsy of the brain, &c.

CAUSES.—The dropsy is often owing to an hereditary disposition. It may likewise proceed from drinking ardent spirits or other strong liquors. It is true, almost to a proverb, that great drinkers die of a dropsy. The want of exercise is also a very common cause of the dropsy. Hence it is justly reckoned among the diseases of the sedentary. It often proceeds from excessive evacuations, as frequent and copious bleedings, strong purges often repeated, frequent salivation, &c. The sudden stoppage of customary or necessary evacuations, as the menses, the hæmorrhoids, fluxes of the belly, &c. may likewise cause a dropsy.

I have known the dropsy occasioned by drinking large quantities of cold, weak watery liquor, when the body was heated by violent exercise. A low, damp, or marshy, situation is likewise a frequent cause of it. Hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of viscous aliment that is hard of digestion. It is often the effect of other diseases, as the jaundice, a scirrhus of the liver, a violent ague of long continuance, diarrhœa or dysentery, an empyema, or a consumption of the lungs. In short, whatever obstructs the perspiration, or prevents the blood from being duly prepared, may occasion a dropsy.

SYMPTOMS.--The anasarca generally begins with a swelling of the feet and ancles towards night, which for some time disappears in the morning. In the evening, the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shows that the lungs are affected.

In an ascites, besides the above symptoms, there is a swelling on the belly, and often a fluctuation, which may be perceived by striking the belly on the side, and laying the palm of the hand on the opposite. This may be distinguished from a tympany by the weight of the swelling, as well as by the fluctuation. When the anasarca and ascites are combined, the case is very dangerous. Even a simple ascites seldom admits of a radical cure. Almost all that can be done is to let off the water by tapping, which seldom affords more than a temporary relief.

When the disease comes suddenly on, and the patient is young and strong, there is reason to hope for a cure, especially if medicine be given early. But if the patient be old, has led an irregular or sedentary life,

or if there be reason to suspect that the liver, lungs, or any of the viscera, are unsound, there is great reason to fear that the consequences will prove fatal.

REGIMEN.—The patient must abstain, as much as possible, from all drink, especially weak and watery liquors, and must quench his thirst with mustard-whey, or acids, as juice of lemons, oranges, sorrel, or such like. His aliment ought to be dry, of a stimulating and diuretic quality, as toasted bread, the flesh of birds, or other wild animals roasted; pungent and aromatic vegetables, as garlic, mustard, onions, cresses, horse-radish, rocambole, shalot, &c. He may also eat sea-biscuit dipped in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient must havedrink, the Spa-water, or Rhenish wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he be not able to walk or labour, he must ride on horse-back, or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his apartments warm and dry. If he lives in a damp country, he ought to be removed into a dry one, and, if possible, into a warmer climate. In a word, every method should be taken to promote the perspiration, and to brace the solids. For this purpose it will likewise be proper to rub the patient's body, two or three times a day, with a hard cloth, or the flesh-brush; and he ought constantly to wear flannel next his skin.

MEDICINE.—If the patient be young, his constitution good, and the disease has come on suddenly, it may generally be removed by strong vomits, brisk purges, and such medicines as promote a discharge by sweat and urine. For an adult, half a drachm of ipecacuanha in powder, and half an ounce of oxymel of

squills, will be a proper vomit. This may be repeated as often as is found necessary, three or four days intervening between the doses. The patient must not drink much after taking the vomit, otherwise he destroys its effect. A cup or two of camomile-tea will be sufficient to work it off.

Between each vomit, on one of the intermediate days, the patient may take the following purge; Jalap in powder half a drachm, cream of tartar two drachms, calomel six grains. These may be made into a bolus with a little syrup of pale roses, and taken early in the morning. The less the patient drinks after it the better. If he be much griped, he may now and then take a cup of chicken-broth.

The patient may likewise take every night at bedtime the following bolus: To four or five grains of camphor, add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine-whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day; Take juniper-berries, mustard-seed, and horse-radish, of each half an ounce, ashes of broom half a pound; infuse them in a quart of Rhenish-wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot use this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate anasarca cured by an infusion of the ashes of broom in wine.

The above course will often cure an accidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by

nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a drachm of nitre every morning in a draught of ale, after she had been given over as incurable. The powder of squills is likewise a good diuretic. Six or eight grains of it, with a scruple of nitre, may be given twice a day in a glass of strong cinnamon-water. Ball says a large spoonful of unbruised mustard-seed taken every night and morning, and drinking half an English pint of the decoction of the tops of green broom after it, has performed a cure after other powerful medicines had proved ineffectual.

I have sometimes seen good effects from cream of tartar in this disease. It promotes the discharges by stool and urine, and will at least palliate, if it does not perform a cure. The patient may begin by taking an ounce every second or third day, and may increase the quantity to two or three ounces, if the stomach will bear it. This quantity is not however to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the decoction of seneka-root, as directed above; or he may take two table-spoonfuls of Mindorus's spirit in a cup of wine-whey three or four times a day. To promote a discharge of urine, the following infusion of the London hospitals will likewise be beneficial.

Take of zedoary root, two drachms; dried squills, rhubarb, and juniper-berries bruised, of each a drachm; cinnamon in powder, three drachms; salt of wormwood, a drachm and a half; infused in an English pint and a half of old hock wine, and, when fit for use, filter the liquor. A wine-glass of it may be taken three or four times a day.

In the anasarca it is usual to scarify the feet and legs. By this means the water is often discharged; but the operator must be cautious not to make the incisions too deep; they ought barely to pierce through the skin and especial care must be taken by spirituous fomentations and proper digestives, to prevent a gangrene.

In an ascites, when the disease does not evidently and speedily give way to purgative and diuretic medi-

cines, the water ought to be kept off by tapping. This is a very simple and safe operation, and would often succeed if it were performed in due time; but if it be delayed till the humours are vitiated, or the bowels spoiled by long soaking in water, it can hardly be expected that any permanent relief will be procured.*

After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark; the elixir of vitriol; warm aromatics with a due proportion of rhubarb, infused in wine and such like. His diet ought to be dry and nourishing, such as is recommended in the beginning of the chapter; and he should take as much exercise as he can bear without fatigue. He should wear flannel or rather fleecy hosiery next his skin, and make daily use of the flesh-brush.

An incidental dropsy may certainly by proper treatment be cured; but when fairly seated in the system with a scirrhous liver, or a worn-out constitution, medicines may give a temporary relief, but can hardly, be expected ever to operate a cure. Nitre is probably of all others the most efficacious remedy.

CHAP. XXXVIII.

OF THE GOUT.

THERE is no disease which shews the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprung, and all who would avoid it must be active and temperate.

* The very name of an operation is dreadful to most people, and they wish to try every thing before they have recourse to it. This is the reason why tapping so seldom succeeds to our wish. I have had a patient who was regularly tapped once a month for several years and who used to eat her dinner as well after the operation as if nothing had happened. She died at last rather worn out by age than by the disease.

Though idleness and intemperance are the principal causes of the gout, yet many other things may contribute to bring on the disorder in those who are not, and to induce a paroxysm in those who are subject to it; as too great an application to study; too free an use of acidulated liquors; night-watching; grief or uneasiness of mind; an obstruction or defect of any of the customary discharges, as the *menses*, sweating of the feet, perspiration, &c.

SYMPTOMS.—A fit of the gout is generally preceded by indigestion, drowsiness, belching of wind, a slight head-ach, sickness, and sometimes vomiting. The patient complains of weariness and dejection of spirits, and has often a pain in the limbs, with a sensation as if wind or cold water were passing down the thigh. The appetite is often remarkably keen a day or two before the fit, and there is a slight pain in passing urine, and often an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and some observe, that as is the fever which ushers in the gout, so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The irregular gout generally makes its attack in the spring or beginning of winter, in the following manner: about two or three in the morning, the patient is seized with a pain in his great toe, sometimes in the heel, and at other times in the ancle or calf of the leg. This pain is accompanied with a sensation as if cold water were poured upon the part, which is succeeded by a shivering, with some degree of fever. Afterwards the pain increases, and fixing among the small bones of the foot, the patient feels all the different kinds of torture, as if the part were stretched, burnt, squeezed, gnawed, or torn in pieces. The part at length becomes so exquisitely sensible, that the patient cannot bear to have it touched, or even suffer any person to walk across the room.

The patient is generally in exquisite torture for twenty-four hours, from the time of the coming on of the fit; he then becomes easier, the part begins to swell, appears red, and is covered with a little moisture. Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of which constitutes a fit of the gout; which is longer or shorter, according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards night, and easier in the morning. The paroxysms, however, generally grow milder every day, till at length the disease is carried off by perspiration, urine, and the other evacuations. In some patients this happens in a few days; in others, it requires weeks, and in some months to finish the fit. Those whom age and frequent fits of the gout have greatly debilitated, seldom get free from it before the approach of summer and sometimes not till it be pretty far advanced.

REGIMEN.—As there are no medicines yet known that will cure the gout, we shall confine our observations chifley to regimen, both in and out of the gout.

In the fit, if the patient be young and strong, his diet ought to be thin and cooling, and his drink of a diluting nature; but where the constitution is weak, and the patient has been accustomed to live high, this is not a proper time to retrench. In this case he must keep nearly to his usual diet, and should take frequently a cup of strong negus, or a glass of generous wine. Wine-whey is a very proper drink in this case, as it promotes the perspiration without greatly heating the patient. It will answer this purpose better if a tea-spoonful of *sal volatile oleosum*, or spirits of hartshorn, be put into a cup of it twice a day. It will likewise be proper to give at bed-time a tea-spoonful of the volatile tincture of *guaiacum*, in a large draught of warm wine whey. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharg-

ing the gouty matter is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapt in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eight or ten days, and sometimes for a fortnight or three weeks, or longer, if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had, and seldom or never remove it till the fit be entirely gone off.

The patient ought likewise to be kept quiet and easy during the fit. Every thing that affects the mind, disturbs the paroxysm, and tends to throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is to be considered as nature's method of removing something that might prove destructive to the body, and all that we can do with safety is, to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuations by bleeding, stool, &c. are likewise to be used with caution; they do not remove the cause of the disease, and sometimes by weakening the patient prolong the fit: but where the constitution is able to bear it, it will be of use to keep the body gently open by diet, or very mild laxative medicines.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether; but nothing has yet been found which will do this with safety to the patient. In vain we eagerly grasp at any thing that promises

immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as imprudent to stop the small-pox from rising, and to drive them into the blood, as attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted.

When the pain, however, is very great, and the patient is restless, thirty or forty drops of laudanum may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over, the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other warm stomachic purge. He should also drink a weak infusion of stomachic bitter in small wine or ale, as the Peruvian bark, with cinnamon, Virginian snake-root, and orange-peel. The diet at this time should be light, but nourishing, and gentle exercise ought to be taken on horse-back, or in a carriage.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This, however, is not to be attempted by medicine. I have frequently known the gout kept off for several years by the Peruvian bark, and other astringent medicines; but in all the cases where I had occasion to see this tried, the persons died suddenly, and to all appearance for want of a regular fit of the gout. One would be apt, from hence, to conclude that a fit of the gout, to some constitutions, in the decline of life, is rather salutary than hurtful.

Though it may be dangerous to stop a fit of the gout by medicine, yet if the constitution can be so changed by diet and exercise, as to lessen or totally prevent its return, there certainly can be no danger in following such a course. It is well known that the whole habit

may be so altered by a proper regimen, as quite to eradicate this disease; and those only who have sufficient resolution to persist in such a course have reason to expect a cure.

The course which we would recommend for preventing the gout, is as follows: In the first place, *universal temperance.* In the next place *sufficient exercise.** By this we do not mean sauntering about in an indolent manner, but labour, sweat, and toil. These only can render the humours wholesome, and keep them so. Going early to bed and rising betimes, are also of great importance. It is likewise proper to avoid night studies and intense thought. All strong liquors, especially generous wines and sour punch, are to be avoided.

We would likewise recommend some doses of *magnesia alba* and rhubarb to be taken every spring and autumn; and afterwards a course of stomachic bitters, as tansey or water-trefoil-tea, an infusion of gentian and camomile-flowers, or a decoction of burdock-root, &c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank for two or three weeks in March and October twice a day. An issue or perpetual blister has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only prevent the gout, but also other chronic maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digestion, and invigorates the habit.

Though there is little room for medicine during a regular fit of the gout, yet when it leaves the extremities, and falls on some of the internal parts, proper applications to recal and fix it become absolutely necessary. When the gout affects the head, the pain of the joints ceases, and the swelling disappears, while either

* Some make a secret of curing the gout by *muscular exercise.* This secret, however, is as old as Celsus, who recommends that mode of cure; and whoever will submit to it in the fullest extent, may expect to reap solid and permanent advantages.

head-ach, drowsiness, trembling, giddiness, convulsions, or delirium, come on. When it seizes the lungs, great oppression, with cough and difficulty of breathing ensue. If it attacks the stomach, extreme sickness, vomiting, anxiety, pain in the epigastric region, and total loss of strength will succeed.

When the gout attacks the head or lungs, every method must be taken to fix it in the feet. They must be frequently bathed in warm water, and acid cataplasms applied to the soles. Blister-plasters ought likewise to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it attack the stomach, with a sense of cold, the most warm cordials are necessary; as strong wine boiled up with cinnamon or other spices; cinnamon-water; peppermint-water; and even brandy or rum. The patient should keep his bed, and endeavour to promote a sweat by drinking warm liquors; and if he should be troubled with a nausea or inclination to vomit, he may drink camomile-tea, or any thing that will make him vomit freely.

When the gout attacks the kidneys, and imitates gravel pains, the patient ought to drink freely of a decoction of marsh-mallows, and to have the parts fomented with warm water. An emollient clyster ought likewise to be given, and afterwards an opiate. If the pain be very violent, twenty or thirty drops of laudanum may be taken in a cup of decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them, about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect

it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its proper course, the miserable patient has a chance to be for ever after tormented with head-aches, coughs, pains of the stomach and intestines, and to fall at last a victim to its attack upon some of the more noble parts.

OF THE RHEUMATISM.

This disease has often a resemblance to the gout. It generally attacks the joints with exquisite pain, and is sometimes attended with inflammation and swelling. It is most common in the spring, and towards the end of autumn. It is usually distinguished into acute and chronic; or the rheumatism with and without a fever.

CAUSES.—The causes of the rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all transitions from heat to cold, are very apt to occasion rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distorted, was a man who used to work one part of the day by the fire, and the other part of it in the water. Very obstinate rheumatisms have likewise been brought on by persons not accustomed to it, allowing their feet to continue long wet. The same effects are often produced by wet clothes, damp beds, sitting or lying on the damp ground, travelling in the night, &c.

The rheumatism may likewise be occasioned by excessive evacuations, or the stoppage of customary discharges. It is often the effect of chronic diseases, which vitiate the humours; as the scurvy, the lues venerea, obstinate autumnal agues, &c.

The rheumatism prevails in cold, damp, marshy countries. It is most common among the poorer sort of peasants, who are ill clothed, live in low damp houses, and eat coarse and unwholesome food, which contains but little nourishment, and is not easily digested.

SYMPTOMS.—The *acute* rheumatism commonly begins with weariness, shivering, a quick pulse, restlessness, thirst, and other symptoms of fever. Afterwards the patient complains of flying pains, which are increased by the least motion. These at length fix in the joints, which are often affected with swelling and inflammation. If blood be let in this disease, it has generally the same appearance as in the pleurisy.

In this kind of rheumatism, the treatment of the patient is nearly the same as in an acute or inflammatory fever. If he be young and strong, bleeding is necessary, which may be repeated according to the exigencies of the case. The body ought likewise to be kept open by emollient clysters, or cool opening liquors; as decoctions of tamarinds, cream of tartar whey, senna-tea, and the like. The diet should be light and in small quantity, consisting chiefly of roasted apples, groat-gruel, or weak chicken-broth. After the feverish symptoms have abated, if the pain still continue, the patient must keep his bed, and take such things as promote perspiration, as wine-whey, with spiritus Mindereri, &c. He may likewise take, for a few nights, at bed-time, in a cup of wine-whey, a drachm of the cream of tartar, and half a drachm of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it, and applied to the parts affected. Great care must be taken that he do not catch cold after bathing

The chronic rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate, and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet

consisting chiefly of vegetable substances, as stewed prunes, coddled apples, currants, or gooseberries boiled in milk is most proper. Arbuthnot says, "If there be a specific in aliment for the rheumatism, it is certainly whey;" and adds, "That he knew a person subject to this disease, who could never be cured by any other method but a diet of whey and bread." He likewise says, "That cream of tartar in water-gruel, taken for several days, will ease rheumatic pains considerably." This I have often experienced, but found it always more efficacious when joined with gum guaiacum, as already directed. In this case the patient may take the dose formerly mentioned twice a day, and likewise a tea-spoonful of the volatile tincture of gum guaiacum at bed-time in wine-whey.

This course may be continued for a week, or longer if the case proves obstinate, and the patient's strength will permit. It ought then to be omitted for a few days, and repeated again; at the same time leeches or a blistering-plaster may be applied to the part affected. What I have generally found answer better than either of these, in obstinate fixed rheumatic pains, is the warm plaster.* I have likewise known a plaster of Burgundy pitch, worn for some time on the part affected give great relief in rheumatic pains. My ingenious friend, Dr. Alexander, of Edinburgh, says he has frequently cured very obstinate rheumatic pains by rubbing the parts affected with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected is likewise beneficial, and preferable to the application of leeches.

Though this disease may not seem to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is simi-

* See Appendix, *Warm Plaster*.

lar to the gout in this respect, that the most proper time for using medicines to extirpate it is when the patient is most free from the disorder.

To those who can afford the expense, I would recommend the warm baths of Buxton or Matlock, in Derbyshire. They have often to my knowledge cured very obstinate rheumatisms, and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrowgate waters and those of Moffat are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white mustard; a table-spoonful of the seed of this plant may be taken twice or thrice a day in a glass of water or small wine. The water-trefoil is also of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these, unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas, nothing would be more certain than their effect, were they duly persisted in. Want of perserverance in the use of medicine, is one reason why chronic diseases are so seldom cured.

Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but if it affects the loins, it should be put into the leg or thigh.

Persons afflicted with the scurvy are very subject to rheumatic complaints. The best medicines in this case are bitters and mild purgatives. These may either be taken separately or together, as the patient inclines. An ounce of Peruvian bark, and half an ounce of rhubarb in powder, may be infused in a bottle of wine;

and one, two, or three, glasses of it taken daily, as shall be found necessary for keeping the body gently open. In cases where the bark itself proves sufficiently purgative, the rhubarb may be omitted.

Such as are subject to frequent attacks of the rheumatism, ought to make choice of a dry, warm situation, to avoid the night air, wet clothes, and wet feet, as much as possible. Their clothing should be warm, and they should wear flannel next the skin, and make frequent use of the flesh-brush.

Fleecy hosiery worn next the skin, is not only the best article of dress for preventing the rheumatism, but in promoting its cure. Its use in marshy countries, where the inhabitants are subject to ague and rheumatism, cannot be too strongly recommended; and in such situations, it would be a most beneficial piece of charity for those in better circumstances to assist in supplying the poor with this cheap, simple, and efficacious preservative.

CHAP. XXXIX.

OF THE SCURVY.

THIS disease prevails chiefly in cold northern countries, especially in low, damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull, melancholy disposition, are most subject to it. It often proves fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into which this disease has been divided, as they differ from one another chiefly in degree. What is called the *land-scurvy*, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which we presume are rather owing to confined air, want of exercise, and

the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

CAUSES.—The scurvy is occasioned by cold moist air; by the long use of salted or smoke-dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations; as the menses, the hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness, bad clothing, the want of proper exercise, confined air, unwholesome food, or any disease which greatly weakens the body, or vitiates the humours.

SYMPTOMS.—This disease may be known by unusual weariness, heaviness, and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling, and sometimes a falling away at the legs, on which there are livid, yellow, or violet coloured spots; the face is generally of a pale or leaden colour. As the disease advances, other symptoms come on, as rottenness of the teeth, hæmorrhages, or discharges of blood from different parts of the body, foul obstinate ulcers, pains in various parts, especially about the breast, dry scaly eruptions all over the body, &c.; at last a hectic or wasting fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

CURE.—We know of no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed as soon as possible to a dry, open, or moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressed passions, as grief, fear, &c., the patient must daily take as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease, than constant cheerfulness and good humour. But this, alas! is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish, and morose.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables, as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer and cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced; but to have this effect, they must be persisted in for a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and where these are wanting, recourse must be had to the chemical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, or the spirit of sea-salt.

These things, however, will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially on long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time by pickling, preserving, &c.; and when these fail, the chemical acids recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships were well ventilated, had got stores of fruits, greens, cyder, &c. laid in, and if proper regard were paid to cleanliness and warmth, that sailors would be the most healthy people in the world, and would sel-

dom suffer either from the scurvy or putrid fevers, which are so fatal to that useful set of men; but it is too much the temper of such people to despise all precaution; they will not think of any calamity till it overtakes them, when it is too late to ward off the blow.

It must indeed be owned, that many of them have it not in their power to make the provision we are speaking of; but in this case it is the duty of their employers to make it for them, and no man ought to engage in a long voyage without having these articles secured.

I have seen very extraordinary effects in the land scurvy from a milk-diet. This preparation of nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular acrimony of the humours, which seem to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness flesh and fermented liquors, while milk is deemed only fit for their hogs.

The most proper drink in the scurvy is whey or butter-milk. When these cannot be had, sound cyder, perry, or spruce beer, may we used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper. It may be drank in the quantity of an English pint twice a day. Tar water may be used for the same purpose, or decoctions of mild mucilaginous vegetables, as sarsaparilla, marsh-mallow-roots, &c. Infusions of the bitter plants, as ground ivy, the lesser centaury, marsh-trefoil, &c., are likewise beneficial. I have seen the peasants in some parts of Britain express the juice of the last-mentioned plant, and drink it with good effect in those foul scorbutic eruptions with which they are often troubled in the spring season.

Harrowgate-water is certainly an excellent medicine in the land-scurvy. I have often seen patients who had been reduced to the most deplorable condition by this disease, greatly relieved by drinking the sulphur-

water, and bathing in it. The chalybeate-water may also be used with advantage, especially with a view to brace the stomach after drinking the sulphur-water, which, though it sharpens the appetite, never fails to weaken the powers of digestion.

A slight degree of scurvy may be carried off by frequently sucking a little of the juice of a bitter orange or a lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would, however, recommend the bitter orange as greatly preferable to lemon; it seems to be as good a medicine, and is not so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinach, lettuce, parsley, celery, endive, radish, dandelion, &c. It is amazing to see how fresh vegetables in the spring cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as great upon the human species, were they used in proper quantity for a sufficient length of time.

I have sometimes seen good effects in scorbutic complaints of very long standing, from the use of a decoction of the roots of water-dock. It is usually made by boiling a pound of the fresh root in six English pints of water, till about one-third of it be consumed. The dose is from half a pint to a whole pint of the decoction every day. But in all the cases where I have seen it prove beneficial, it was made much stronger, and drank in larger quantities. The safest way, however, is for the patient to begin with small doses, and increase them both in strength and quantity, as he finds his stomach will bear it. It must be used for a considerable time. I have known some take it for many months, and have been told of others who had used it for several years, before they were sensible of any benefit, but who nevertheless were cured by it at length.

The leprosy, which was so common in this country, long ago, seems to have been near a-kin to the scurvy.

Perhaps its appearing so seldom now, may be owing to the inhabitants of Britain eating more vegetable-food than formerly, living more upon tea and other diluting diet, using less salted meat, being more cleanly, better lodged and clothed, &c.—For the cure of this disease we would recommend the same course of diet and medicine as in the scurvy.

OF THE SCROPHULA, OR KING'S EVIL.

This disease chiefly affects the glands, especially those of the neck. Children and young persons of a sedentary life, are very subject to it. It is one of those diseases which may be removed by proper regimen, but seldom yields to medicine. The inhabitants of cold, damp, marshy countries are most liable to the scrophula.

CAUSES.—This disease may proceed from an hereditary taint, scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the pox, or other chronic diseases, are apt to be affected by the scrophula. It may likewise proceed from such diseases as weaken the habit, or vitiate the humours, as the small-pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrophulous ulcers; and we have reason to believe, when this happens, that there has been a predisposition in the habit of this disease. In short, whatever tends to vitiate the humours, or relax the solids, paves the way to the scrophula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to induce this disease in children than allowing them to continue long wet.*

SYMPTOMS.—At first, small knots appear under

* The scrophula, as well as the rickets, is found to prevail in large manufacturing towns, where people live gross, and lead sedentary lives.

the chin, or behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and when it does break, it only discharges a thin *sanies*, or watery humour. Other parts of the body are likewise liable to its attack, as the arm-pits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or spleen; and I have frequently seen the glands of the mesentery greatly enlarged by it.

Those obstinate ulcers which break out upon the feet and hands with swelling and little or no redness, are of the scrophulous kind. They seldom discharge good matter, and are exceedingly difficult to cure. The *white swellings* of the joints seem likewise to be of this kind. They are with difficulty brought to a suppuration, and when opened they only discharge a thin ichor. There is not a more general symptom of the scrophula than a swelling of the upper lip and nose.

REGIMEN.—As this disease proceeds, in a great measure, from relaxation, the diet ought to be generous and nourishing, but at the same time light and of easy digestion; as well fermented bread made of sound grain, the flesh and broth of young animals, with now and then a glass of generous wine, or good ale. The air ought to be open, dry, and not too cold, and the patient should take as much exercise as he can bear. This is of the utmost importance. Children who have sufficient exercise are seldom troubled with the scrophula.

MEDICINE.—The vulgar are remarkably credulous with regard to the cure of the scrophula; many of them believing in the virtue of the royal touch, that of the seventh son, &c. The truth is, we know but little either of the nature or cure of this disease, and where reason or medicine fail, superstition always comes in their place. Hence it is, that in diseases which are the most difficult to understand, we generally hear of the greatest number of miraculous cures being performed. Here, however, the deception is easily accounted for.

The scrophula, at a certain period of life, often cures of itself; and if the patient happens to be touched about this time, the cure is imputed to the touch, and not to nature, who is really the physician. In the same way, the insignificant nostrums of quacks and old women often gain applause when they deserve none.

There is nothing more pernicious than the custom of plying children in the scrophula with strong purgative medicines. People imagine it proceeds from humours, which must be purged off, without considering that these purgatives increase the debility, and aggravate the disease. It has been found, that keeping the body gently open for some time, especially with sea-water, has a good effect; but this should only be given in gross habits, and in such quantity as to procure one, or at most two stools every day.

Bathing in the salt-water has likewise a very good effect, especially in the warm season. I have often known a course of bathing in salt-water, and drinking it in such quantities as to keep the body gently open, cure a scrophula, after many other medicines had been tried in vain. When salt-water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing and drinking the salt-water we would recommend the Peruvian bark The cold bath may be used in summer, and the bark in winter. To an adult half a drachm of the bark in powder may be given in a glass of red wine four or five times a day. Children, and such as cannot take it in substance, may use the decoction, made in the following manner: Boil an ounce of Peruvian bark, and a drachm of Winter's bark, both grossly powdered, in an English quart of water to a pint; towards the end, half an ounce of sliced liquorice-root and a handful of raisins may be added, which will render the decoction less disagreeable, and make it take up more of the bark. The liquor must be strained, and two, three, or four tablespoonfuls, according to the age of the patient, given

three times a day; or the compound tincture of bark may be used in its stead.

The Moffat and Harrowgate waters, especially the latter, are likewise very proper medicines in the scrophula. They ought not, however, to be drank in large quantities, but should be taken so as to keep the body gently open, and must be used for a considerable time.

The hemloc may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea-water is most proper before there are any suppuration or symptom of tabes; the Peruvian bark when there are running sores, and a degree of hectic fever; and the hemlock in old inveterate cases, approaching to the schirrous or cancerous state. Either the extract or the fresh juice of this plant may be used. The dose may be small at first, and increased gradually as far as the stomach is able to bear it.

External applications are of little use. Before the tumour breaks, nothing ought to be applied to it, unless a piece of flannel, or something to keep it warm. After it breaks, the sore may be dressed with some digestive ointment. What I have always found to answer best was, the yellow basilicon mixed with about a sixth or eighth part of its weight of red precipitate of mercury. The sore may be dressed with this twice a day, and if it be very fungous, and does not digest well, a larger proportion of the precipitate may be added.

Medicines, which mitigate this disease, though they do not cure it, are not to be despised. If the patient can be kept alive by any means till he arrives at the age of puberty, he has a great chance to get well, but if he does not recover at this time, in all probability he never will.

There is no malady which parents are so apt to communicate to their offspring as the scrophula, for which reason people ought to beware of marrying into families affected with this disease.

For the means of preventing the scrophula, we must refer the reader to the observations on nursing, at the beginning of the book.

To bring the whole subject of prevention of this disease into one view.—

The principal preventive is to keep the children perfectly clean and dry. Impurities not only taint and relax the skin, but corrupt the humours, their noxious particles being absorbed through the pores. Children should be frequently washed at first with luke-warm water, as best suited to the delicacy and habit of the new-born infant; but the warmth to be gradually diminished, till at length the child can bear water perfectly cold, which will be most salutary and beneficial. The cold-bath braces and strengthens the system, and by counteracting relaxation, operates most successfully as a preventive of scrophula. The child should be washed all over every morning, and the lower part every night, and being wiped perfectly dry, to be wrapped in a warm blanket

Loose and light clothing, at all times salutary, is particularly so where there is any appearance of scrophula in the child. The linen next the skin must be frequently changed, and the same dress never worn two days.

In like manner air and exercise are grand preventatives. Children should sleep in lofty airy apartments, and in good weather be daily taken into the fields to taste the healthful exhalations of the earth, and the balmy fragrance of the plants. In cold and wet weather caution should be used, but even then the daily use of the cold-bath will enable the child to withstand the impressions of a damp chilly atmosphere. Exercise is in every respect beneficial, and prevents obstructions, particularly of the glands, which form the earliest symptom of scrophula.

Where there is reason to suspect this disease from the appearance of the child, having a weak habit and thin skin, or being the offspring of a scrophulous parant or parents, care should be taken to provide a very healthy nurse. After the child is weaned, it should gradually be accustomed to light and digestible animal-food, and get a portion of it every day at dinner; as milk and vegetables, though generally nutritious and

wholesome, are not sufficient to give a proper tone to the stomach and system. A thinness of blood, and relaxation of the fibres, are generally causes, and always attendants of the evil, which are best counteracted by strengthening articles of food and drink. Butter, and all fatty and oily substances, are particularly to be avoided; and in this and all other cases were weakness is a cause or attendant of this disorder, pastry of every description is most noxious; nor should a child of a scrophulous habit eat any preparation of flour, but wholesome well baked plain-bread.

OF THE ITCH.

Though this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air, and wholesome diet. It generally appears in form of small watery pustules first about the wrists, or between the fingers, afterwards it affects the arms, legs, thighs, &c. These pustules are attended with intolerable itching, especially when the patient is warm in bed, or sits by the fire. Sometimes, indeed, the skin is covered with large blotches or scabs, and at other times with white scurf, or scaly eruption. This last is called the *dry itch*, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and, if it be suddenly drove in, without proper evacuations, it may occasion fevers, inflammations of the viscera, or other internal disorders.

The best medicine yet known for the itch is sulphur, which ought to be used both externally and internally. The parts most affected may be rubbed by an ointment made of the flower of sulphur, two ounces; crude sal ammoniac, finely powdered, two drachms; hog's-lard, or butter, four ounces. If a scruple or half a drachm of the essence of lemon he added, it will entirely take

away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time twice or thrice a week. It is seldom necessary to rub the whole body; but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed or take a purge or two. It will likewise be proper during the use of it, to take every night and morning as much of the flower of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease, are not to be used again, unless they have been fumigated with brimstone, and thoroughly cleansed, otherwise they will communicate the infection anew.*

I never knew brimstone, when used as directed above, fail to cure the itch; and have reason to believe, that, if duly persisted in, it never will fail; but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but, if any symptoms of the disease should appear again, the medicine should be repeated. It is both more safe and efficacious when persisted in for a considerable time, than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its stead the powder of white hellebore-root made up into an ointment, in the same manner, which will seldom fail to cure the itch.

* Sir John Pringle observes, that though this disease may seem trifling, there is no one in the army that is more difficult to cure, as the infection often lurks in the clothes, &c. and breaks out a second, and even a third time. The same inconveniency occurs in private families, unless particular regard is paid to the changing or cleaning of their clothes, which last is by no means an easy operation.

People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable, have a near resemblance, and I have often known infants killed by being rubbed by greasy ointments, that make these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life, or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool-hardy as to wash the parts affected with a strong solution of the corrosive sublimate. Others use the mercurial ointment, without taking the least care either to avoid cold, keep the body open, or observe a proper regimen. The consequences of such conduct may be easily guessed. I have known even the mercurial girdles produce bad effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the body.

It is not to be told what mischief is done by using mercurial ointment for curing the itch and killing vermin; yet it is unnecessary for either; the former may be always more certainly cured by sulphur, and the latter will never be found where due regard is paid to cleanliness.

Those who would avoid this detestable disease ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.*

* The itch is now by cleanliness banished from every genteel family in Britain. It still, however, remains among the poorer sort of peasants in Scotland, and among the manufacturers in England. These are not only sufficient to keep the seeds of the disease alive, but to spread the infection among others. It were to be wished that some more effectual method could be devised for extirpating it altogether. Several country gentlemen have told me, that, by getting such as were infected cured, and strongly recommending an attention to cleanliness, they have banished the itch entirely out of their parishes.

CHAP. XL.

OF THE ASTHMA.

THE asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It is distinguished into the moist and dry, or humoural and nervous. The former is attended with expectoration or spitting; but in the latter the patient seldom spits, unless sometimes a little tough phlegm, by the mere force of coughing.

CAUSES.—The asthma is sometimes hereditary It may likewise proceed from a bad formation of the breast, the fumes of the metals or minerals taken into the lungs, violent exercise, especially running; the obstruction of customary evacuations, as the menses, hæmorrhoids, &c. the sudden retrocession of the gout, or striking in the eruption, as the small-pox, measles, &c. violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

SYMPTOMS.—An asthma is known by a quick laborious breathing, which is generally performed with a kind of weezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pastries, toasted cheese, or the like.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of

the breast, palpitation of the heart, a weak and sometimes intermitting pulse, and an involuntary flow of tears, bilious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than a bed, and is very desirous of cool air.

REGIMEN.—The food ought to be light and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits, baked, boiled, or roasted, are proper. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the sharp keen atmosphere of a bleak hilly country: a medium, therefore, between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in town all day, ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion, and is of service in the preparation of the blood. The blood of asthmatic persons is seldom duly prepared, owing to the proper

action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

MEDICINE.--Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In a paroxysm or fit, the body is generally bound; a purging clyster, with a solution of asafœtida, ought therefore to be administered, and if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand, or dry cloth. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected, and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and of saffron mixed together in a cup of valerian tea, twice or thrice a day. Sometimes a vomit has a very good effect, and snatches the patient, as it were, from the jaws of death. This, however, will be more safe after other evacuations have been premised. A very strong infusion of roasted coffee is said to give ease in an asthmatic paroxysm.

In the moist asthma, such things as promote expectoration or spitting, ought to be used; as the syrup of squills, gum ammoniac, and such like. A common spoonful of the syrup or oxymel of squills, mixedwith an equal quantity of cinnamon-water, may be taken three or four times through the day, and four or five pills made of equal parts of asafœtida and gum ammoniac at bed-time.*

* After copious evacuations, large doses of æther have been found very efficacious in removing a fit of the asthma. I have likewise known the following mixture produce very happy effects: To four or five ounces of the solution of milk of gum ammoniac, add two ounces of simple cinnamon-water, the same quantity of balsamic syrup, and half an ounce of paregoric elixir. Of this two table-spoonfuls may be taken every three hours.

For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses' milk: I have likewise known cows' milk drank warm in the morning have a very good effect in this case.

In every species of asthma, setons and issues have a good effect; they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy: and though they do not always cure the disease, yet they will often prolong the patient's life.

Asthma, common as it is in Great Britain, is almost unknown in milder and more serene climates; hence a change of climate is always adviseable, and though neither that nor medicine can scarce ever eradicate the disease, yet the change to a milder climate, with a proper attention to regimen, may enable an asthmatic person to live many years in tolerable health. In this, however, as in most other disorders, general rules cannot be laid down for every situation, but the patient's case and constitution must be particularly consulted.

CHAP. XLI.

OF THE APOPLEXY.

THE apoplexy is a sudden loss of sense and motion, wherein the patient is to all appearance dead; the heart and lungs, however, still continue to move. Though this disease often proves fatal, yet it may sometimes be removed by proper care. It chiefly attacks sedentary persons of a gross habit, who use a rich and

plentiful diet, and indulge in strong liquors. People in the decline of life are most subject to the apoplexy. It prevails most in winter, especially in rainy seasons, and very low states of the barometer.

CAUSES.—The immediate cause of an apoplexy is a compression of the brain, occasioned by an excess of blood, or a collection of watery humours. The former is called a *sanguine*, and the latter a *serous*, apoplexy. It may be occasioned by any thing that increases the circulation towards the brain, or prevents the return of the blood from the head: as intense study; violent passions;* viewing objects for a long time obliquely; wearing any thing too tight about the neck; a rich and luxurious diet; suppression of urine; suffering the body to cool suddenly after having been greatly heated; continuing long in a warm or cold bath; the excessive use of spiceries, or high-seasoned food; excess of venery; the sudden striking in of any eruption; suffering issues, setons, &c. suddenly to dry up, or the stoppage of any customary evacuation; a mercurial salivation pushed too far, or suddenly checked by cold; wounds or bruises on the head; long exposure to excessive cold; poisonous exhalations, &c.

SYMPTOMS, and method of cure.—The usual forerunners of an apoplexy are giddiness, pain, and swimming of the head; loss of memory; drowsiness; noise in the ears; the night-mare; a spontaneous flux of tears, and laborious respiration. When persons of an apoplectic make observe these symptoms, they have reason to fear the approach of a fit, and should endeavour to prevent it by bleeding, a slender diet, and opening medicines.

In the sanguine apoplexy, if the patient does not die

* I knew a woman, who, in a violent fit of anger, was seized with a sanguine apoplexy. She at first complained of extreme pain, *as if daggers had been thrust through her head*, as she expressed it. Afterwards she became comatose, her pulse sunk very low, and was exceeding slow. By bleeding, blistering and other evacuations, she was kept alive for about a fortnight. When her head was opened, a large quantity of extravasated blood was found in the left ventricle of the brain.

suddenly, the countenance appears florid, the face is swelled or puffed up, and the blood-vessels, especially about the neck and temples, are turgid; the pulse beats strong, the eyes are prominent and fixed, and the breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting.

In this species of apoplexy, every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy, and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely on the neck or arm, and if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours, and blistering-plasters applied between the shoulders, and to the calves of the legs.

As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor; as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits, and other strong liquors, are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head.

In the serous apoplexy, the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case.

It may, however, generally be performed once with safety and advantage, but should not be repeated. The patient should be placed in the same posture as directed above, and should have blistering-plasters applied, and receive opening clysters in the same manner. Purges are here likewise necessary, and the patient may drink strong balm-tea. If he be inclined to sweat, it ought to be promoted by drinking small wine-whey, or an infusion of carduus benedictus. A plentiful sweat kept up for a considerable time has often carried off a serous apoplexy.

When apoplectic symptoms proceed from opium, or other narcotic substance, taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of an apoplectic make, or those who have been attacked by it, ought to use a very spare and slender diet, avoiding all strong liquors, spiceries, and high-seasoned food. They ought likewise to guard against all violent passions, and to avoid the extremes of heat and cold. The head should be shaved, and daily washed with cold water. The feet ought to be kept warm, and never suffered to continue long wet. The body must be kept open either by food or medicine, and a little blood may be let every spring and fall. Exercise should by no means be neglected, but it ought to be taken in moderation. Nothing has a more happy effect in preventing an apoplexy than perpetual issues or setons; great care, however, must be taken not to suffer them to dry up, without opening others in their stead. Apoplectic persons ought never to go to rest with a full stomach, or to lie with their heads low, or wear any thing too tight about their necks.

The above observations should be particularly attended to. A full stomach impedes the circulation, which is naturally slower when asleep than when awake. The head lying low, seems to invite stagnation, and tight ligatures round the neck can hardly fail to produce apoplexy, by preventing the return of the blood from the vessels of the brain.

CHAP. XLII.

OF COSTIVENESS AND OTHER AFFECTIONS OF THE STOMACH AND BOWELS.

WE do not here mean to treat of those astrictions of the bowels which are the symptoms of disease, as of the colic, the iliac passion, &c. but only to take notice of that infrequency of stools which sometimes happens, and which in some particular constitutions may occasion diseases.

Costiveness may proceed from drinking rough red wines, or other astringent liquors; too much exercise, especially on horseback. It may likewise proceed from a long use of cold insipid food, which does not sufficiently stimulate the intestines. Sometimes it is owing to the bile not descending to the intestines, as in the jaundice; and at other times it proceeds from disease of the intestines themselves, as a palsy, spasm, torpor, tumours, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, and other complaints of the bowels. It is peculiarly hurtful to hypochondriac and hysteric persons, as it generates wind and other grievous symptoms. Some people, however, can bear costiveness to a great degree. I know persons who enjoy pretty good health, yet do not go to stool above once a week, and others not above once a fortnight. Indeed I have heard of some who do not go above once a month.

Persons who are generally costive should live upon a moistening and laxative diet; as roasted or boiled apples, pears, stewed prunes, raisins, gruels with currants, butter, honey, sugar, and such like. Broths, with spinage, leeks, and other soft pot-herbs, are likewise proper. Rye-bread, or that which is made of a mixture of wheat and rye together, ought to be

eaten. No person troubled with costiveness should eat white bread alone, especially that which is made of fine flour. The best for keeping the body soluble is what in some parts of England they call *meslin*. It is made of a mixture of wheat and rye, and is very agreeable to those who are accustomed to it.

Costiveness is increased by keeping the body too warm, and by every thing that promotes the perspiration; as wearing flannel, lying too long in bed, &c. Intense thought and a sedentary life are likewise hurtful. All the secretions and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c. ought to be avoided. Malt-liquor that is fine, and of a moderate strength, is very proper. Butter-milk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness ought, if possible, to remedy it by diet, as the constant use of medicine for that purpose is attended with many inconveniences, and often with bad consequences.* I never

* The learned Dr. Arbuthnot advises those who are troubled with costiveness to use animal oils, as fresh butter, cream, marrow, fat broths, especially those made of the internal parts of animals, as the liver, heart, midriff, &c. He likewise recommends the expressed oils of mild vegetables, as olives, almonds, pastaches, and the fruits themselves; all oily and mild fruits, as figs; decoctions of mealy vegetables; these lubricate the intestines; some saponaceous substances which stimulate gently, as honey, hydromel, or boiled honey and water, unrefined sugar, &c.

The doctor observes, that such lenitive substances are proper for persons of dry atrabilarian constitutions, who are subject to astriction of the belly, and the piles, and will operate when stronger medicinal substances are sometimes ineffectual; but that such lenitive diet hurts those whose bowels are weak and lax. He likewise observes, that all watery substances are lenitive, and that even common water, whey, sour milk, and butter-milk, have that effect.—That new milk, especially asses milk, stimulates still more when it sours on the stomach; and that whey turned sour will purge strongly.

knew any one get into a habit of taking medicine for keeping the body open, who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the body cannot be kept open without medicine, we would recommend gentle doses of rhubarb to be taken twice or thrice a week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives, so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of soluble tartar dissolved in water-gruel. About the size of a nutmeg of lenitive electuary taken twice or thrice a day generally answers the purpose very well.

WANT OF APPETITE.

This may proceed from a foul stomach, indigestion, the want of free air and exercise; grief, fear, anxiety, or any of the depressing passions; excessive heat, the use of strong broths, fat meats, or any thing that palls the appetite, or is hard of digestion; the immoderate use of strong liquors, tea, tobacco, opium, &c.

The patient ought, if possible, to make use of an open dry air, to take exercise daily on horseback or in a carriage, to rise betimes, and to avoid all intense thought. He should use a diet of easy digestion, and should avoid excessive heat and great fatigue.

If want of appetite proceed from errors in diet or any other part of the patient's regimen, it ought to be changed. If nausea and retchings shew that the stomach is loaded with crudities, a vomit will be of service. After this a gentle purge or two of rhubarb, or any of the bitter purging salts, may be taken. The patient ought next to use some of the stomachic bitters infused in wine. Though gentle evacuation be necessary, yet strong purges and vomits are to be avoided, as they weaken the stomach, and hurt digestion.

Elixir of vitriol is an excellent medicine in most cases of indigestion, weakness of the stomach, or want

of appetite. From twenty to thirty drops of it may be taken twice or thrice a day in a glass of wine or water. It may likewise be mixed with the tincture of the bark, one drachm of the former to an ounce of the latter, and two tea-spoonfuls of it taken in wine and water as above.

The chalybeate waters, if drank in moderation, are generally of considerable service in this case. The salt-water has likewise good effects, but it must not be used too freely. The waters of Harrowgate, Scarborough, Moffat, and most other spas in Britain, may be used with advantage. We would advise all who are afflicted with indigestion and want of appetite, to repair to these places of public rendezvous. The very change of air, and the cheerful company, will be of service; not to mention the exercise, dissipation, amusements, &c.

OF THE HEART-BURN.

What is commonly called the heart-burn is not a disease of that organ, but an uneasy sensation of heat or acrimony about the pit of the stomach, which is sometimes attended with anxiety, nausea, and vomiting.

It may proceed from debility of the stomach, indigestion, bile, the abounding of an acid in the stomach, &c. Persons who are liable to this complaint ought to avoid stale liquors, acid, windy or greasy aliments, and should never use violent exercise soon after a plentiful meal. I know many persons who never fail to have the heart-burn if they ride soon after dinner, provided they have drank ale, wine, or any fermented liquor; but are never troubled with it when they have drank rum or brandy and water without any sugar or acid.

When the heart-burn proceeds from debility of the stomach, or indigestion, the patient ought to take a dose or two of rhubarb; afterwards he may use infusions of the Peruvian bark, or any other of the stomachic bitters, in wine or brandy. Fifteen or twenty drops of the elixir of vitirol, taken in camomile-tea, will be of service to strengthen the stomach. Exercise in the open air will also be of use.

When bilious humours occasion the heart-burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. It it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum arabic, may be mixed in an English quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not choose chalk may take a tea-spoonful of prepared oyster-shells, or of the powder called crabs-eyes, in a glass of cinnamon or peppermint-water. But the safest and best absorbent is magnesia alba. This not only acts as an absorbent, but likewise as a purgative; whereas chalk and other absorbents of that kind are apt to lie in the intestines, and occasion obstructions. This powder is not disagreeable, and may be taken in a cup of tea, or a glass of mint and water. A large tea-spoonful is the usual dose, but this may be taken in a much greater quantity when there is occasion. These things are now generally made up into lozenges for the conveniency of being carried in the pocket and taken at pleasure.

If wind be the cause of this complaint, the most proper medicines are those called carminatives; as ani-seeds, juniper-berries, ginger, canella alba, cardamom-seeds, &c. These may either be chewed or infused in wine, brandy, or other spirits; but as they are only drams in another form, they should not be made use of but on the most pressing occasion, as they are injurious to the stomach. One of the safest methods of this kind, is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamom-seeds, in an English pint of brandy. After this has digested for two or three days, it ought to be strained, and four ounces of white sugar-candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful may be taken occasionally for a dose.

I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green tea. Two table-spoonfuls of the milk of gum-ammoniac, taken once or twice a day, is also a good remedy.

Pregnant women having the heart-burn should, as far as possible, satisfy themselves whether it proceed from any of the causes already mentioned, or be owing to the state of pregnancy itself, arising from the consent between the stomach and the womb. In this last case, where it is not attended with much spitting, or acrid eructations, the white of an egg mixed with water and a little sugar, will afford relief.

CHAP. XLIII.

OF NERVOUS DISEASES.

OF all diseases incident to mankind, those of the nervous kind are the most complicated and difficult to cure. A volume would not be sufficient to point out their various appearances. They imitate almost every disease, and are seldom alike in two different persons, or even the same person at different times. Proteus like, they are continually changing shape, and, upon every fresh attack, the patient thinks he feels symptoms which he never experienced before. Nor do they only affect the body; the mind likewise suffers, and is often thereby rendered extremely weak and peevish. The low spirits, timourousness, melancholy, and fickleness of temper, which generally attend nervous disorders, induce many to believe that they are entirely diseases of the mind; but this change of temper is rather a consequence, than the cause of nervous diseases.

CAUSES.—Every thing that tends to relax or weaken the body, disposes it to nervous diseases, as indolence, excessive venery, drinking too much tea, or other weak watery liquors, frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or

prevents the proper assimilation of the food, has likewise this effect; as long fasting, excess in eating or drinking, the use of windy, crude, or unwholesome aliments, an unfavourable posture of the body, &c.

Nervous disorders often proceed from intense application to study. Indeed, few studious persons are entirely free from them. Nor is this at all to be wondered at; intense thinking not only preys upon the spirits, but prevents the persons from taking proper exercise, by which means the digestion is impared, the nourishment prevented, the solids relaxed, and the whole mass of humours vitiated. Grief and disappointment likewise produce the same effects. I have known more nervous patients who dated the commencement of their disorders from the loss of a husband, a favourite child, or some other disappointment in life, than from any other cause. In a word, whatever weakens the body, or depresses the spirits, may occasion nervous disorders; as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, anxiety, vexation, &c.

SYMPTOMS,—We shall only mention some of the most general symptoms of these disorders, as it would be both an useless and endless task to enumerate the whole. They generally begin with windy inflations or distentions of the stomach and intestines; the appetite and digestion are usually bad, yet sometimes there is an uncommon craving for food, and a quick digestion. The food often turns sour on the stomach, and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish coloured liquor, resembling the grounds of coffee. Excruciating pains are often felt about the navel, attended with a rumbling or murmuring noise in the bowels. The body is sometimes loose, but more commonly bound, which occasions retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times very copious and quite clear. There is a great straitness of the breast, with difficulty of breathing; violent palpitations of the heart, sudden flushings of heat in various parts of the body; at other times, a

sense of cold, as if water were pouring over them; flying pains in the arms and limbs, pains in the back and belly, resembling those occasioned by gravel; the pulse very variable, sometimes uncommonly slow, and at other times very quick; yawning, the hiccup, frequent sighing, and a sense of suffocation, as if from a ball or lump in the throat; alternate fits of crying and convulsive laughing, the sleep is unsound, and seldom refreshing, and the patient is often troubled with the night-mare.

As the disease increases the patient is molested with head-achs, cramps, and fixed pains in various parts of the body, the eyes are clouded, and often affected with pain and dryness; there is a noise in the ears, and often a dulness of hearing; in short, the whole animal functions are impared. The mind is disturbed on the most trivial occasions, and is hurried into the most perverse commotions, inquietude, terror, sadness, anger, diffidence, &c. The patient is apt to entertain wild imaginations and extravagant fancies; the memory becomes weak, and the judgment fails.

Nothing is more characteristic of this disease than a constant dread of death. This renders those unhappy persons who labour under it peevish, fickle, impatient, and apt to run from one physician to another, which is one reason why they seldom reap the benefit from medicine, as they have not sufficient resolution to persist in any one course till it has time to produce its proper effects. They are likewise apt to imagine that they labour under diseases from which they are quite free, and are very angry if any one attempts to set them right, or laugh them out of their ridiculous notions.

REGIMEN.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but easy of digestion. Fat meats and heavy sauces are hurtful; all excess should be avoided; and they ought never to eat more at a time than they can digest. If they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Though

wine in excess enfeebles the body, and impairs the faculties of the mind, yet, taken in moderation, it strengthens the stomach, and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach, or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find temporary relief in the use of these, but they always increase the malady, as they weaken the stomach and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and prove certain poisons at last. These cautions are the more necessary, as most nervous people are peculiarly fond of tea and ardent spirits; to the use of which many of them fall victims.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body, without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea-voyages have an excellent effect, and to those who are possessed of sufficient resolution, we would by all means recommend this course. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason, a long journey, or a voyage, is of much more advantage than riding short journies near home.

A cool and dry air is proper, as it braces and invigorates the whole body. Few things tend more to relax and enervate than hot air, especially that which is rendered so by great fires, or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and de-

fend the alimentary canal from many impressions to which it would otherwise be subject, upon every sudden change from warm to cold weather. Rubbing the body frequently with a flesh brush, or a coarse linen cloth, is likewise beneficial, as it promotes the circulation, perspiration, &c. Persons who have weak nerves ought to rise early, and take exercise before breakfast, as lying too long in a bed cannot fail to relax the solids. They ought likewise to be diverted and to be kept as easy and cheerful as possible. There is not any thing which hurts the nervous system, or weakens the digestive powers, more than fear, grief, or anxiety.

MEDICINE.—Though nervous diseases are seldom radically cured, yet their symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable by proper medicines.

When the patient is costive he ought to take a little rhubarb, or some other mild purgative, and should never suffer his body to be long bound. All strong and violent purgatives are, however, to be avoided, as aloes, jalap, &c. I have generally seen an infusion of senna and rhubarb in brandy answer very well. This may be made of any strength, and taken in such quantity as the patient finds necessary. When digestion is bad, or the stomach relaxed and weak, the following infusion of Peruvian bark and other bitters may be used with advantage:

Take of Peruvian bark an ounce, gentian-root, orange-peel, and coriander-seed, of each half an ounce; let these ingredients be all bruised in a mortar, and infused in a bottle of brandy or gin for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner, and supper.

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects; but, when the liver or other viscera are obstructed, or otherwise unsound, the cold-bath is improper. It is therefore to be used with great caution. The most pro-

seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patients afflicted with wind, I have always observed the greatest benefit from the elixir of vitriol. It may be taken in the quantity of fifteen, twenty, or thirty drops, twice or thrice a day, in a glass of water. This both expels wind, strengthens the stomach, and promotes digestion.

Opiates are generally extolled in these maladies, but as they only palliate the symptoms, and generally afterwards increase the disease, we would advise people to be extremely sparing in the use of them, lest habit should render them at last absolutely necessary.

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorders; but whoever wishes for a thorough cure must expect it from regimen alone: we shall therefore omit mentioning more medicines, and again recommend the strictest attention to *diet*, *air*, *exercise*, and *amusements*.

OF MELANCHOLY.

Melancholy is that state of alienation or weakness of mind which renders people incapable of enjoying the pleasures, or performing the duties of life. It is a degree of insanity, and often terminates in absolute madness.

CAUSES.—It may proceed from an hereditary disposition, intense thinking, especially where the mind is long occupied about one object; violent passions or affections of the mind, as love, fear, joy, grief, pride, and such like. It may also be occasioned by excessive venery, narcotic or stupefactive poisons, a sedentary life, solitude, the suppression of customary evacuations, acute fevers, or other diseases. Violent anger will change melancholy into madness, and excessive cold, especially of the lower extremities, will force the

blood into the brain, and produce all the symptoms of madness. It may likewise proceed from the use of aliment that is hard of digestion, or which cannot be easily assimilated; from a callous state of the integuments of the brain, or a dryness of the brain itself. To all which we may add gloomy and mistaken notions of religion.

SYMPTOMS.—When persons begin to be melancholy, they are dull, dejected, timorous, watchful, fond ofsolitude,fretful, fickle,captious and inquisitive, solicitous about trifles, sometimes niggardly, and at other times, prodigal; the body is generally bound, the urine thin, and in small quantity, the stomach and bowels inflated with wind, the complexion pale, and pulse slow and weak; the functions of the mind are also greatlyperverted,insomuch that the patient often imagines himself dead, or changed into some other animal. Some have imagined their bodies were made of glass or other brittle substances, and were afraid to move, lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to any obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind, or an hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the *menses*, sometimes carry off this disease.

REGIMEN.—The diet should consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell-fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kinds of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient, who, by a long use of whey, water, and garden-fruit, recovered, after having evacuated a great quantity of black-coloured matter.

Strong liquors of every kind ought to be avoided as poison. The most proper drink is water, whey, or very

small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely, or his drink may be sweetened with it. Infusion of balm-leaves, penny-royal, the roots of wild valerian, or the flowers of the lime-tree, may be drank freely, either by themselves or sweetened with honey, as the patient shall choose.

The patient ought to take as much exercise in the open air as he can bear. This helps to dissolve the viscid humours, it removes obstructions, promotes the perspiration, and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease, than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would still have a better effect if he were obliged to labour a piece of ground. By digging, hoeing, planting, sowing, &c. both the body and mind would be exercised. A long journey, or a voyage, especially towards a warmer climate, with agreeable companions, has often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure than confining the patient within doors, and plying him with medicines.

MEDICINE.—In the cure of this disease, particular attention must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of king Saul, and indeed it is a very rational one. Nothing can remove the disease of the mind so effectually as applications to the mind itself, the most efficacious of which is music. The patient's company ought likewise to consist of such persons as are agreeable to him. People in this state are apt to conceive unaccountable aversions against particular persons, and the very sight of such persons

is sufficient to distract their minds, and throw them into the utmost perturbation. In every species of insanity, care should be taken not to vex the mind by contradiction.

When the patient is high, evacuations are necessary. In this case, he must be bled, and have his body kept open by purging medicines, as manna, rhubarb, cream of tartar, or the soluble tartar. I have seen the last have very happy effects. It may be taken in the dose of half an ounce, dissolved in water-gruel, every day, for several weeks, or even months, if necessary. More or less may be given according as it operates. Vomits have likewise a good effect; but they must be pretty strong, otherwise they will not operate.

Whatever increases the evacuation of urine, or promotes perspiration, has a tendency to remove this disease. Both these secretions may be promoted by the use of nitre and vinegar. Half a drachm of purified nitre may be given three or four times a day in any manner that is most agreeable to the patient; and an ounce and a half of distilled vinegar, may be daily mixed with his drink. Dr. Locker seems to think vinegar the best medicine that can be given in this disease.

Camphire and musk have likewise been used in this case with advantage. Ten or twelve grains of camphire may be rubbed in a mortar, with half a drachm of nitre, and taken twice a day, or oftener if the stomach will bear it. If it will not sit upon the stomach in this form, it may be made into pills with gum asafœtida and Russian castor, and taken in the quantity above directed. If musk is to be administered, a scruple or twenty-five grains of it may be made into a bolus with a little honey or common syrup, and taken twice or thrice a day. Antimonial wine is recommended in the cure of this disease. Forty or fifty drops will be a sufficient dose, take three or four times a day in a dish of tea. We do not mean that all the medicines should be administered at once, but whichever of them is given, must be duly persisted in, and where one fails another may be tried.

As it is very difficult to induce patients in this disease to take medicines, we shall mention a few outward applications which sometimes do good; the principal of these are issues, setons, and warm bathing. Issues may be made in any part of the body, but they generally have the best effect near the spine. The discharge from these may be greatly promoted by dressing them with the mild blistering ointment, and keeping what are commonly called the orrice-peas in them. The most proper place for a seton is between the shoulder-blades; and it ought to be placed upwards and downwards, or in the direction of the spine.

OF THE PALSY.

The palsy is a loss or diminution of sense or motion, or of both, in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. It is more or less dangerous according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary to life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected the case is bad, as it shews that the disease proceeds from the brain. When the part affected feels cold, is insensible or wastes away, or when the judgment and memory begin to fail, there is small hope of a cure.

CAUSES.—The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness, wounds of the brain or spinal marrow, pressure upon the brain or nerves, very cold or damp air, the suppression of customary evacuations, sudden fear, want of exercise, or whatever greatly relaxes the system, as drinking much tea* or coffee. The palsy

* Many people imagine that tea has no tendency to hurt the nerves, and that drinking the same quantity of warm water would be equally pernicious. This, however, seems to be a mistake. Many

may likewise proceed from wounds of the nerves themselves, from the poisonous fumes of metals or minerals, as mercury, lead, arsenic, &c.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse-raddish, &c. The drink may be generous wine, mustard-whey, or brandy and water. Friction with the flesh-brush, or a warm hand, is extremely proper, especially on the parts affected. Blistering-plasters may likewise be applied to the affected parts with advantage. When this cannot be done, they may be rubbed with the volatile liniment, or the nerve-ointment of the Edinburgh dispensatory. One of the best external applications is electricity. The shocks, or, rather vibrations, should be received on the part affected; and they ought daily to be repeated for several weeks.

Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. Cephalic snuff, or any thing that makes the patient sneeze, is likewise of use. Some pretend to have found great benefit from rubbing the parts affected with nettles, but this does not seem to be any way preferable to blistering. If the tongue be affected, the patient may gargle his mouth frequently with brandy and mustard, or he may hold a bit of sugar in his mouth, wet with the palsy-drops, or compound spirits of lavender. The wild valerian-root is a very proper medicine in this case. It may either be taken in an infusion with sage-leaves, or

persons drink three or four cups of warm milk and water, without feeling any bad consequences; yet the same quantity of tea will make their hands shake for twenty-four hours. That tea affects the nerves, is likewise evident from its preventing sleep, occasioning giddiness, dimness of the sight, sickness, &c.

half a drachm of it in powder may be given in a glass of wine three times a day. If the patient cannot use the valerian, he may take sal volatile oleosum, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine three or four times a day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamon-bark, ginger, or other warm spices.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skin, and if possible should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

The epilepsy is a sudden deprivation of all the senses wherein the patient falls suddenly down, and is affected with violent convulsive motions. Children, especially those who are delicately brought up, are most subject to it. It more frequently attacks men than women, and is very difficult to cure. When the epilepsy attacks children, there is reason to hope it may go off about the time of puberty. When it attacks any person after twenty years of age, the cure is difficult, but when after forty, a cure is hardly to be expected. If the fit continues only for a short space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavourable symptom when the patient is seized with fits in his sleep.

CAUSES.—The epilepsy is sometimes hereditary. It may likewise proceed from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain, a polypus, tumours, or concretions within the skull, excessive drinking, intense study, excess of venery, worms, teething, suppression of customary evacuations, too great emptiness or repletion, violent passions or affections, contagion received into the body, as the infection of the small-pox, measles, &c.

SYMPTOMS.—An epileptic fit is generally preceded by unusal weariness, pain of the head, dulness, giddiness, noise in the ears, dimness of the sight, palpitation of the heart, disturbed sleep, difficult breathing, the bowels are inflated with wind, the urine is in great quantity, but thin, the complexion is pale, the extremities are cold, and the patient often feels, as it were, a stream of cold air ascending towards his head.

In the fit, the patient generally makes an unusual noise, his thumbs are drawn in towards the palms of the hands, his eyes are distorted, he starts, and foams at the mouth, his extremities are bent or twisted various ways, he often discharges his seed, urine, and fœces, involuntarily, and is quite destitute of all sense and reason. After the fit is over, his senses gradually return, and he complains of a kind of stupor, weariness, and pain of his head, but has no remembrance of what happened to him during the fit.

The fits are sometimes excited by violent affections of the mind, a debauch of liquor, excessive heat, cold, or the like.

This disease, from the difficulty of investigating its causes, and its strange symptoms, was formerly attributed to the wrath of the gods, or the agency of evil spirits. In modern times, it has often by the vulgar been imputed to witchcraft and fascination. It depends, however, as much upon natural causes as any other malady, and its cure may often be effected by persisting in the use of proper means.

REGIMEN.—The epileptic patients ought, if possible, to breathe a pure and free air. Their diet should be light but nourishing, They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, excessive joy, and the like.

Exercise is likewise of great use, but the patient must be careful to avoid all extremes either of heat or cold,

all dangerous situations, as standing upon precipices, riding, deep waters, and such like.

MEDICINE.—The intention of cure must vary according to the cause of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored: if this cannot be done, others may be substituted in their place. Issues or setons in this case have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill or carry off these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and, if the fits prove obstinate, a blistering-plaster may be put between the shoulders. The same method is to be followed, when epileptic fits precede the eruption of the small-pox, or measles, &c.

When the disease is hereditary, or proceeds from a wrong formation of the brain, a cure is not to be expected. When it is owing to a debility, or too great an irritability of the nervous system, such medicines as tend to brace and strengthen the nerves may be used, as the Peruvian bark and steel; or the *anti-epileptic* electuaries recommended by Fuller and Mead.

The flowers of zinc have of late been highly extolled for the cure of the epilepsy Though this medicine will not be found to answer the expectations which have been raised concerning it, yet in obstinate epileptic cases it deserves a trial. The dose is from one to three or four grains, which may be taken either in pills or a bolus, as the patient inclines. The best method is to begin with a single grain four or five times a day, and gradually to increase the dose as far as the patient can bear it. I have often known this medicine, when duly persisted in, prove beneficial.

Musk has sometimes been found to succeed in the epilepsy. Ten or twelve grains of it, with the same quantity of factitious cinnabar, may be made up into a bolus, and taken every night and morning.

Sometimes the epilepsy has been cured by electricity.

Convulsion-fits proceed from the same causes, and must be treated in the same manner as the epilepsy.

There is one particular species of convulsion-fits which commonly goes by the name of St. Vitus's dance, wherein the patient is agitated with strange motions and gesticulations, which by the common people are generally believed to be the effects of witchcraft. This disease may be cured by repeated bleedings and purges; and afterwards using the medicines prescribed above for the epilepsy, viz. the Peruvian bark, and snake-root, &c. Chalybeate waters are found to be beneficial in this case. The cold bath is likewise of singular service, and ought never to be neglected when the patient can bear it.

OF THE HICCUP.

The hiccup is a spasmodic or convulsive affection of the stomach and midriff, arising from any cause that irritates their nervous fibres.

It may proceed from excess in eating or drinking; from a hurt in the stomach; poisons; inflammations; or schirrous tumours of the stomach, intestines, bladder, midriff, or the rest of the *viscera*. In gangrenes, acute and malignant fevers, a hiccup is often the forerunner of death.

When the hiccup proceeds from the use of aliment that is flatulent, or hard of digestion, a draught of generous wine, or a dram of any spirituous liquor, will generally remove it. If poison be the cause, plenty of milk and oil must be drank, as has been formerly recommended. When it proceeds from an inflammation of the stomach, &c. it is very dangerous. In this case the cooling regimen ought to be strictly observed. The patient must be bled, and take frequently a few drops of

the sweet spirits of nitre in a cup of wine-whey. His stomach should likewise be fomented with cloths dipped in warm water, or have bladders filled with warm milk and water applied to it.

When the hiccup proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. When it is a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminative medicines directed for the heart-burn may be used.

When the hiccup proves very obstinate, recourse must be had to the most powerful aromatic and antispasmodic medicines. The principal of these is musk; fifteen or twenty grains of which may be made into a bolus, and repeated occasionally. Opiates are likewise of service, but they must be used with caution. A bit of sugar, dipped in compound spirits of lavender, or the volatile aromatic tincture, may be taken frequently. External applications are sometimes also beneficial; as the stomach-plaster or a cataplasm of the Venice treacle of the Edinburgh or London Dispensatory, applied to the region of the stomach.

I lately attended a patient who had almost a constant hiccup for above nine weeks. It was frequently stopped by the use of musk, opium, wine, and other cordial and antispasmodic medicines, but always returned. Nothing, however, gave the patient so much ease as brisk small-beer. By drinking freely of this the hiccup was often kept off for several days, which was more than could be done by the most powerful medicines. The patient was at length seized with a vomiting of blood, which soon put an end to his life. Upon opening the body, a large schirrous tumour was found near the pylorus, or right orifice of the stomach.

CRAMP OF THE STOMACH.

This disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has any inclination to vomit, he ought to take some draughts of warm water, or weak camomile-tea, to cleanse his stomach. After this, if he has been costive, a laxative clyster may be given. He ought then to take laudanum. The best way of administering it is in a clyster. Sixty or seventy drops of liquid laudanum may be given in a clyster of warm water. This is much more certain than laudanum given by the mouth, which is often vomited, and in some cases increases the pain and spasms in the stomach.

If the pain and cramps return with great violence, after the effects of the anodyne clyster are over, another with an equal or larger quantity of opium, may be given; and every four or five hours a bolus, with ten or twelve grains of musk, and half a drachm of the Venice treacle. In the mean time, the stomach ought to be fomented with cloths dipped in warm water, or bladders filled with warm milk and water should be constantly applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected; and an anti-hysteric plaster worn upon it for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pain or cramps proceed from a suppression of the *menses*, bleeding is of use. If they be owing to the gout, recourse must be had to spirits, or some of the warm cordial waters. Blistering-plasters ought likewise in this case to be applied to the ancles. I have often seen violent cramps and pains of the stomach, removed by covering it with a large plaster of Venice treacle.

OF THE NIGHT-MARE

In this disease the patient, in the time of sleep, imagines he feels an uncommon oppression or weight about his breast or stomach, which he can by no means shake off. He groans, and sometimes cries out, though oftener he attempts to speak in vain. Sometimes he imagines himself engaged with an enemy, and in danger of being killed, attempts to run away, but finds he cannot. Sometimes he fancies himself in a house that is on fire, or that he is in danger of being drowned in a river. He often thinks he is falling over a precipice, and the dread of being dashed to pieces suddenly awakes him.

This disorder has been supposed to proceed from too much blood; from a stagnation of blood in the brain, lungs, &c. But it is rather a nervous affection, and arises chiefly from indigestion. Hence we find that persons of weak nerves, who lead a sedentary life, and live full, are most commonly afflicted with the night-mare. Nothing tends more to produce it than heavy suppers, especially when eaten late, or the patient goes to bed soon after. Wind is likewise a very frequent cause of this disease; for which reason those who are afflicted with it ought to avoid all flatulent food. Deep thought, anxiety, or any thing that oppresses the mind, ought also to be avoided.

As persons afflicted with the night-mare generally moan, or make some noise in the fit, they should be waked, or spoken to by such as hear them, as the uneasiness generally goes off as soon as the patient is awake. Dr. Whyte says, he generally found a dram of brandy, taken at bed-time, prevent this disease. That, however, is a bad custom, and in time loses its effect. We would rather have the patient depend upon the use of food of easy digestion, cheerfulness, exercise through the day, and a light supper taken early, than to accustom himself to drams. A glass of peppermint-water will often promote digestion as much as a glass of brandy, and is much safer. After a person of weak

digestion, however, has eaten flatulent food, a dram may be necessary; in this case we would recommend it as the most proper medicine.

Persons who are young, and full of blood, if troubled with the night-mare, ought to take a purge frequently, and use a spare diet.

OF SWOONINGS.

People of weak nerves or delicate constitutions are liable to swooning or fainting fits. These indeed are seldom dangerous when duly attended to; but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swooning are, sudden transition from cold to heat; breathing air that is deprived of its proper spring or elasticity; great fatigue; excessive weakness; loss of blood; long fasting; fear, grief, and other violent passions or affections of the mind.

It is well known that persons who have been long exposed to cold, often faint or fall into a swoon, upon coming into the house, especially if they drink hot liquors, or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room, immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot, till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his kness and elbows, and to have his hands and face sprinkled with vinegar or cold water. He shoul dlikewise be made to smell to vinegar, and should have a spoonful or two of water, if he can swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it may be necessary to bleed the patient, and afterwards to give him a clyster.

As air that is breathed frequently loses its elasticity or

spring, it is no wonder if persons who respire in it often fall into a swoon or fainting fit. They are in this case deprived of the very principle of life. Hence it is that fainting fits are so frequent in all crowded assemblies, especially in hot seasons. Such fits, however, must be considered as a kind of temporary death; and, to the weak and delicate, they sometimes prove fatal. They ought, therefore, with the utmost care to be guarded against. The method of doing this is obvious. Let assembly-rooms, and all other places of public resort, be large and well ventilated; and let the weak and delicate avoid such places, particularly in warm seasons.

A person who faints in such a situation ought immediately to be carried into the open air; his temples should be rubbed with strong vinegar or brandy, and volatile spirits or salts held to his nose. He should be laid upon his back with his head low, and have a little wine or some other cordial as soon as he is able to swallow it, poured into his mouth. If the person has been subject to hysteric fits, castor or asafœtida should be applied to the nose, or burnt feathers, horn, or leather, &c.

When fainting fits proceed from mere weakness or exhaustion, which is often the case after great fatigue, long fasting, loss of blood, or the like, the patient must be supported with generous cordials, as jellies, wines, spirituous liquors, and such like. These, however, must be given at first in very small quantities, and increased gradually as the patient is able to bear them. He ought to be allowed to lie quiet, still, and easy, upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago-gruel with wine, new milk, and other things of a light and cordial nature. These things are to be given out of the fit. All that can be done in the fit is, to let him smell to a bottle of Hungary-water, *eau de luce*, or spirits of hartshorn, and to rub his temples with warm brandy, or to lay a compress dipped in it to the pit of the stomach.

In fainting fits that proceed from fear, grief, or other violent passions or affections of the mind, the patient

must be very cautiously managed. He should be suffered to remain at rest, and only made to smell to some vinegar. After he is come to himself, he may drink freely of warm lemonade, or balm-tea, with some orange or lemon-peel in it. It will likewise be proper, if the fainting fits have been long and severe, to clean the bowels, by throwing in an emollient clyster.

It is common in fainting fits, from whatever cause they proceed, to bleed the patient. This practice may be very proper in strong persons of a full habit; but in those who are weak and delicate, or subject to nervous disorders, it is dangerous. The proper method with such people is, to expose them to the free air, and to use cordial and stimulating medicines, as volatile salts, Hungary-water, spirit of lavender, tincture of castor, and the like.

OF FLATULENCIES, OR WIND.

All nervous patients, without exception, are afflicted with wind or flatulency in the stomach and bowels, which arises chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom troubled with wind, unless they either overload their stomachs or drink liquors that are in a fermenting state, and consequently full of elastic air. While therefore the matter of flatulence proceeds from our aliments, the cause which makes air separate from them in such quantity as to occasion complaints, is almost always a fault of the bowels themselves, which are too weak either to prevent the production of elastic air, or to expel it after it is produced.

To relieve this complaint, such medicines ought to be used as have a tendency to expel wind, and by strengthening the alimentary canal, to prevent its being produced there.*

* Many nervous people find great benefit from eating a dry biscuit, especially when the stomach is empty. I look upon this as one

The list of medicines for expelling wind is very numerous; they often, however, dissapoint the expectations of both the physician and his patient. The most celebrated amongst the class of carminatives are juniper-berries, the roots of ginger and zedoary, the seeds of anise, carraway, and coriander, gum asafœtida and opium, the warm waters, tinctures,and spirits, as the aromatic water, the tincture of wood-soot, the volatile aromatic spirit, æther, &c.

Dr. Whyte says, he found no medicines more efficacious in expelling wind than æther and laudanum. He generally gave the laudanum in a mixture with peppermint-water and tincture of castor, or sweet spirits of nitre. Sometimes, in place of this, he gave opium in pills with asafœtida. He observes that the good effects of opiates are equally conspicuous, whether the flatulence be contained in the stomach or intestines, whereas those warm medicines, commonly called carminatives, do not often give immediate relief, except when the wind is in the stomach.

With regard to æther, the doctor says he has often seen very good effects from it in flatulent complaints, where other medicines have failed. The dose is a teaspoonful mixed with two table-spoonfuls of water.* In gouty cases, he observes that æther, a glass of French brandy, or of the aromatic water, or ginger, either taken in substance, or infused in boiling water, are among the best medicines for expelling wind.

When the case of flatulent patients is such as makes it improper to give them warm medicines inwardly, the doctor recommends external applications, which are sometimes of advantage. Equal parts of the antihysteric and stomach-plaster, may be spread upon a piece of soft leather, of such size as to cover the greater

of the best carminative- medicines; and would recommend it in all complaints of the stomach arising from flatulence, indigestion, &c.

* Though the patient may begin with this quantity, it will be necessary to increase the dose gradually as the stomach can bear it. Æther is now given in considerably greater doses than it was in Dr. Whyte's time.

part of the belly. This should be kept on for a considerable time, provided the patient be able to bear it; if it should give great uneasiness it may be taken off, and the following liniment used in its stead:

Take of Bates' anodyne balsam an ounce; of the expressed oil of mace half an ounce; oil of mint two drachms. Let these ingredients be mixed together, and about a table-spoonful well rubbed on the parts at bed-time.

For strengthening the stomach and bowels, and consequently for lessening the production of flatulence, the doctor recommends the Peruvian bark, bitters, chalybeates, and exercise. In flatulent cases, he thinks some nutmeg or ginger should be added to the tincture of the bark and bitters, and that the aromatic powder should be joined with the filings of iron.

When windy complaints are attended with costiveness, which is often the case, few things will be found to answer better than four or five of the following pills taken every night at bed-time:

Take asafœtida two drachms; succotrine aloes, salt of iron, and powdered ginger, of each one drachm; as much of the elixir proprietatis, as will be sufficient to form them into pills.

On the other hand, when the body is too open, twelve or fifteen grains of rhubarb, with half a drachm or two scruples of the Japonic confection, given every other evening, will have very good effects.

In those flatulent complaints which come on about the time the menses cease, repeated small bleedings often give more relief than any other remedy.

With regard to diet, the doctor observes that tea, and likewise all flatulent aliments, are to be avoided, and that for drink, water with a little brandy or rum is not only preferable to malt-liquor, but in most cases also to wine.

As Dr. Whyte has paid great attention to this subject, and as his sentiments upon it in a great measure agree with mine, I have taken the liberty to adopt them, and shall only add to his observations, that exercise is, in my opinion, superior to all medicine,

both for preventing the production, and likewise for expelling of flatulencies. These effects, however, are not to be expected from sauntering about, or lolling in a carriage; but from labour, or such active amusements as give exercise to every part of the body.

OF LOW SPIRITS.

All who have weak nerves are subject to low spirits in a greater or lesser degree. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is greatly increased by solitude and indulging gloomy ideas, but may often be relieved by cheerful company and sprightly amusements.

When low spirits are owing to a weak relaxed state of the stomach and bowels, an infusion of the Peruvian bark with cinnamon or nutmeg will be proper. Steel joined with aromatics may likewise in this case be used with advantage; but riding, and a proper diet, are most to be depended on.

When they arise from a foulness of the stomach and intestines, or obstruction in the hypochondriac viscera, aloetic purges will be proper. I have sometimes known the Harrowgate-waters of service in this case.

When low spirits proceed from a suppression of the menstrual or of the hœmorrhoidal flux, these evacuations may either be restored, or some other substituted in their place, as issues, setons, or the like. Dr. Whyte observes, that nothing has such sudden good effects in this case as bleeding.

When low spirits have been brought on by long continued grief, anxiety, or other distresses of mind, agreeable company, variety of amusements, and change of place, especially travelling into foreign countries, will afford the most certain relief.

Persons afflicted with low spirits should avoid all kinds of excess, especially of venery and strong liquors. The moderate use of wine, and other strong liquors, is by no means hurtful; but when taken to

excess they weaken the stomach, vitiate the humours, and depress the spirits. This caution is the more necessary, as the unfortunate and melancholy often fly to strong liquors for relief, by which means they never fail to precipitate their own destruction.

OF HYSTERIC AFFECTIONS.

These likewise belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine. Women of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremelysensible, are most subject to hysteric complaints. In such persons, an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the menses often gives rise to hysteric fits. They may likewise be excited by violent passions or affections of the mind, as fear, grief, anger, or great disappointments.

Sometimes the hysteric fit resembles a swoon or fainting fit, during which the patient lies as in a sleep, only the breathing is so low as scarcely to be perceived; at other times the patient is affected with catchings and strong convulsions. The symptoms which precede hysteric fits, are likewise various in different persons. Sometimes the fit comes on with coldness of the extremities, yawning and stretching, lowness of spirits, oppression, and anxiety. At other times the approach of the fit is foretold by a feeling. as if there was a ball at the lower part of the belly, which gradually rises towards the stomach, where it occasions inflation, sickness, and sometimes vomiting; afterwards it rises into the gullet, and occasions a degree of suffocation, to which quick breathing, palpitation of the heart, giddiness of the head, dimness of the sight, loss of hearing, with convulsive motions of the extremities and other parts of the body succeed. The hysteric paroxysm is often introduced by an immoderate fit of laughter, and some-

times it goes off by crying. Indeed there is not much difference between the laughing and crying of an hysteric lady.

Our aim in the treatment of this disease must be to shorten the fit or paroxysm when present, and to prevent its return. The longer the fits continue, and the more frequently they return, the disease becomes the more obstinate. Their strength is increased by habit, and they induce so great a relaxation of the system, that it is with difficulty removed.

It is customary, during the hysteric fits or paroxysm to bleed the patient. In strong persons of a plethoric habit, and where the pulse is full, this may be proper, but in weak and delicate constitutions, or where the disease has been of loug standing, or arises from inanimation it is not safe. The best course in such cases is to rouse the patient by strong smells, as burnt feathers, asafœtida, or spirits of hartshorn, held to the nose. Hot bricks may also be applied to the soles of the feet, and the legs, arms, and belly, may be strongly rubbed with a warm cloth. But the best application is to put the feet and legs into warm water. This is peculiarly proper when the fits precede the flow of the menses. In cases of costiveness, a laxative clyster with asafœtida will be proper; and as soon as the patient can swallow, two table-spoonfuls, of a solution of asafœtida, or of some cordial julap, may be often given.*

The radical cure of this disorder will be best attempted at a time when the patient is most free from the fits. It will be greatly promoted by a proper attention to diet. A milk and vegetable diet, when duly persisted in, will often perform a cure. If, however, the patient has been accustomed to a more

* When hysteric fits are occasioned by sympathy, they may be cured by exciting an opposite passion. This is said to have been the case of a whole school of young ladies in Holland, who were all cured by being told that the first who were seized should be burnt to death. But this method of cure, to my knowledge, will not always succeed. I would therefore advise, that young ladies who are subject to hysteric fits should not be sent to boarding schools, as the disease may be caught by imitation. I have known madness itself brought on by sympathy.

generous diet, it will not be safe to leave it off all at once, but by degrees. The most proper drink is water with a small quantity of spirits; a cool dry air is the best. Cold bathing, and every thing that braces the nerves and invigorates the system, is beneficial; but lying too long in bed, or whatever relaxes the body is hurtful. It is of the greatest importance to have the mind kept constantly easy and cheerful, and, if possible, to have it always engaged in some agreeable and interesting pursuit.

The proper medicines are those which strengthen the alimentary canal and the whole nervous system, as the preparations of iron, the Peruvian bark, and other bitters. Twenty drops of the elixir of vitriol, in a cup of the infusion of the bark, may be taken twice or thrice a day. The bark and iron may likewise be taken in substance, provided the stomach can bear them: but they are generally given in too small doses to have any effect. The chalybeate waters generally prove beneficial in this disorder

If the stomach is loaded with phlegm, vomits will be of use; but they should not be too strong, nor frequently repeated, as they tend to relax and weaken the stomach. If there is a tendency to costiveness, it must be removed either by diet, or taking an opening pill, as it shall be found necessary.

To lessen the irritability of the system, antispasmodic medicines will be of use. The best antispasmodic medicines are musk, opium, and castor. When opium disagrees with the stomach, it may either be applied externally, or given in clysters. It is often successful in removing those periodical head-achs, to which hysteric and hypochondriac patients are subject. Castor has in some cases been found to procure sleep where opium failed; for which reason Dr. Whyte advises, that they should be joined together. He likewise recommends the antihysteric plaster to be applied to the abdomen.*

* Though antispasmodics and anodynes are universally recommended in this disease, yet all the extraordinary cures that I ever

Hysteric women are often afflicted with cramps in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentation. When the cramp or spasm is very violent, opium is the remedy most to be depended on. In milder cases, immersing the feet and legs in warm water, or applying a blistering-plaster to the part affected, will often be sufficient to remove the complaint. In patients whose nerves are uncommonly delicate and sensible, it will be better to omit the blistering-plaster, and to attempt the cure by opiates, musk, camphire, and the warm bath.

Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and when convulsions arise from a flatulent distension of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the abdomen by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps. Though this seems to owe its effect chiefly to imagination, yet, as it sometimes succeeds, it merits a trial.* When spasm or convulsive motions arise from sharp humours in the stomach or intestines, no lasting relief can be procured till these are either corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines had failed.

OF HYPOCHONDRIAC AFFECTIONS.

This disease generally attacks the indolent, the luxurious, the unfortunate, and the studious. It becomes daily more common in this country, owing no doubt to the increase of luxury and sedentary employments.

knew in hysteric cases, were performed by means of tonic and corroborating medicines.

* Some persons afflicted with cramps pretend to reap great benefit from small bundles of rosemary tied all night about their feet, ancles, and knees.

It has so near a resemblance to the immediately preceding, that many authors consider them as the same disease, and treat them accordingly. They require, however, a very different regimen, and the symptoms of the latter, though less violent, are more permanent than those of the former.

Men of melancholy temperaments, whose minds are capable of great attention, and whose passions are not easily moved, are in the advanced periods of life most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long continued evacuations, obstructions in some of the viscera, as the liver, spleen, &c.

Hypochondriac persons ought never to fast long, and their food should be solid and nourishing. All acescent and windy vegetables are to be avoided. Flesh meats agree best with them, and their drink should be old claret or good Madeira. Should these disagree with the stomach, water with a little brandy or rum in it may be drank.

Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is very beneficial, and where it does not agree with the patient, frictions with the flesh-brush or a coarse cloth may be tried. If the patient has it in his power, he ought to travel either by sea or land. A voyage or a long journey, especially towards a warmer climate, will be of more service than any medicine.

The general intentions of cure in this disease are to strengthen the alimentary canal, and to promote the secretions. These intentions will be best answered by the different preparations of iron and the Peruvian bark, which, after proper evacuations, may be taken in the same manner as directed in the preceding disease.

If the patient be costive, it will be necessary to make use of some gentle opening medicine, as pills composed of equal parts of aloes, rhubarb, and asafœtida, with as much of the elixir proprietatis as is necessary to form the

ingredients into pills. Two, three, or four, of these may be taken as often as it is found necessary to keep the body gently open. Such as cannot bear the asafœtida may substitute Spanish soap in its place.

Though a cheerful glass may have good effects in this disease, yet all manner of excess is hurtful. Intense study, and every thing that depresses the spirits, are likewise pernicious.

Though the general symptoms and treatment of nervous disorders, were pointed out in the beginning of this chapter, yet for the benefit of the unhappy persons afflicted with those obstinate and complicated maladies, I have treated several of their capital symptoms under distinct or separate heads. These, however, are not to be considered as different diseases, but as various modifications of the same disease. They all arise from the same general causes, and require nearly the same method of treatment. There are many other symptoms that merit particular attention, which the nature of my plan will nor permit me to treat of at full length. I shall therefore omit them altogether, and conclude this Chapter with a few general remarks, on the most obvious means of preventing or avoiding nervous disorders.

In all persons afflicted with nervous disorders, there is a great delicacy and sensibility of the whole system, and an uncommon degree of weakness of the organs of digestion. These may be either natural or acquired. When owing to a defect in the constitution, they are hardly to be removed, but may be mitigated by proper care. When induced by diseases, as long or repeated fevers, profuse hœmorrhages, or the like, they prove also very obstinate, and will yield only to a course of regimen calculated to restore and invigorate the habit.

But nervous affections arise more frequently from causes, which it is in a great measure in our power to avoid, than from diseases, or an original fault in the constitution, &c. Excessive grief, intense study, improper diet, and neglect of exercise, are the great sources of this extensive class of diseases.

It has been already observed, that grief indulged destroys the appetite and digestion, depresses the spirits, and induces an universal relaxation and debility of the whole system. Instances of this are daily to be seen. The loss of a near relation, or any other misfortune in life, is often sufficient to occasion the most complicated series of nervous symptoms. Such misfortunes, indeed, are not to be avoided, but surely their effects, by a vigorous and proper exertion of the mind, might be rendered less hurtful. For directions in this matter, we must refer the reader to the article GRIEF, in the Chapter on the Passions.

The effects of intense study are pretty similar to those occasioned by grief. It preys upon the animal spirits, and destroys the appetite and digestion. To prevent their effects, studious persons ought, according to the poet, " to toy with their books."* They should never study too long at a time, nor attend long to one particular subject, especially if it be of a serious nature. They ought likewise to be attentive to their posture, and should take care frequently to unbend their minds by music, diversions, or going into agreeable company.

With regard to diet, I shall only observe, that nervous diseases may be induced either by excess or inanition. Both of these extremes hurt the digestion, and vitiate the humours. When nature is oppressed with fresh loads of food, before she has had time to digest and assimilate the former meal, her powers are weakened, and the vessels are filled with crude humours. On the other hand, when the food is not sufficiently nourishing, or is taken too seldom, the bowels are inflated with wind, and the humours, for want of regular fresh supplies of wholesome chyle, are vitiated. These extremes are therefore with equal care to be avoided. They both tend to induce a relaxation and debility of the nervous system, with all its dreadful train of consequences.

* Armstrong on Health.

But the most general cause of nervous disorders is indolence. The active and laborious are seldom troubled with them. They are reserved for the children of ease and affluence, who generally feel their keenest force. All we should say to such persons is, that the means of prevention and cure are both in their own power. If the constitution of human nature be such, that man must either labour or suffer diseases, surely no individual has any right to expect an exemption from the general rule.

Those, however, who are willing to take exercise, but whose occupations confine them to the house, and perhaps to an unfavourable posture, really deserve our pity. We have in a former part of the book endeavoured to lay down rules for their conduct; and shall only add, that where these cannot be complied with, their place may in some measure be supplied by the use of bracing and strengthening medicines, as the Peruvian bark, with other bitters, the preparations of steel, the elixir of vitriol, &c.

In many cases of the nervous kind, the symptoms of the disorder are hardly to be described; they may be termed a mental agony, producing a lassitude, restlessness, and total incapacity of attending to any concerns of life. This medicine can hardly cure; a change of climate, and the variety of scenes and enjoyments which travelling procures, appears the only remedy in cases of extremity.

CHAP. LXIV.

DISORDER OF THE SENSES.

WE do not mean to treat of the nature of our sensations, or to give a minute description of the various organs by which they are performed; but to point out some of the diseases to which these organs are most liable, and to show how they may be prevented or remedied.

OF THE EYE.

No organ of the body is subject to more diseases than the eye; nor is there any one of which the diseases are more difficult to cure. Though more ignorant persons pretend to cure these than any other class of diseases, yet a very superficial acquaintance with the structure of the eye, and the nature of vision, will be sufficient to convince any one of the danger of trusting to them. These diseases often exceed the skill of the most learned physicians; hence we may easily infer the danger of trusting them to ignorant quacks who, without all peradventure, put out more eyes than they cure. But though the diseases of the eye can seldom be cured, they might often by due care be prevented; and even where the sight is totally lost, many things might be done, which are generally neglected, to render the unhappy person both more useful to himself and to society.*

The eyes are hurt by viewing bright or luminous objects, keeping the head too long in a hanging posture, violent head-achs, excessive venery, the long use of bitters, the effluvia from acrid or volatile substances, various diseases, as the small-pox, measles, &c. but above all, from night-watching, and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are no less pernicious. The eyes are often hurt by the stoppage of customary

* It is a pity those who have the misfortune to be born blind, or who lose their sight when young, should be suffered to remain in ignorance or to beg. This is both cruelty and want of economy. There are many employments of which blind persons are very capable, as knitting, carding, turning a wheel, teaching languages, &c. Nor are instances wanting of persons who have arrived at the highest pitch of learning, without having the least idea of light. Witness the late famous Nicholas Sanderson, of Cambridge, and my worthy friend Dr. Thomas Blacklock of Edinburgh. The former was one of the first mathematicians of his age, and the latter, besides being a good poet and philosopher, was master of all the learned languages, and a very considerable adept in the liberal arts.

evacuations, as morning sweats, sweating of the feet, the menses in women, and the bleeding piles in men. All kinds of excess are likewise hurtful to the sight, particularly the immoderate use of ardent spirits, and other strong liquors.

In all diseases of the eyes, especially those attended with inflammation, the cool regimen ought to be observed. The patient must abstain from all spirituous liquors. The smoke of tobacco, smoky rooms, the vapours of onions and garlic, and all vivid lights and glaring colours, are carefully to be avoided. The drink may be water, whey, or small-beer, and the aliment must be light and of easy digestion.

For preventing disorders of the eyes, issues and setons are of prime use. Every person, whose eyes are tender, ought to have one or more of these in some part of the body. It will likewise be of use to keep the body gently open, and either to bleed or purge every spring or fall. All excess and night-studies are to be avoided. Such as do not choose a seaton or an issue will reap benefit from wearing a small Burgundy pitch-plaster between their shoulders.

A gutta serena, or amaurosis, is an abolition of the sight, without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from compression of the nerves, by redundant humours, these may in some measure be drained off, and the patient relieved. For this purpose, the body must be kept open with the laxative mercurial pills. If the patient be young, and of a sanguine habit, he may be bled. Cupping with scarification on the back part of the head, will likewise be of use. A running at the nose may be promoted by volatile salts, stimulating powders, &c. But the most likely means for relieving the patient are issues, or blisters kept open for a long time on the neck. I have known these restore sight, even after it had been for a considerable time lost.

Should these fail, recourse must be had to a mercu-

rial salivation; or, what will perhaps answer the purpose better, twelve grains of the corrosive sublimate of mercury may be dissolved in an English pint and a half of brandy, and a table-spoonful of it taken twice a day, drinking half a pint of the decoction of sarsaparilla after it.

A *cataract* is an obstruction of the pupil, by the interposition of some opaque substance, which either diminishes or totally extinguishes the sight. It is generally an opacity of the crystalline humour. In a recent or beginning cataract, the same medicines are to be used as in the gutta serena, and they will sometimes succeed. But when this does not happen, and the cataract becomes firm, it must be couched, or rather extracted. I have resolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly on the eye, and a perpetual blister on the neck.

The *myopia*, or short-sightedness, and the *presbopia*, or seeing only at too great a distance, are disorders which depend on the original figure or structure of the eye, therefore admit of no cure. The inconveniences arising from them may, however, be in some measure remedied by the help of proper glasses. The former requires the aid of a concave, and the latter of a convex glass.

A *strabismus*, or squinting, depends upon an irregular contraction of the muscle of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder, by having their eyes unequally exposed to the light. They may likewise be acquired by imitation from a squinting nurse or play-fellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it is, to contrive a mask for the child to wear, which will only permit him to see in a straight direction.

Spots or specks on the eyes are generally the effect of inflammation, and often appears after the small-pox, the measles, or violent opthalmias. They are very

difficult to cure, and often occasion total blindness If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients; as vitriol, the juice of celandine, &c. When these do not succeed, a surgical operation may be tried; the success of this, however, is always very doubtful.

The *blood-shot* eye may be occasioned by a stroke, a fall, retching, vomiting, violent coughing, &c. I have frequently known it happen to children in the hooping cough. It appears at first like a bit of scarlet, and is afterwards of a livid or blackish colour. This disorder generally goes off without medicine. Should it prove obstinate, the patient may be bled, and have his eyes fomented with a decoction of comphry-roots and elder-flowers. A soft poultice may be applied to the eyes; and the body should be kept open by gentle purgatives.

The *watery* or *weeping eye*, is generally occasioned by a relaxation or weakness of the glandular parts of that organ. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rose-water with white vitriol dissolved in it, &c. Medicines which have a revulsion are likewise proper, as mild purgatives, perpetual blisters on the neck, bathing the feet frequently with luke-warm water, &c.

When this disease proceeds from an obstruction of the lachrymal duct, or natural passage of the tears, it is called a *fistula lachrymalis*, and can ouly be cured by a surgical operation.

OF THE EAR.

The functions of the ear may be injured by wounds, ulcers, or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise, violent colds in the head, fevers, hard wax or other substances, sticking in the cavity of the ear. Deafness is very often the effect of old age, and is incident to most people in the decline of life. Sometimes it is owing to an original fault in the structure or formation of the ear itself. When this is the case, it admits of no cure; and the un-

happy person not only continues deaf, but generally likewise dumb for life.*

When deafness is the effect of wounds or ulcers of the ears, or of old age, it is not easily removed. When it proceeds from cold of the head, the patient must be careful to keep his head warm, especially in the night; he should likewise take some gentle purges, and keep his feet warm, and bathe them frequently in luke-warm water at bed-time. When deafness is the effect of a fever, it generally goes off after the patient recovers.

If it proceeds from dry wax sticking in the ears, it may be softened by dropping oil into them; afterwards they may be syringed with warm milk and water.

If deafness proceeds from dryness of the ears, which may be known by looking into them, half an ounce of the oil of sweet almonds, and the same quantity of liquid opodeldoc, or tincture of asafœtida, may be mixed together, and a few drops of it put into the ear every

* Though those who have the misfortune to be born deaf are generally suffered to continue dumb, and consequently are in a great measure lost to society, yet nothing is more certain than that such persons may be taught not only to read and write, but also to speak and to understand what others says to them. Teaching the dumb to speak, will appear paradoxical, to those who do not consider that the formation of sounds is merely mechanical, and may be taught without the assistance of the ear. This is not only capable of demonstration, but is actually reduced to practice, by the ingenious Mr. Thomas Braidwood, of Edinburgh. This gentleman has, by the mere force of genius and application, brought the teaching of dumb persons to such a degree of perfection, that his scholars are generally more forward in their education, than those of the same age who enjoy all their faculties. They not only read and write with the utmost readiness, but likewise speak, and are capable of holding conversation with any person in the light. What a pity any of the human species should remain in a state of idiotism, who are capable of being rendered as useful and intelligent as others. We mention this, not only from humanity to those who have the misfortune to be born deaf, but also in justice to Mr. Braidwood, whose success has far exceeded all former attempts this way; and indeed, it exceeds imagination itself so far, that no person who his not seen and examined his pupils, can believe what they are capable of. As this gentleman, however willing, is only to teach a few, and as the far greater part of those who are born deaf, cannot afford to attend him it would be an act of great humanity, as well as public utility, to erect an academy for their benefit.

night at bed-time, stopping them afterwards with a little wool or cotton. Some, instead of oil, put a small slice of fat bacon into each ear, which is said to answer the purpose very well. When the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel mixed with spirit of wine, to be dropped into the ear; others, equal parts of Hungary-water and spirit of lavender. Etmuller extols amber and musk; and Brooks says, he has often known hardness of hearing cured by putting a grain or two of musk into the ear with cotton wool. But these and other applications must be varied according to the cause of the disorder.*

Though such applications may sometimes be of service, yet they much oftener fail, and frequently they do hurt. Neither the eyes nor ears ought to be tampered with: they are tender organs, and require a very delicate touch. For this reason, what we should chiefly recommend in deafness is, to keep the head warm. From whatever cause the disorder proceeds, this is always proper; and I have known more benefit from it alone, in the most obstinate cases of deafness, than from all the medicines I ever used.

OF THE TASTE AND SMELL.

Though these senses are not of so great importance to man in a state of society as the sight and hearing, yet, as the loss of them is attended with some inconveniency, they deserve our notice. They are seldom to be restored when lost, which ought to make us very attentive to their preservation, by carefully avoiding

* A gentleman, on whose veracity I can depend, told me, that after using many things to no purpose for an obstinate deafness, he was at last advised, to put a few drops of his own urine warm into his ears every night and morning, from which he received great benefit. It is probable, that a solution of sal ammoniac and water, would produce the same effect.

whatever may in the least prove injurious to them. As there is a very great affinity between the organs of tasting and smelling, whatever hurts the one generally affects the other.

Luxury is highly injurious to these organs. When the nose and palate are frequently stimulated by fragrant and poignant dishes, they soon lose the power of distinguishing tastes and odours with any degree of nicety. Man in a state of nature may perhaps have these faculties as acute as any other animal.

The sense of smelling may be diminished or destroyed by diseases; as the moisture, dryness, inflammation, or suppuration of that membrane, which lines the inside of the nose, commonly called the olfactory membrane; the compression of the nerves which supply this membrane, or some fault of the brain itself at their origin. A defect, or too great a degree of solidity, of the small spungy bones of the upper jaw, the caverns of the forehead, &c. may likewise impair the sense of smelling. It may also be injured by a collection of fœtid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation, and coagulate the sharp serum, may be applied; as the oil of aniseed mixed with fine flour, camphire dissolved in oil of almonds, &c. The vapours of amber, frankincense, gum mastich, and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, morjoram, and aniseed; or a sternutatory of calcined white vitriol; twelve grains of which may be mixed with two ounces of marjoram-water, and filtrated. The steam or vapour of vinegar upon hot iron, received up the nostrils, is likewise of use for softening the mucus, opening obstructions, &c.

If there be an ulcer in the nose, it ought to be dressed with some emollient ointment, to which, if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, it is not to be cured without mercury. In this case, the solution of the corrosive sublimate in brandy may be taken, as directed in the gutta serena. The ulcer ought likewise to be washed with it, and the fumes of cinnabar may be received up the nostrils.

If there be reason to suspect that the nerves which supply the organs of smelling are inert, or want stimulating, volatile salts, strong snuffs, and other things which occasion sneezing, may be applied to the nose. The forehead may likewise be anointed with balsam of Peru, to which may be added a little of the oil of amber.

The taste may be diminished by crusts, filth, mucus, apthæ, pellicles, warts, &c. covering the tongue. It may be depraved by a fault of the saliva, which being discharged into the mouth gives the same sensations as if the food, which the person takes, had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of taste or smelling, than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c. the tongue ought to be scraped, and frequently washed with a mixture of water, vinegar, and honey, or some other detergent. When the saliva is vitiated, which seldom happens, unless in fevers or other diseases, the curing of this disorder is the cure of this symptom. To relieve it, however, in the mean time, the following things may be of use; if there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile. What is called a nidorous taste, arising from nidorous humours, is corrected by the juice of citrons, oranges, and other acids. A salt taste is cured by a plentiful dilution with watery liquors. An acid taste is destroyed by

absorbents, and alkaline salts, as powder of oyster shells, salt of wormwood, &c. &c.

When the sensibility of the nerves, which supply the organs of taste, is diminished, the chewing of horse-radish, or other stimulating substances, will help to recover it.

OF THE TOUCH.

The sense of touching may be hurt by any thing that obstructs the nervous influence, or prevents its being regularly conveyed to the organs of touching; as pressure, extreme cold, &c. It may likewise be hurt by too great a degree of sensibility, when the nerve is not sufficiently covered by the cuticle or scarf skin, or where there is too great a tension of it, or it is too delicate. Whatever disorders the functions of the brain and nerves, hurts the sense of touching. Hence it appears to proceed from the same general causes as palsy and apoplexy, and requires nearly the same method of treatment.

In a stupor, or defect of touching, which arises from an obstruction of the cutaneous nerves, the patient must first be purged; afterwards such medicines as excite the action of the nerves, or stimulate the system, may be used. For this purpose, the spirits of hartshorn, sal volatile, oleosum, horse radish, &c. may be taken inwardly; the disordered parts at the same time may be frequently rubbed with nettles, or spirit of sal ammoniac. Blistering-plasters and sinapisms applied to the parts will likewise be of use, as also warm bathing, especially in the natural hot baths.

The greatest relaxer of the nervous system and what blunts every sense in the strongest degree is intemperance; a drunkard may be literally said to have lost his senses, and even when they return, every debauch increases the debility, till at length there ensues blindness, disease, and death. Excess in eating is no less injurious; it destroys the taste and smell; thus defeating the purposes of two useful senses.

Want of cleanliness is likewise very hurtful to the

organs of sensation, and this evil being in every person's power to remedy there is no excuse for it. Nature has wisely guarded the extremities of the nerves, the interior part of the nose, the eyes, the ear, the mouth, from all external annoyance, and permitted the means, without man's will, of relieving these delicate organs from impurities; and shall we be so shamefully lazy as to refuse the assistance of a very easy manual labour, with a little soap and water, to prevent the dirtiness of our skin, and prevent every inconvenience? Is it too much trouble to dip the face, with the eyes open, four or five times every morning, to wash the ears, to rince the nose, and by a proper and temperate diet to keep the tongue clean? These simple things properly attended to, will be found more conducive to health than a whole Materia Medica.

CHAP. XLV.

OF A SCHIRRUS AND CANCER.

A SCHIRRUS is a hard indolent tumour, generally seated in some of the glands; as the breast, the arm-pits, &c. If the tumour becomes large, unequal, of a livid, blackish, or leaden colour, and is attended with a violent pain, it gets the name of an occult cancer. When the skin is broken, and a sanies or ichorous matter of an abominable fœtid smell is discharged from the sore, it is called an open ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

CAUSES.—This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive fear, grief, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, cho-

leric, and those persons who devote themselves to a religious life in convents or monasteries, are often afflicted with it. It may also be occasioned by the long continued use of food that is too hard of digestion, or of an acrid nature; by barrenness, celibacy, indolence, cold, blows, friction, pressure, or the like. Women often suffer from the last of these, by means of their stays, which squeeze and compress their breast, so as to occasion great mischief. Sometimes the disease is owing to an hereditary disposition.

SYMPTOMS.—This disorder seems often very trifling at the beginning;—a hard tumour, about the size of a hazel nut, or perhaps smaller, is generally the first symptom. This will often continue for a long time without seeming to increase, or giving the patient great uneasiness; but if the constitution be hurt, or the tumour irritated by pressure, or improper treatment of any kind, it begins to extend itself towards the neighbouring parts, by pushing out a kind of roots or limbs. It then gets the name of *cancer*, from a fancied resemblance between these limbs and the claws of a crab. The colour of the skin begins to change, which is first red, afterwards purple, then bluish, livid and at last black. The patient complains of heat, with a burning, gnawing, shooting pain. The tumour is very hard, rough and unequal, with a protuberance or rising in the middle; its size increases daily, and the neighbouring veins become thick, knotty, and of a blackish colour.

The skin at length gives way, and a thin sharp ichor begins to flow, which corrodes the neighbouring parts, till it forms a large unsightly ulcer. More occult cancers arise, and communicate with the neighbouring glands. The pain and stench become intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last, a violent hœmorrhage or discharge of blood from some part of the body, with faintings or convulsion fits, generally put an end to the miserable patient's life.

REGIMEN.—The diet ought to be light, but nourishing. All strong liquors, and high-seasoned or

salted provisions, are to be avoided. The patient may take as much exercise as he can easily bear, and should use every method to divert thought, and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

MEDICINE.—This is one of those diseases for which no certain remedy is yet known. Its progress, however, may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be stopped; but after the disorder has arrived at a certain height, it generally sets all medicine at defiance.

When a schirrus tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a week, a dose of the common purging mercurial pills. Some blood may also be let, and the part affected may be gently rubbed twice a day, with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light, and an English pint of the decoction of woods or sarsaparella may be drank daily. I have sometimes discussed hard tumours, which had the appearance of being cancers, by a course of this kind.

Should the tumour, however, not yield to this treatment, but on the contrary become larger and harder, it will be proper to extirpate it either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted by it. This, however, is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate or relieve the most urgent symptoms may be used. Dr. Home says, that half a grain of the corrosive sublimate of mercury, dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the solanum, or nightshade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hemlock. Dr. Stock, physician at Vienna, has of late recommended the extract of this plant as very efficacious in cancers of every kind. The doctor says, he has given some hundred weights of it without ever hurting any body, and often with manifest advantage. He advises the patient, however, to begin with very small doses, as two or three grains, and to increase the dose gradually till some good effect be perceived, and there to rest without further increase. From two or three grains at first, the doctor says he has increased the dose to two, three, or four, drachms a day, and finds that such doses may be continued for several weeks, without any bad consequences.

The regimen which the doctor recommends during the use of the medicine, is to avoid farinaceous substances not fermented, and too acrid aromatics. He says, good wine will not be hurtful to those who are accustomed to it, nor a moderate use of acids, and adds, that the patient should live in a pure free air, and keep his mind as quiet and cheerful as possible.

The doctor does not pretend to fix the time in which a cancer may be resolved by the use of hemlock, but says, he has given it for above two years in large doses without any apparent benefit, nevertheless the patient has been cured by persisting in the use of it for half a year longer. This is at least encouragement to give it a fair trial. Though we are far from thinking the hemlock merits those extravagant encomiums which the doctor has bestowed upon it, yet in a disease which has so long baffled the boasted

powers of medicine, we think it ought always to be tried.

The powder of hemlock is by some preferred to the extract. They are both made of the fresh leaves, and may be used nearly in the same manner. Dr. Nicholson, of Berwick, says, he gradually increased the dose of the powder from a few grains to half a drachm, and gave near four drachms of it in the day with remarkably good effects. The hemlock may be also used externally, either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops and leaves into it.

Few things contribute more to the healing of foul sordid ulcers of any kind than keeping them thoroughly clean. This ought never to be neglected. The best application for this purpose seems to be the carrot-poultice. The root of the common carrot may be grated, and moistened with as much water as will bring it to the consistence of a poultice or cataplasm. This must be applied to the sore, and renewed twice a day. It generally cleans the sore, eases the pain, and takes away the disagreeable smell, which are objects of no small importance in such a dreadful disorder.*

Wort, or an infusion of malt, has been recommended not only as a proper drink, but as a powerful medicine in this disease. It must frequently be made fresh, and the patient may take it at pleasure. Two, three, or even four, English pints of it may be taken every day for a considerable time. No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects.†

* London Medical Essays.

† In a cancer which had set all medicines, and even surgery, at defiance, I lately saw remarkable effects from an obstinate perseverance in a course of antiseptics. I ordered the deep ulcers to be washed to the bottom by means of a syringe, twice or thrice a day,

When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure the disease, but will ease the patient's agony, and render life more tolerable while it continues.

To avoid this dreadful disorder, people ought to use wholesome food; to take sufficient exercise in the open air; to be as easy and cheerful as possible; and carefully to guard against all blows, bruises, and every kind of pressure upon the breasts, or other glandular parts.*

The cancer is equally a loathsome and painful disease, it kills by inches, and can seldom be cured but by cutting; and even that remedy is not always certain. Tumours in the breast, which might have turned to cancers, have been cured by the camphorated mercurial ointment, applied twice a day, but after the schirrus has broke, it will yield to no remedy, not even the boasted specifics of quackery. These *never-failing* curers of disorders generally send their patients to the grave, as a complete and final remedy for every disease.

either by an infusion of the bark, or a decoction of carrot, and that the patient should take, four or five times a day, a glass of good wine, with half a drachm of the best powdered bark in it. The sores, after being washed, were likewise sprinkled with the same powder. When the patient began this course, her death was daily expected. She continued it for about two years, with manifest advantage; but being told by an eminent surgeon, that the bark would not cure the cancer, and that the sores ought not to be washed, she discontinued the practice, and died in a few weeks. This course was not intended to cure the cancer, but to prolong the patient's life, which it evidently did almost to a miracle.

* As hemlock is the principal medicine recommended in this disease, we would have given some directions for the gathering and preparing of that plant; but as its different preparations are now kept in the shops, we think it much safer for people to get them there, with proper directions for using them.

CHAP. XLVI.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily, indeed, no great degree of medical knowledge is necessary; the remedies for most poisons being generally at hand, or easily obtained, and nothing but common prudence needful in the application of them.

The vulgar notion that every poison is cured by some counter-poison, as a specific, has done much hurt. People believe that they can do nothing for the patient, unless they know the particular antidote to that poison, which he has taken. Whereas the cure of all poisons taken into the stomach, without exception, depends chiefly on discharging them as soon as possible.

There is no case wherein the indications of cure are more obvious. Poison is seldom long on the stomach before it occasions sickness, with an inclination to vomit. This shews plainly what ought to be done. Indeed, common sense dictates to every one, that, if any thing has been taken into the stomach which endangers life, it ought immediately to be discharged. Were this duly regarded, the dangers arising from poisons might generally be avoided. The method of prevention is obvious, and the means are in the hands of every one.

We shall not take up the reader's time with a detail of the ridiculous notions, which have prevailed among ignorant people in different ages with regard to poison; neither shall we mention the boasted antidotes, which have been recommended either for preventing or obvi-

ating their effects; but shall content ourselves with pointing out the poisons most common in this country, and the means of avoiding their dangerous consequences.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, cobalt, the corrosive sublimate of mercury, &c.

Those of the vegetable kind are generally of a narcotic or stupefactive quality: as poppy, hemlock, henbane, berries of the deadly nightshade, &c.

Poisonous animals communicate their infection either by the bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

MINERAL POISONS.—Arsenic is the most common of this class; and as the whole of them are pretty familiar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has taken arsenic, he soon perceives a burning heat, and a violent pricking pain in his stomach and bowels, with an intolerable thirst, and an inclination to vomit. The tongue and throat feel rough and dry: and if proper means be not soon administered, the patient is seized with great anxiety, hiccupping, faintings, and coldness of the extremities. To these succeed black vomits, fœtid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms, the patient should drink large quantities of new milk and salad oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the vomiting ceased, and it is never safe to leave off

Poisonous Herbs

Hemlock

Henbane

Nightshade

Wolfsbane

drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of the poison, and preventing its wounding the bowels; but if they should not make the person vomit, half a drachm or two scruples of powder of ipecacuanha must be given, or a few spoonfuls of the oxymel or vinegar of squills may be mixed with the water which he drinks. Vomiting may likewise be excited by tickling the inside of the throat with a feather. Should these methods, however, fail, half a drachm of white vitriol, or five or six grains of emetic tartar, must be administered.

If tormenting pains are felt in the lower belly, and there is reason to fear that poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up, and the patient must drink emollient decoctions of barley, oatmeal, marsh-mallows, and such like. He must likewise take an infusion of senna and manna, a solution of Glauber's salts, or some other purgative.

After the poison has been evacuated, the patient ought for some time to live upon such things as are of a healing and cooling quality; to abstain from flesh and all strong liquors, and to live upon milk, broth, gruel, light puddings, and other spoon-meats of easy digestion. His drink should be barley-water, linseed tea, or infusions of any of the mild mucilaginous vegetables.

VEGETABLE POISONS, besides heat and pain of the stomach, commonly occasion some degree of giddiness, and often a kind of stupidity or folly. Persons who have taken these poisons must be treated in the same manner as for the mineral or corrosive.

Though the vegetable poisons, when allowed to remain in the stomach, often prove fatal; yet the danger is generally over as soon as they are discharged. Not being of such a caustic or corrosive nature, they are less apt to wound or inflame the bowels than mineral substances. No time, however, ought to be lost in having them discharged.

Opium, being frequently taken by mistake, merits particular attention. It is used in medicine both in a solid and liquid form, which latter commonly goes by the name of laudanum. It is, indeed, a valuable medicine when taken in proper quantity; but as an over dose proves a strong poison, we shall point out its common effects, together with the method of cure,

An over dose of opium generally occasions great drowsiness, with stupor and other apoplectic symptoms. Sometimes the person has so great an inclination to sleep, that it is almost impossible to keep him awake. Every method, however, must be tried for this purpose. He should be tossed, shaked, and moved about. Sharp blistering-plasters should be applied to his legs or arms, and stimulating medicines, as salts of hartshorn, &c. held under his nose. It will also be proper to let blood; at the same time every method must be taken to make him discharge the poison. This may be done in the manner directed above, viz. by the use of strong vomits, drinking plenty of warm water, with oil, &c.

Mead, besides vomits, in this case recommends acid medicines, with lixivial salts. He says, that he has often given salt of wormwood mixed with juice of lemons in repeated doses with great success.

If the body should remain weak and languid after the poison has been discharged, nourishing diet and cordials will be proper; but when there is reason to fear that the stomach or bowels are inflamed, the greatest circumspection is necessary both with regard to food and medicine.

OF THE BITES OF POISONOUS ANIMALS.

We shall begin with the bite of a mad dog, as it is both the most common and dangerous animal-poison in this country.

The creatures naturally liable to contract this disease are, as far as we yet know, all of the dog kind, viz. foxes, dogs, and wolves. Hence it is called the *rabies*

canina, or dog-madness. Of the last we have none in this island; and it so seldom happens, that any person is bit by the first, that they scarce deserve to be taken notice of. If such a thing should happen, the method of treatment is precisely the same as for the bite of a mad dog.

The symptoms of madness in a dog are as follow: at first he looks dull, shows an aversion to food and company: he does not bark as usual, but seems to murmur, is peevish, and apt to bite strangers: his ears and tail droop more than usual, and he appears drowsy: afterwards he begins to loll out his tongue, and froth at the mouth, his eye seeming heavy and watery: he now, if not confined, takes off, runs panting along with a kind of dejected air, and endeavours to bite every one he meets. Other dogs are said to fly from him. Some think this a certain sign of madness, supposing that they know him by the smell; but it is not to be depended on. If he escapes being killed, he seldoms runs above two or three days, till he dies exhausted with heat, hunger, and fatigue.

This disease is most frequent after long, dry, hot, seasons: and such dogs as live upon putrid stinking carrion, without having enough of fresh water, are liable to it.

When any person has been bit by a dog the strictest inquiry ought to be made whether the animal was really mad. Many disagreeable consequences arise from neglecting to ascertain this point. Some people have lived in continual anxiety for many years, because they had been bit by a dog, which they believed to be mad: but, as he had been killed on the spot, it was impossible to ascertain the fact. This should induce us, instead of killing the dog the moment he has bit any person, to do all in our power to keep him alive, at least till we can be certain whether he be mad or not.

Many circumstances may contribute to make people imagine a dog mad. He loses his master, runs about in quest of him, is set upon by other dogs, and perhaps by men. The creature, thus frightened,

beat, and abused, looks wild, and lolls out his tongue as he runs along. Immediately a crowd is after him; while he, finding himself closely pursued, and taking every one he meets for an enemy, naturally attempts to bite them in self-defence. He soon gets knocked on the head, and it passes currently that he was mad, and it is then impossible to prove the contrary.

This being the true history of by far the greater part of those dogs who pass for mad, is it any wonder that numberless whimsical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almost every family. Though not one in a thousand has any claim to merit, yet they are all supported by numberless vouchers. No wonder that imaginary diseases should be cured by imaginary remedies. In this way credulous people first impose upon themselves, and then deceive others. The same medicine which was supposed to prevent the effects of the bite, when the dog was not mad, is recommended to a person who has had the misfortune to be bit by a dog that was really mad. He takes it, trusts to it, and is undone.

To these mistakes we must impute the frequent ill success of the medicines, used for preventing the effects of the bite of a mad dog. It is not owing so much to a defect in medicine, as to wrong applications. I am persuaded, if proper medicines were administered immediately after the bite is received, and continued for a sufficient length of time, we should not lose one in a thousand of those who have the misfortune to be bit by a mad dog.

This poison is generally communicated by a wound, which nevertheless heals as soon as a common wound; but afterwards it begins to feel painful, and as the pain spreads towards the neighbouring parts, the person then becomes heavy and listless. His sleep is unquiet, with frightful dreams; he sighs, looks dull, and loves solitude. These are the forerunners, or rather the first symptoms of that dreadful disease occasioned by the bite of a mad dog. But as we do not propose to treat fully

of the disease itself, but to point out the method of preventing it, we shall not take up time in shewing its progress, from the first invasion, to its commonly fatal end.

The common notion that this poison may lie in the body for many years, and afterwards prove fatal, is both hurtful and ridiculous. It must render such persons as have had the misfortune to be bit very unhappy, and can have no good effect. If the person takes proper medicines for forty days after the time of his being bit, and feels no symptom of the disease, there is reason to believe him out of danger.

The medicines recommended for preventing the effects of a bite of a mad dog, are chiefly such as promote the different secretions and antispasmodics.

Dr. Mead recommends a preventive medicine, which he says he never knew fail, though in the space of thirty years, he had used it a thousand times.

The doctor's prescription is as follows:—

"Take ash-coloured ground liver-wort, cleaned, dried, and powdered, half an ounce; of black pepper powdered, a quarter of an ounce. Mix these well together, and divide the powder into four doses; one of which must be taken every morning fasting, for four mornings successively, in half an English pint of cow's milk warm.

"After these four doses are taken, the patient must go into the cold bath, or a cold spring or river, every morning fasting, for a month; he must be dipped all over, but not stay in (with his head above water) longer than half a minute, if the water be very cold: after this he must go in three times a week for a fortnight longer.

"The person must be bled before he begins to use the medicine."*

We shall next mention the famous East-India speci-

* Though we give this prescription on the credit of Dr. Mead, yet we would not advise any person, who has reason to believe that he has been bit by a dog which was really mad, to trust to it alone. Mead was an able physician; but he seems to have been no great philosopher, and was sometimes the dupe of his own credulity.

fic, as it is called. This medicine is composed of cinnabar and musk. It is esteemed a great antispasmodic; and by many extolled as an infallible remedy for preventing the effects of the bite of a mad dog.

"Take native or fictitious cinnabar, of each twenty-four grains, musk sixteen grains. Let these be made into a fine powder, and taken in a glass of fine arrack or brandy."

This single dose is said to secure the person for thirty days, at the end of which it must be repeated; but if he has any symptoms of the disease, it must be repeated in three hours.

The following is likewise reckoned a great antispasmodic medicine :—

"Take of Virginian snake root in powder, half a drachm, gum asafœtida, twelve grains, gum camphire, seven grains; make these into a bolus with a little syrup of saffron.

Camphire may also be given in the following manner;

"Take purified nitre half an ounce, Virginian snake root in powder two drams, camphire one dram; rub them together in a mortar, and divide the whole into ten doses."

Mercury is likewise recommended as of great efficacy both in the prevention and cure of this kind of madness. When used as a preventive, it will be sufficient to rub daily a dram of the ointment into the parts about the wound.

Vinegar is likewise of considerable service, and should be taken freely, either in the patient's food or drink.

These are the principal medicines recommended for preventing the effects of the bite of a mad dog. We would not, however, advise people to trust to any one of them; but from a proper combination of their different powers, there is the greatest reason to hope for success.

The great error in the use of these medicines lies in not taking them for a sufficient length of time. They are used more like charms than medicines intended to produce any change in the body. To this, and not to the insufficiency of the medicines, we must impute their frequent want of success.

Dr. Mead says, that the virtue of this medicine consists in promoting urine. But how a poison should be expelled by urine, with only three or four doses of any medicine, however powerful, is not easy to conceive. More time is certainly necessary, even though the medicine were more powerful than that which the doctor prescribes.

The East-India specific is still more exceptionable on this account.

As these and most other medicines, taken singly, have frequently been found to fail, we shall recommend the following course:

If a person be bit in a fleshy part, where there is no hazard of hurting any large blood vessel, the parts adjacent to the wound may be cut away. But if this be not done soon after the bite has been received, it will be better to omit it.

The wound may be dressed with salt and water, or a pickle made of vinegar and salt, and afterwards dressed twice a day with yellow basilicon mixed with red precipitate of mercury.

The patient should begin to use either Dr. Mead's medicine, or some of the others mentioned above. If he takes Mead's medicine, he may use it, as the doctor directs, for four days successively. Let him then omit it for two or three days, and again repeat the same number of doses as before.

During this course he must rub into the parts about the wound, daily, one dram of the mercurial ointment. This may be done for ten or twelve days at least.

When this course is over, he may take a purge or two, and wait a few days till the effect of the mercury be gone off. He must then begin to use the cold bath, into which he may go every morning for five or six weeks. If he should feel cold or chilly for a long time after coming out of the cold bath, it will be better to use a tepid one, or to have the water a little warm.

In the mean time we would advise him not to leave off all internal medicines, but to take either one of

the bolusses of snake root, asafœtida, and camphire; or one of the powders of nitre, camphire, and snake root, twice a day. This may be used the whole time that he is bathing.

During the use of the mercurial ointment, the patient must keep within doors, and take nothing cold.

A proper regimen must be observed throughout the whole course. The patient should abstain from flesh, and all salted and high seasoned provisions. He must avoid strong liquors, and live mostly upon a light and rather spare diet. His mind should be kept as easy and cheerful as possible, and all excessive heat and violent passions avoided with the utmost care.

I have never seen this course of medicine with proper regimen fail to prevent hydrophobia; and cannot help again observing, that the want of success must generally be owing either to the application of improper medicines, or not using proper ones for a sufficient length of time.

Mankind are extremely fond of every thing that promises a sudden or miraculous cure. By trusting to these they often lose their lives, when a regular course of medicine would have rendered them absolutely safe. This holds remarkably, in the present case. Numbers of people, for example, believe if they or their cattle be once dipped in the sea, it is sufficient; as if the salt-water were a charm against the effects of the bite. This, and such like whims, have proved fatal to many.

It is a common notion, if a person be bit by a dog which is not mad, that if he should go mad afterwards, the person would be affected with the disorder at the same time; but this notion is too ridiculous to deserve a serious consideration. It is a good rule, however, to avoid all dogs as much as possible, as the disease is often upon them for some time before its violent symptoms appear. The hydrophobia has been occasioned by the bite of a dog which shewed no other symptoms of the disease but listlessness and a sullen disposition.

Though we do not mean to treat fully of the cure of the hydrophobia, yet we are far from reckoning it incurable. The notion that this disease could not be cured, has been productive of the most horrid consequences. It was usual either to abandon the unhappy persons, as soon as they were seized with the disease, to their fate, to bleed them to death, or to suffocate them between mattresses or feather-beds, &c. This conduct certainly deserved the severest punishment We hope, for the honour of human nature, it will never again be heard of.

I have never had an opportunity of treating this disease, and therefore can say nothing of it from my own experience; but the learned Dr. Tissot says, it may be cured in the following manner:

1. The patient must be bled to a considerable quantity; and this may be repeated twice, or thrice, or even a fourth time, if circumstances require it.

3. The patient should be put, if possible, into a warm bath; and this should be used twice a-day.

3. He should every day receive two, or even three, emollient clysters.

4. The wound, and the parts adjoining to it, should be rubbed with the mercurial ointment twice a-day.

5. The whole limb which contains the wound should be rubbed with oil, and be wrapped in an oily flannel.

6 Every three hours a dose of Cob's powder should be taken in a cup of the infusion of lime-tree and elder flowers. This powder is made by rubbing together in a mortar, to a very fine powder, of native and fictitious cinnabar, each twenty-four grains; of musk, sixteen grains.*

7. The following bolus is to be given every night, and to be repeated in the morning, if the patient be not

* The Ormskirk medicine, as it is called, seems to me to consist chiefly of cinnabar. Though it is said to be infallible as a preventive, yet I would not advise any one to trust to it alone. Indeed, it is ordered to be taken in a manner which gives it more the appearance of a charm than of a medicine. Surely, if a medicine is to produce any change in the body, it must be taken for some considerable time, and in sufficient quantity.

easy, washing it down with the infusion mentioned above; take one drachm of Virginian snake root in powder; of camphire and asafœtida, ten grains each; of opium, one grain; and with a sufficient quantity of conserve, or rob of elder, make a bolus.

8. If there be a great nausea at the stomach, with a bitterness in the mouth, thirty-five or forty grains of ipecacuanha, in powder, may be taken for a vomit.

9. The patient's food, if he takes any, must be light; as panado, soups made of farinaceous or mealy vegetables, &c.

10. If the patient should long continue weak, and subject to terrors, he may take half a drachm of the Peruvian Bark thrice a-day.

The next poisonous animal which we shall mention is the VIPER. The grease of this animal, rubbed into the wound, is said to cure the bite. Though that is all the viper-catchers generally do when bit, we should not think it sufficient for the bite of an enraged viper. It would surely be more safe to have the wound well sucked,* and afterwards rubbed with warm salad-oil.

A poultice of bread and milk, softened with salad-oil, should likewise be applied to the wound; and the patient ought to drink freely of vinegar-whey, or water-gruel with vinegar in it, to make him sweat. Vinegar is one of the best medicines which can be used in any kind of poison, and ought to be taken very liberally. If the patient be sick, he may take a vomit. This course will be sufficient to cure the bite of any of the poisonous animals of this country.

With regard to poisonous insects, as the bee, the wasp,

* The practice of sucking out poisons is very ancient; and indeed nothing can be more ratioaal. Where the bite cannot be cut out, this is the most likely way of extracting the poison. There can be no danger in performing this office, as the poison does no harm, unless it be taken into the body by a wound. The person who sucks the wound ought, however, to wash his mouth frequently with salad-oil, which will secure him from even the least inconveniency. The Psylli in Africa, and the Marsi in Italy, were famed for curing the bites of poisonous animals, by sucking the wound; and we are told, that the Indians in North America practise the same at this day.

the hornet, &c. their stings are seldom attended with danger, unless when a person happens to be stung by a great number of them at the same time; in which case, something should be done to abate the inflammation and swelling. Some, for this purpose, apply honey; others lay pounded parsley to the part. A mixture of vinegar and Venice treacle is likewise recommended; but I have found rubbing the part with warm salad-oil succeed very well. Indeed, when the stings are so numerous as to endanger the patient's life, which is sometimes the case, he must not only have oily poultices applied to the part, but should likewise be bled, and take some cooling medicines, as nitre or cream of tartar, and should drink plentifully of diluting liquors.

It is the happiness of this island to have very few poisonous animals, and those which we have are by no means of the most virulent kind. Nine-tenths of the effects attributed to poison or venom in this coun try, are really other diseases, and proceed from quite different causes.

We cannot, however, make the same observation with regard to poisonous vegetables. These abound every where, and often prove fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit, roots, or berries, which they do not know; and all poisonous plants to which they can have access, ought, as far as possible, to be destroyed. This would not be so difficult a task as some people imagine

Poisonous plants have no doubt their use, and they ought to be propagated in proper places: but, as they prove often destructive to cattle, they should be rooted out of all pasture-grounds. They ought likewise, for the safety of the human species, to be destroyed in the neighbourhood of all towns and villages, which, by the bye, are the places where they most commonly abound. I have seen the poisonous hemlock, henbane, wolfsbane, and deadly nightshade, all growing within the environs of a small town, where, though several persons, within the memory of those living in it, had lost their lives by

one or other of these plants, yet no method that I could hear of, had ever been taken to root them out; though this might be done at a very trifling expense.

Seldom a year passes but we have accounts of several persons poisoned by eating hemlock-roots, instead of parsnips, or some kinds of fungus which they had gathered for mushrooms. These examples ought to put people upon their guard with respect to the former, and to put the latter entirely out of use. Mushrooms may be a delicate dish, but they are a dangerous one, as they are generally gathered by persons who do not know one kind of fungus from another, and take every thing for a mushroom which has that appearance.

We might here mention many other plants and animals of a poisonous nature which are found in foreign countries; but as our observations are chiefly intended for this island, we shall pass these over. It may not, however, be amiss to observe, for the benefit of such of our countrymen, as go to America, that an effectual remedy is now said to be found for the benefit of the rattlesnake. The prescription is as follows—Take of the roots of plantain and horehound, in summer, roots and branches together, a sufficient quantity; bruise them in a mortar, and squeeze out the juice, of which give, as soon as possible, one large spoonful: if the patient be swelled, you must force it down his throat. This generally will cure; but if he find no relief in an hour after, you may give another spoonful, which never fails. If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum.

We give this upon the faith of Dr. Brookes, who says it was the invention of a negro, for the discovery of which he had his freedom purchased, and a hundred pounds per annum settled upon him during life, by the General Assembly of Carolina.

It is possible there may be in nature specific remedies for every kind of poison; but as we have very little faith in any of those which have yet been pretended to be discovered, we shall beg leave again to recommend

the most strict attention to the following rules, viz. that when any poisonous substance has been taken into the stomach, it ought, as soon as possible, to be discharged by vomits, clysters, and purges; and, when poison has been received into the body by a wound, that it be expelled by medicines which promote the different secretions, especially those of sweat, urine, and insensible perspiration; to which may be joined antispasmodics, or such medicines as take off tension and irritation; the chief of which are opium, musk, camphire, and asafœtida.

CHAP. XLVII.

OF THE VENEREAL DISEASE.

IN the first edition of this book, the venereal disease was omitted. The reasons, however, which at that time induced me to leave it out, have, upon more mature consideration, vanished. Bad consequences, no doubt, may arise from ignorant persons tampering with medicine in this disorder; but the danger from that quarter seems to be more than balanced by the great and solid advantages which must arise to the patient from an early knowledge of his case, and an attention to a plan of regimen, which, if it does not cure the disease, will be sure to render it more mild and less hurtful to the constitution.

It is peculiarly unfortunate for the unhappy persons who contract this disease, that it lies under a sort of disgrace. This renders disguise necessary, and makes the patient either conceal his disorder altogether, or apply to those who promise a sudden and secret cure, but who, in fact, only remove the symptoms for a time, while they fix the disease deeper in the habit. By this means a slight infection, which might have been easily removed, is often converted into an obstinate, and sometimes incurable, malady.

Another unfavourable circumstance attending this

disease is, that it assumes a variety of different shapes, and may with more propriety be called an assemblage of diseases, than a single one. No two diseases can require a more different method of treatment than this does in its different stages. Hence the folly and danger of trusting to any particular nostrum for the cure of it. Such nostrums are, however, generally administered in the same manner to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances of the utmost importance.

Though the venereal disease is generally the fruit of unlawful embraces, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives, by not being aware of their danger in due time. The unhappy conditions of such persons will certainly plead our excuse, if any excuse be necessary, for endeavouring to point out the symptoms and cure of this too common disease.

To enumerate all its different symptoms, however, and to trace the disease minutely through its various stages, would require a much larger space than falls to this part of my subject; I shall therefore confine my observations chiefly to circumstances of importance, omitting such as are either trifling, or which occur but seldom. I shall likewise pass over the history of the disease, with the different methods of treatment which it has undergone since it was first introduced into Europe, and many other circumstances of a similar nature; all of which, though they might tend to amuse the reader, yet could afford him little or no useful knowledge.

OF THE VIRULENT GONORRHŒA.

The virulent gonorrhœa is an involuntary discharge of infectious matter from the parts of generation in either sex. It generally makes its appearance within eight or ten days after the infection has been received:

sometimes indeed it appears in two or three days, and at other times not before the end of four or five weeks Previous to the discharge, the patient feels an itching, with a small degree of pain in the genitals. Afterwards a thin glary matter begins to distil from the urinary passage, which stains the linen, and occasions a small degree of titillation, particularly at the time of making water; this, gradually increasing, arises at length to a degree of heat and pain, which are chiefly perceived about the extremity of the urinary passage, where a slight degree of redness and inflam mation likewise begin to appear.

As the disorder advances, the pain, heat of urine, and running, increase, while fresh symptoms daily ensue. In men, the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is more troublesome when the patient is warm in bed. The pain which was at first only perceived toward the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the colour of seed, grows yellow, and at length puts on the appearance of matter.

When the disorder has arrived at its height, all the symptoms are more intense; the heat of the urine is so great, that the patient dreads making water; and though he feel a constant inclination this way, yet it is rendered with the greatest difficulty, and often by drops; the involuntary erections now become extremely painful, and frequent; there is also a pain, heat, and sense of fulness about the seat and the running is plentiful and sharp, of a brown, greenish, and sometimes of a bloody colour.

By a proper treatment the violence of the symptoms gradually abates; the heat of the urine goes off, the involuntary and painful erections, and the heat and pain about the seat, become easier; the running also gradually decreases, grows whiter and thicker, till at last it entirely disappears.

By attending to these symptoms, the gonorrhœa may

be generally distinguished from any other disease. There are, however, some few disorders for which it may be mistaken, as an ulcer in the kidneys or bladder, the fluor albus, or whites, in women, &c. But, in the former of these, the matter comes away only with the urine, or when the sphincter of the bladder is open; whereas in a gonorrhœa the discharge is constant. The latter is more difficult to distinguish, and must be known chiefly from its effects, as pain, communicating the infection, &c.

REGIMEN.—When a person has reason to suspect that he has caught the venereal infection, he ought most strictly to observe a cooling regimen, to avoid every thing of a heating nature, as wines, spirituous liquors, rich sauces, salted, high seasoned, and smoke-dried, provisions, &c. as also aromatic and stimulating vegetables, as onions, garlic, shalot, nutmeg, mustard, cinnamon, mace, ginger, and such like. His food ought chiefly to consist of mild vegetables, milks, broths, light puddings, panado, gruels, &c. His drink may be barley-water, milk and water, decoctions of marshmallows and liquorice, linseed-tea, or clear whey. Of these he ought to drink plentifully. Violent exercise of all kinds, especially riding on horseback, and venereal pleasures, are to be avoided. The patient must beware of cold, and when the inflammation is violent, he ought to keep his bed.

MEDICINE.—A virulent gonorrhœa cannot always be cured speedily and effectually at the same time. The patient ought therefore not to expect, nor the physician to promise it. It will often continue for two or three weeks, and sometimes for five or six, even where the treatment has been very different.

Sometimes, indeed, a slight infection may be carried off in a few days, by bathing the parts in warm milk and water, and injecting frequently up the urethra a little sweet oil, or linseed-tea, about the warmth of new milk. Should these not succeed in carrying off the infection, they will, at least, have a tendency to lessen its virulence.

To effect a cure, however, astringent injections will generally be found necessary. This may be various ways prepared, but I think those made with the white vitriol are both more safe and efficacious. They can be made stronger or weaker, as circumstances may require; but it is best to begin with the most gentle, and increase their power if necessary. I generally order a dram of white vitriol to be dissolved in eight or nine ounces of common or rose water, and an ordinary syringe-full of it to be thrown up three or four times a-day. If this quantity does not perform a cure, it may be repeated, and the dose increased.*

Whether injections be used or not, cooling purges are always proper in the gonorrhœa. They ought not, however, to be of a strong or drastic kind. Whatever raises a violent commotion in the body, increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second, will generally be sufficient to remove the inflammatory symptoms, to diminish the running, and to change the colour and consistence of the matter, which gradually becomes more white and ropy as the virulence abates.†

* Although it is now very common to cure the gonorrhœa by astringent injections, there are still many practitioners who do not approve this mode of practice. I can, however, from much experience, assert, that it is both the most easy, elegant, and efficacious, method of cure; and that any bad consequences arising from it must be owing to the ignorance or misconduct of the practitioner himself, and not the remedy. Many, for example, use strong preparations of lead, all of which are dangerous, when applied to the internal surfaces of the body; others use escharotics, which inflame and injure the parts. I have known a gonorrhœa actually cured by an injection made of green tea, and would always recommend gentle methods, where they will succeed.

† If the patient can swallow a solution of salts and manna, he may take six drams; or if his constitution requires it, an ounce of the former, with half an ounce of the latter. These may be dissolved in an English pint of boiling water, whey, or thin water gruel, and taken early in the morning.

If an infusion of sena and tamarinds be more agreeable, two drams of the former, and an ounce of the latter, may be infused all

When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient, and the vehemence and urgency of the symptoms.

Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For this purpose an ounce of nitre and two ounces of gum-arabic, pounded together, may be divided into twenty-four doses; one of which may be taken frequently in a cup of the patient's drink. If these should make him pass his urine so often as to become troublesome to him, he may either take them less frequently, or leave out the nitre altogether, and take equal parts of gum-arabic and cream of tartar. These may be pounded together, and a tea-spoonful taken in a cup of the patient's drink four or five times a-day. I have generally found this answer extremely well, both as a diuretic, and for keeping the body gently open.

When the pain and inflammation are seated high, towards the neck of the bladder, it will be proper frequently to throw up an emollient clyster, which, besides the benefit of procuring stools, will serve as a fomentation to the inflamed parts.

Soft poultices, when they can conveniently be applied to the parts, are of great service. They may be made of the flour of linseed, or of wheat-bread and

night in an English pint of boiling water. The infusion may be strained next morning, and half an ounce of Glauber's salts dissolved in it. A tea-cupful of this infusion may be taken every half hour till it operates.

Should the patient prefer an electuary, the following will be found to answer very well. Take of the lenitive electuary four ounces, cream of tartar two ounces, jalap in powder two drams, rhubarb one dram, and as much of the syrup of pale roses as will serve to makeup the whole into a soft electuary. Two or three tea spoonsful of this may be taken over night, and about the same quantity next morning, every day that the patient chooses to take a purge.

The doses of the above medicines may be increased or diminished, according as the patient finds it necessary. We have ordered the salts to be dissolved in a large quantity of water, because it renders their operation more mild.

milk, softened with fresh butter or sweet oil. When poultices cannot be conveniently used, cloths wrung out of warm water, or bladders filled with warm milk and water, may be applied. I have often known the most excruciating pains, during the inflammatory state of the gonorrhœa, relieved by one or other of these applications.

Few things tend more to keep off inflammation in the spermatic vessels, than a proper truss for the scrotum. It ought to be so contrived as to support the testicles, and should be worn from the first appearance of the disease, till it has ceased some weeks.

The above treatment will sometimes remove the gonorrhœa so quickly, that the person will be in doubt whether he really laboured under that disease. This, however, is too favourable a turn to be often expected. It more frequently happens, that we are able only to procure an abatement or remission of the inflammatory symptoms, so far as to make it safe to have recourse to the great antidote mercury.

Many people, on the first appearance of a gonorrhœa, fly to the use of mercury. This is a bad plan. Mercury is often not at all necessary in a gonorrhœa: and when taken too early, it does mischief. It may be necessary to complete the cure, but can never be proper at the commencement of it.

When bleeding, purging, fomentations, and the other things recommended as above, have eased the pain, softened the pulse, relieved the heat of urine, and rendered the involuntary erections less frequent, the patient may begin to use mercury in any form that is least disagreeable to him.

If he takes the common mercurial pill, two at night and one in the morning will be a sufficient dose at first. Should they affect the mouth too much, the dose must be lessened; if not at all, it may be gradually increased to five or six pills in the day. If calomel be thought preferable, two or three grains of it formed into a bolus, with a little of the conserve of

hips, may be taken at bed-time, and the dose gradually increased to eight or ten grains. One of the most common preparations of mercury now in use is the corrosive sublimate. This may be taken in the manner afterwards recommended under the confirmed lues or pox. I have always found it one of the most safe and efficacious medicines when properly used.

The above medicines may either be taken every day, or every other day, as the patient is able to bear them. They ought never to be taken in such quantity as to raise a salivation, unless in a very slight degree. The disease may be more safely, and as certainly cured, without a salivation as with it. When the mercury runs off by the mouth, it is not so successful in carrying off the disease, as when it continues longer in the body, and is discharged gradually.

Should the patient be purged or griped in the night by the mercury, he must take an infusion of senna, or some other purgative, and drink freely of water-gruel to prevent bloody stools, which are very apt to happen should the patient catch cold, or if the mercury has not been duly prepared. When the bowels are weak, and the mercury is apt to gripe or purge, these disagreeable consequences may be prevented by taking, with the above pills or bolus, half a drachm or two scruples of diascordium, or the Japonic confection.

To prevent the disagreeable circumstance of the mercury's affecting the mouth too much, or bringing on a salivation, it may be combined with purgatives. With this view the laxative mercurial pill has been contrived, the usual dose of which is half a drachm or three pills, night and morning, to be repeated every other day: but the safer way is for the patient to begin with two, or even with one pill, gradually increasing the dose.

To such persons, as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum arabic, which not only serves this purpose, but

likewiseprevents the mercury from affecting themouth, and renders it in many respects a better medicine.*

It happens very fortunately for those who cannot be brought to take mercury inwardly, and likewise for persons whose bowels are too tender to bear it, that an external application of it will answer equally well, and in some respects better. It must be acknowledged that mercury, taken inwardly for any length of time, greatly weakens and disorders the bowels; for which reason, when a plentiful use of it becomes necessary, we would prefer rubbing, to the mercurial pills. The common mercurial or blue ointment will answer very well. Of that which is made by rubbing together equal quantities of hog's lard and quicksilver, about a drachm may be used at a time. The best time for rubbing it on is at night, and the most proper place the inner side of the thighs. The patient should stand before the fire when he rubs, and should wear flannel-drawers next his skin, at the time he is using the ointment. If ointment of a weaker or stronger kind be used, the quantity must be increased or diminished in proportion.

If, during the course of the ointment, the inflammation of the genital parts, together with the heat and feverishness, should return, or if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of Glauber's salts, or some other cooling purge, may be taken, and the rubbing intermitted for a few days. As soon, however, as the signs of spitting, are gone off, if the virulency be not quite corrected, the ointment must be repeated, but in smaller quantities, and at longer intervals than before. Whatever way mercury is administered, its use may be persisted in as long as any virulency is suspected to remain.

* Take quicksilver one drachm, gum arabic reduced to a mucilage two drachms; let the quicksilver be rubbed with the mucilage in a marble mortar, until the globules of mercury entirely disappear; afterwards add gradually, still continuing the trituration, half an ounce of balsamic syrup, and eight ounces of simple cinnamon-water. Two table-spoonfuls of this solution may be taken night and morning. Some reckon this the best form in which quicksilver can be exhibited for the cure of a gonorrhœa.

During this, which may be called the second stage of the disorder, though so strict a regimen is not necessary as in the first or inflammatory state, yet intemperance of every kind must be avoided. The food must be light, plain, and of easy digestion; and the greatest indulgence that may be allowed with respect to drink, is a little wine diluted with a sufficient quantity of water. Spirituous liquors are to be avoided in every shape. I have often known the inflammatory symptoms renewed and heightened, the running increased, and the cure rendered extremely difficult and tedious, by one fit of excessive drinking.

When the above treatment has removed the heat of urine, and soreness of the genital parts, when the quantity of running is considerably lessened, without any pain or swelling in the groin or testicle supervening, when the patient is free from involuntary erections, and, lastly, when the running becomes pale, whitish, thick, void of ill smell, and tenacious or ropy; when all or most of these symptoms appear, the gonorrhœa is arrived at its last stage, and we may gradually proceed to treat it as a gleet, with astringent and agglutinating medicines.

OF GLEETS.

A gonorrhœa frequently repeated, or improperly treated, often ends in a gleet, which may either proceed from a relaxation, or from some remains of the disease. It is, however, of the greatest importance in the cure of the gleet, to know from which of these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect it is owing to the latter; but if the drain is inconstant, and is chiefly observable when the patient is stimulated by lascivious ideas, or upon straining to go to stool, we may reasonably conclude, that it is chiefly owing to the former.

In the cure of a gleet proceeding from relaxation, the principal design is to brace and restore a proper degree of tension to the debilitated and relaxed vessels.

For this purpose, besides the medicines recommended in the gonorrhœa, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark,* alum, vitriol, gall, tormentil, bistort, balaustines, tincture of gum kino, &c. The injections may be rendered more astringent, by the addition of a few grains of alum, or increasing the quantity of vitriol as far as the parts are able to bear it.

The last remedy which we shall mention in this case, is the cold bath, in which perhaps there is not a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet, unless there be something in the constitution of the patient which renders the use of it unsafe. The chief objections to the use of the cold bath are, a full habit, and an unsound state of the viscera. The danger from the former may always be lessened, if not removed, by purging and bleeding; but the latter is an insurmountable obstacle, as the pressure of the water, and the sudden contraction of the external vessels, by throwing the blood with too much force upon the internal parts, are apt to occasion ruptures of the vessels, or a flux of humours upon the diseased organs. But where no objection of this kind prevails, the patient ought to plunge over head in water every morning fasting, for three or four weeks together. He should not, however, stay long in the water, and should take care to have his skin dried as soon as he comes out.

The regimen proper in this case is the same as was mentioned in the last stage of the gonorrhœa: the diet must be drying and astringent, and the drink Spa, Pyrmont, or Bristol waters, with which a little claret or

* The Peruvian bark may be combined with other astringents, and prepared in the following manner:

Take of Peruvian bark bruised, six drachms; of fresh galls bruised, two drachms; boil them in a pound and half of water to a pound; to the strained liquor add three ounces of the simple tincture of the bark. A small tea-cupful of this may be taken three times a day, adding to each cup fifteen or twenty drops of the acid elixir of vitriol.

red wine, may sometimes be mixed. Any person may now afford to drink these waters, as they can be every where prepared at almost no expense, by a mixture of common chalk and oil of vitriol.

When the gleet does not in the smallest degree yield to these medicines, there is reason to suspect that it proceeds from ulcers. In this case, recourse must be had to mercury, and such medicines as tend to correct any predominant acrimony with which the juices may be affected, as the decoction of China, sarsaparella, sassafras, or the like.

Mr. Fordyce says, he has seen many obstinate gleets, of two, three, or four, years standing, effectually cured by a mercurial inunction, when almost every other medicine has been tried in vain. Dr. Chapman seems to be of the same opinion; but he says he has always found the mercury succeed best in this case, when joined with terebinthinate and other agglutinating medicines. For which reason the doctor recommends pills made of calomel and Venice turpentine,* and desires that their use may be accompanied with a decoction of guaiacum or sarsaparella.

The last kind of remedy which we shall mention for the cure of ulcers in the urinary passage, are the suppurating candles or bougies. As these are prepared various ways, and are generally to be bought ready made, it is needless to spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them. Before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly. It may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are

* Take Venice turpentine, boiled to a sufficient degree of hardness, half an ounce; calomel half a drachm. Let these be mixed and formed into sixty pills, of which five or six may be taken night or morning. If, during the use of these pills, the mouth should grow sore, or the breath become offensive, they must be discontinued till these symptoms disappear.

not only often healed, but tumours and excrescences in the urinary passages taken away, and an obstruction of urine removed by means of bougies.

OF THE SWELLED TESTICLE.

The swelled testicle may either proceed from infection, lately contracted, or from the venereal poison lurking in the blood; the latter, indeed, is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa, particularly when the running is unseasonably checked by cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, or the like.

In the inflammatory stage bleeding is necessary, which must be repeated according to the urgency of the symptoms.* The food must be light, and the drink diluting. High-seasoned food, flesh, wines, and every thing of a heating nature are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil, are likewise very proper, and ought constantly to be applied when the patient is in bed; when he is up, the testicles should be kept warm, and supported by a bag or truss, which may easily be contrived in such a manner as to prevent the weight of the testicle from having any effect.

If it should be found impracticable to clear the testicle by the cooling regimen now pointed out, and extended according to circumstances, it will be necessary to lead the patient through such a complete antivenereal course as shall ensure him against any future uneasiness. For this purpose, besides rubbing the mercurial ointment on the parts as directed in the gonorrhœa, the patient must be confined to bed, if necessary, for five or six weeks, suspending the testicle all the while with a bag or truss, and plying him inwardly with strong decoctions of sarsaparella.

* I have been accustomed for some time past, to apply leeches to inflamed testicles, which practice has always been followed with the most happy effects.

When these means do not succeed, and there is reason to suspect a scrophulous or cancerous habit, either of which may support a schirrous induration, after the venereal poison is corrected, the parts should be fomented daily with a decoction of hemlock, the bruised leaves of which may likewise be added to the poultice, and the extract at the same time taken inwardly.* This practice is strongly recommended by Dr. Storck in schirrous and cancerous cases; and Mr. Fordyce assures us, that by this method he has cured diseased testicles of two or three years standing, even when ulcerated, and when the schirrous had begun to be affected with pricking and lancing pains.

OF BUBOES

Venereal buboes are hard tumours seated in the groin, occasioned by venereal poison lodged in this part. They are of two kinds, viz. such as proceed from a recent infection, and such as accompany a confirmed lues.

The cure of recent buboes, that is, such as appear soon after impure coition, may be first attempted by dispersion; and, if that should not succeed, by suppuration. To promote the dispersion of the bubo, the same regimen must be observed as was directed in the first stage of a gonorrhœa. The patient must likewise be bled, and take some cooling purges, as the decoction of tamarinds and senna, Glauber's salts, and the like. If by this course the swelling and other inflammatory symptoms abate, we may safely proceed to the use of mercury, which must be continued till the venereal virus is quite subdued.†

But if the bubo should, from the beginning, be attended with great heat, pain, and pulsation, it will be

* The extract of hemlock may be made into pills, and taken in the manner directed under the article Cancer.

† For the dispersion of a bubo, a number of leeches applied to the part affected, will be found equally as efficacious as in the inflamed testicle

proper to promote its suppuration. For this purpose the patient may be allowed to use his ordinary diet, and to take now and then a glass of wine. Emollient cataplasms, consisting of bread and milk, softened with oil or fresh butter, may be applied to the part; and, in cold constitutions, where the tumour advances slowly, white lily-roots boiled, or sliced onions raw, and a sufficient quantity of yellow basilicon, may be added to the poultice.

When the tumour is ripe, which may be known by its conical figure, the softness of the skin, and a fluctuation of matter plainly to be felt under the finger, it may be opened either by caustic or a lancet, and afterwards dressed with digestive ointment.

It sometimes however happens, that buboes can neither be dispersed nor brought to a suppuration, but remain hard indolent tumours. In this case the indurated glans must be consumed by caustic; if they should become schirrous, they must be dissolved by the application of hemlock, both externally and internally, as directed in the schirrous testicle.

OF CHANCRES.

Chancres are superficial, callous, eating ulcers, which may happen either with or without a gonorrhœa. They are commonly seated upon the glans, and make their appearance in the following manner: First, a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter, inclining to yellow. This pimple is hot, and generally itches before it breaks; afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges generally become hard and callous. Sometimes the first appearance resembles a simple excoriation of the cuticle; which, however, if the cause be venereal, soon becomes a true chancre.

A chancre is sometimes a primary affection, but it is much oftener symptomatic, and is the mark of a confirmed lues. Primary chancres discover themselves

soon after impure coition, and are generally seated in parts covered with a thin cuticle, as the lips, the nipples of women, the glans penis of men, &c.*

When a chancre appears soon after impure coition, its treatment is nearly similar to that of the virulent gonorrhœa. The patient must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed, or rather soaked, in warm milk and water, and if the inflammation be great, an emollient poultice or cataplasm may be applied to them. This course will, in most cases, b sufficient to abate the inflammation, and prepare the patient for the use of mercury.

Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, scurvy eruptions about the roots of the hair, and other symptoms of a confirmed lues. Though they may be seated in any of the parts mentioned above, they commonly appear upon the private parts, or the inside of the thigh. They are also less painful, but frequently much larger and harder, than primary chancres. As their cure must depend upon that of the pox, of which they are only a symptom, we shall take no further notice of them till we come to treat of a confirmed lues.†

Thus we have related most of the symptoms which accompany or succeed a violent gonorrhœa, and have also given a short view of the proper treatment; there are, however, several others which sometimes attend

* When the venereal ulcers are seated in the lips, the infection may be communicated by kissing. I have seen very obstinate venereal ulcers in the lips, which I have all the reason in the world to believe were communicated in this manner.

Nurses ought to beware of suckling infected children, or having their breasts drawn by persons tainted with the venereal disease. This caution is peculiarly necessary for nurses, who reside in the neighbourhood of great towns.

† I have found it answer extremely well to sprinkle chancres twice a-day with calomel: this will often produce a cure without any other application whatever. If the chancres are upon the glans, they may be washed with milk and water, and afterwards the calomel may be applied as above.

this disease, as a strangury, or obstruction of urine, a phymosis, paraphymosis, &c.

A strangury may be occasioned either by a spasmodic constriction, or an inflammation of the urethra and parts about the neck of the bladder. In the former case, the patient begins to void his urine with tolerable ease; but as soon as it touches the galled or inflamed urethra, a sudden constriction takes place, and the urine is voided by spurts, sometimes by drops only. When the strangury is owing to an inflammation about the neck of the bladder, there is a constant heat and uneasiness of the part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome tenesmus, or constant inclination to go to stool.

When the strangury is owing to spasm, such medicines as tend to dilute and blunt the salts of the urine will be proper. For this purpose, besides the common diluting liquors, soft and cooling emulsions, sweetened with the syrup of poppies, may be used. Should these not have the desired effect, bleeding and emollient fomentations will be necessary.

When the complaint is evidently owing to an inflammation about the neck of the bladder, bleeding must be more liberally performed, and repeated according to the urgency of the symptoms. After bleeding, if the strangury still continues, soft clysters, with a proper quantity of laudanum in them, may be administered, and emollient fomentations applied to the region of the bladder; at the same time the patient may take every four hours, a tea-cupful of barley water, to an English pint of which six ounces of the syrup of marsh-mallows, four ounces of the oil of sweet almonds, and half an ounce of nitre may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper in this case to discontinue the diuretics, and to draw off the water with the catheter; but, as the patient is seldom able to bear its being in-

troduced, we would rather recommend the use of mild bougies. These often lubricate the passage, and greatly facilitate the discharge of urine. Whenever they begin to stimulate, or give any uneasiness, they may be withdrawn. The phymosis is such a constriction of the prepuce over the glans, as hinders it from being drawn backwards; the paraphymosis, on the contrary, is such a constriction of the prepuce behind the glans, as hinders it from being brought forward.

The treatment of these symptoms is so nearly the same with that of the virulent gonorrhœa, that we have no occasion to enlarge upon it. In general, bleeding, purging, poultices, and emollient fomentations, are sufficient. Should these, however, fail of removing the stricture, and the parts be threatened with a mortification, twenty or thirty grains of ipecacuanha, and one grain of emetic tartar, may be given for a vomit, and may be worked off with warm water or thin gruel. It sometimes happens that, in spite of all endeavours to the contrary, the inflammation goes on, and symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and, if necessary, divided, in order to prevent a strangulation, and set the imprisoned glans at liberty. We shall not describe the manner of performing this operation, as it ought to be done by a surgeon. When a mortification has taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile-flowers and barks, and to give a drachm of bark in powder every two or three hours.

With regard to the priapism, chordee, and other distortions of the penis, the treatment is no way different from that of the gonorrhœa. When they prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

OF A CONFIRMED LUES.

We have hitherto treated of those affections in which the venereal poison is supposed to be confined

chiefly to the particular part by which it was received, and shall next take a view of the lues in its confirmed state; that is, when the poison is actually received into the blood, and, circulating with it through every part of the body, mixes with the several secretions, and renders the whole habit tainted.

The symptoms of a confirmed lues are, buboes, in the groin, pains in the head and joints, which are peculiarly troublesome in the night, or when the patient is warm in bed; scabs and scarfs in various parts of the body, especially on the head, of a yellowish colour, resembling a honeycomb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually, by the palate, towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and the spungy ends become brittle, and break upon the least accident; at other times they are soft, and bend like wax; the conglobate glans become hard and callous, and form in the neck, armpits, groin, and mesentery, hard moveable tumours like the king's evil; tumours of different kinds are likewise formed in the lymphatic vessels, tendons, ligaments, and nerves, as the gummata, ganglia, nodes, tophs, &c; the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a singing noise, pain, and deafness, whilst their intestinal substance is exulcerated and rendered carious: at length all the animal, vital, and natural functions, are depraved; the face becomes pale and livid, the body emaciated and unfit for motion, and the miserable patient falls into an atrophy or wasting consumption.

Women have symptoms peculiar to their sex; as cancers of the breast, a suppuration or overflowing of the menses, the whites, hysteric affections, an inflammation, abscess, schirrous, gangrene, cancer or ulcer of the womb; they are generally barren or subject to abortion, or, if they bring children into the world, they have an universal erysipelas, are half rotten, and covered with ulcers.

Such is the catalogue of symptoms attending this dreadful disease in its confirmed state. Indeed, they are seldom all to be met with in the same person, or at the same time; so many of them, however, are generally present as are sufficient to alarm the patient, and if he has reason to suspect the infection is lurking in his body, he ought immediately to set about the expulsion of it, otherwise the most tragical consequences will ensue.

The only certain remedy hitherto known in Europe for the cure of this disease is mercury, which may be used in great variety of forms, with nearly the same success. Some time ago it was reckoned impossible to cure a confirmed lues without a salivation. This method is now, however, pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison when administered in such a manner as not to run off by the salivary glands.

Though many are of opinion that the mercurial ointment is as efficacious as any other preparation of that mineral; yet experience has taught me to think otherwise. I have very often seen the most obstinate venereal cases, where great quantities of mercurial ointment had been used in vain, yield to the saline preparation of mercury. Nor am I singular in this opinion. Mr. Clare, surgeon, assures me, that for some time past, he has employed in venereal cases a saline preparation of mercury with most happy success. This preparation, rubbed with a sufficient quantity of any mild powder, he applies in small portions to the tongue, where, with a gentle degree of friction, it is immediately absorbed, and produces its full effect upon the system, without doing the least injury to the stomach or bowels; a matter of the greatest importance in the application of this most active and powerful remedy.

It is impossible to ascertain either the exact quantity of medicines that must be taken, or the time they ought to be continued, in order to perform a cure.

These will vary according to the constitution of the patient, the season of the year, the degree of infection, the time it was lodged in the body, &c. But though it is difficult, as Astruc observes, to determine, a priori, what quantity of mercury will, in the whole, be necessary to cure this distemper completely; yet it may be judged of a posteriori, from the abatement and ceasing of the symptoms. The same author adds, that commonly not less than two ounces of the strong mercurial ointment is sufficient, and not more than three or four ounces necessary.

The only chemical preparation of mercury which we shall take notice of, is the corrossive sublimate. This was some time ago brought into use for the venereal disease in Germany by the illustrious Baron Van Swieten, and was soon after introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of giving it is as follows: One grain of corrosive sublimate is dissolved in two ounces of French brandy or malt-spirits; and of this solution an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a-day, and to be continued as long as any symptoms of the disorder remain. To those whose stomach cannot bear the solution, the sublimate may be given in form of a pill.*

Several woods, roots, and barks, have been recommended for curing the venereal disease, but none of them have been found, upon experience, to answer the high encomiums which have been bestowed upon them. Though no one of these is to be depended upon alone, yet when joined with mercury, some of them are found to be very beneficial in promoting a cure. One of the

* The sublimate may be given in distilled water, or any other liquor that the patient chooses. I commonly order ten grains to be dissolved in an ounce of the spirit of wine, for the conveniency of carriage, and let the patient take twenty or thirty drops of it night and morning, in half a glass of brandy or other spirits. Mr. Debra, an ingenious chemist of this place, informs me that he prepares a salt of mercury, much more mild and gentle in its operation than the sublimate, though equally efficacious.

best we know yet is sarsaparella, which may be prepared and taken according to the directions in the Appendix.*

The mezereon root is likewise found to be a powerful assistant to the sublimate, or any other mercurial. It may either be used along with the sarsaparella, as directed in the Appendix, or by itself. Those who choose to use the mezereon by itself, may boil an ounce of the fresh bark, taken from the root, in twelve English pints of water to eight, adding towards the end an ounce of liquorice. The dose of this is the same as of the decoction of sarsaparella.

We have been told that the natives of America cure the venereal disease in every stage by a decoction of the root of a plant called the lobelia. It is used either fresh or dried; but we have no certain accounts with regard to the proportion. Sometimes they mix other roots with it, as those of the ranunculus, the ceanothus, &c. but whether these are designed to disguise or assist it is doubtful. The patient takes a large draught of the decoction early in the morning, and continues to use it for his ordinary drink through the day.†

Many other roots and woods might be mentioned, which have been extolled for curing the venereal disease, as the china root, the roots of soap-wort, burdock, &c. as also the wood of guaiacum and sassafras:

* See Appendix, *Decoction of Sarsaparella.*

† Though we are still very much in the dark with regard to the method of curing this disease among the natives of America, yet it is generally affirmed that they do cure it with speed, safety, and success, and that without the least knowledge of mercury. Hence it becomes an object of considerable importance to discover their method of cure. This might surely be done by making trials of the various plants which are found in those parts, and particularly of such of the natives as are known to make use of it. All people in a rude state take their medicines chiefly from the vegetable kingdom, and are often possessed of valuable secrets with regard to the virtues of plants, of which more enlightened nations are ignorant. Indeed, we make no doubt but some plants of our own growth, were proper pains taken to discover them, would be found as efficacious in curing the venereal disease as those of America. It must, however, be remembered, that what will cure the venereal disease in one country, will not always be found to have equal success in another.

but as none of them have been found to possess virtues superior to those already mentioned, we shall, for the sake of brevity, pass them over, and shall conclude our observations on this disease, with a few general remarks concerning the proper management of the patient, and the nature of the infection.

GENERAL OBSERVATIONS.

The condition of the patient ought always to be considered, previous to his entering upon a course of mercury in any form. It would be equally rash and dangerous to administer mercury to a person labouring under any violent acute disease, as a putrid fever, pleurisy, peripneumony, or the like. It would likewise be dangerous in some chronic cases; as slow hectic fever, or the last stage of a consumption. Sometimes, however, these diseases proceed from a confirmed lues; in which case it will be necessary to give mercury. In chronic diseases of a less dangerous nature, as the asthma, the gravel, and such like, mercury if necessary, may be safely administered. If the patient's strength has been greatly exhausted by sickness, labour, abstinence, or any other cause, the use of mercury must be postponed, till by time, rest, and a nourishing diet, it can be sufficiently restored.

Mercury ought not to be administered to women during the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of her delivery, and circumstances render it necessary, mercury may be given, but in small doses, and at greater intervals than usual; with these precautions, both the mother and child may be cured at the same time, if not, the disorder will at least be kept from growing worse, till the woman be brought to bed, and sufficiently recovered, when a more effectual method may be pursued, which if she suckles her child, will in all probability be sufficient for the cure of both.

Mercury ought always to be administered to infants

with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labour under a confirmed lues. No doubt the infirmities of age must render people less able to undergo the fatigues of a salivation; but this, as was formerly observed, is never necessary; besides, we have generally found that mercury had much less effect upon very old persons, than on those who were younger.

Hysteric and hypochondriac persons, and such as are subject to an habitual diarrhœa or dysentery, or to frequent and violent attacks of the epilepsy, or who are afflicted wtih the scrophula or the scurvy, ought to be cautious in the use of mercury. Where any one of these disorders prevails, it ought either, if possible, to be cured, or at least palliated, before the patient enters upon a course of mercury. When this cannot be done, the mercury must be administered in smaller doses, and at longer intervals than usual.

The most proper seasons for entering upon a course of mercury, are the spring and autumn, when the air is of a moderate warmth. If the circumstances of the case, however, will not admit of delay, we must not defer the cure on account of the season, but must administer the mercury; taking care at the same time to keep the patient's chamber warmer or cooler, according as the season of the year requires.

The next thing to be considered is the preparation necessary to be observed before we proceed to administer a course of mercury. Some lay great stress upon this circumstance, observing, that by previously relaxing the vessels, and correcting any disorder which may happen to prevail in the blood, not only the mercury will be disposed to act more kindly, but many other inconveniences will be prevented.

We have already recommended bleeding and gentle purges, previous to the administration of mercury, and

shall only now add, that these are always to be repeated according to the age, strength, constitution, and other circumstances, of the patient. Afterwards, if it can be conveniently done, the patient ought to bathe once or twice a-day, for a few days, in lukewarm water. His diet, in the mean time, must be light, moist, and cooling. Wine, and all heating liquors, also violent bodily exercise, and all great exertions of the mind, are carefully to be avoided.

A proper regimen is likewise to be observed by such as are under a course of mercury. Inattention to this not only endangers the patient's life, but often also disappoints him of a cure. A much smaller quantity of mercury will be sufficient for the cure of a person who lives low, keeps warm, and avoids all manner of excess, than of one who cannot endure to put the smallest restraint upon his appetites; indeed, it but rarely happens that such are thoroughly cured.

There is hardly any thing of more importance, either for preventing or removing venereal infection, than cleanliness. By an early attention to this, the infection might often be prevented from entering the body; and where it has already taken place, its effects may be greatly mitigated. The moment any person has reason to suspect that he has received the infection he ought to wash the parts with water and spirits, sweet-oil, or milk and water; a small quantity of the last may likewise be injected up the urethra, if it can be conveniently done. Whether the disease at first took its rise from dirtiness, is hard to say, but wherever that prevails, the infection is found in its greatest degree of virulence, which gives ground to believe that a strict attention to cleanliness would go far towards extirpating it altogether.*

* I have not only often seen a recent infection carried off in a few days by means of cleanliness, viz. bathing, fomentations, injections, &c. but have likewise found it of the greatest advantage in the more advanced stages of the disease. Of this I had lately a very remarkable instance, in a man whose penis was almost wholly consumed by venereal ulcers; the matter had been allowed to continue on the

When the venereal disease has been neglected, or improperly treated, it often becomes a disorder of the habit. In this case, the cure must be attempted by restoratives, as a milk-diet, the decoction of sarsaparella, and such like, to which mercury may be occasionally added. It is a common practice in North Britain to send such patients to drink goat-whey. This is a very proper plan, provided the infection has been totally eradicated beforehand; but, when that is not the case, and the patient trusts to the whey for finishing his cure, he will often be disappointed. I have frequently known the disease return with all its virulence after a course of goat-whey, even when that course had been thought quite sufficient for completing the cure.

One of the most unfortunate circumstances attending patients in this disease, is the necessity they are often laid under of being soon well. This induces them to take medicine too fast, and leave it off too soon. A few grains more of medicine, or a few days longer confinement, would often be sufficient to perfect the cure; whereas, by neglect of these, a small degree of virulence is still left in the humours, which gradually vitiates, and at length contaminates the whole mass. To avoid this, we would advise, that the

sores, without any care having been taken to clean them, still, notwithstanding the use of mercury and other medicines, it has produced the effects above mentioned. I ordered warm milk and water to be injected three or four times a day into all the sinuous ulcers, in order to wash out the matter; after which, they were stuffed with dry lint to absorb the fresh matter as it was generated. The patient at the same time took every day half a grain of the corrosive sublimate of mercury, dissolved in an ounce of brandy, and drank an English quart of the decoction of sarsaparella. By this treatment, in about six weeks, he was perfectly cured; and, what was very remarkable, a part of the penis was actually regenerated.

Doctor Gilchrist has given an account of a species of the *lues venerea* which prevails in the west of Scotland, to which the natives give the name of *Sibbins* or *Sivvins*. The doctor observes, that the spreading of this disease is chiefly owing to the neglect of cleanliness, and seems to think, that, by due attention to this *virtue*, it might be extirpated. The treatment of this disease is similar to that of a confirmed lues or pox. The *yaws*, a disease which is now very common both in America and the West India islands, may also be cured in the same manner.

patient should never leave off taking medicine immediately upon the disappearing of the symptoms, but continue it for some time after, gradually lessening the quantity, till there is sufficient ground to believe that the disease is entirely eradicated.

It is not only difficult, but absolutely impossible, to ascertain the exact degree of virulence that may attend the disease; for which reason it will be a much safer rule to continue the use of medicine too long, than to leave it off too soon. This seems to be the leading maxim of a modern practitioner, of some note for the venereal disease, who always orders his patient to perform a quarantine of at least forty days, during which time he takes forty bottles of, I suppose, a strong decoction of sarsaparella, or some antivenereal simple. Whoever takes this method, and adds a sufficient quantity of corrosive sublimate, or some other active preparation of mercury to the decoction, will seldom fail to cure a confirmed lues.

It is peculiarly unfortunate for the cure of this disease, that not one in ten of those who contract it, are either able or willing to submit to a proper plan of regimen. The patient is willing to take medicine; but he must follow his business, and, to prevent suspicion, must eat and drink like the rest of the family. This is the true source of nine-tenths of all the mischief arising from the venereal disease. I never knew the cure attended with any great difficulty or danger where the patient strictly followed the physician's advice; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct. Schirrous testicles, ulcerous sore throats, madness, consumptions, carious bones, and a rotten progeny, are a few of the blessings derived from this source.

There is a species of false reasoning, with regard to this disease, which proves fatal to many. A person of sound constitution contracts a slight degree of the disorder; he gets well without taking any great care, or using much medicine, and hence concludes that this

will always be the case. The next time the disease occurs, though ten times more virulent, he pursues the same course, and his constitution is ruined. Indeed, different degrees of virulence in the small-pox are not greater than in this disease, though, as the learned Sydenham observes, in some cases the most skilful physicians cannot cure, and in others the most ignorant old woman cannot kill the patient in that disorder. Though a good constitution is always in favour of the patient, yet a great stress may be laid upon it. It does not appear from observation that the most robust constitution is able to overcome the virulence of the venereal contagion, after it has got into the habit. In this case a proper course of medicine is always indispensibly necessary

Although it is impossible, on account of the different degrees of virulence, &c. to lay down fixed and certain rules for the cure of this disease, yet the following general plan will always be found safe, and often successful, viz. to bleed and administer gentle purges with diuretics during the inflammatory state, and, as soon as the symptoms of inflammation are abated, to administer mercury, in any form that may be most agreeable to the patient. The same medicine, assisted by the decoction of sarsaparella, and a proper regimen, will not only secure the constitution against the further progress of a confirmed pox, but will generally perform a complete cure.

Although the venereal disease may not, in some degree, be a proper subject of discussion for regular families and the nursery, yet there are many individuals to whom the observations I have made may be of service in this complaint. There is no disease which opens so wide a field for the quack, none in which he so completely picks the pocket, and ruins the constitution. Mercury is the chief ingredient of all these nostrums, and by mercury every apothecary's boy pretends to cure the venereal disease. In one species of the disorder mercury is a certain cure, but it requires discrimination; and a medicine of a nature so very active

cannot be administered with too much care. Those who value their health or their life, will not suffer themselves to be, in a matter so serious, the dupes of ignorance or imposture.

CHAP XLVIII.

OF THE DISEASES OF WOMEN.

WOMEN, in all civilized nations, have the management of domestic affairs, and it is very proper they should, as Nature has made them less fit for the more active and laborious employments. This indulgence, however, is generally carried too far; and females, instead of being benefited by it, are greatly injured, from want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk-maid with the pale complexion of those females whose whole time is spent within doors. Though nature has made an evident distinction between the male and female, with regard to bodily strength and vigour, yet she certainly never meant either that the one should be always without, or the other always within doors.

The confinement of the females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all the functions of the body. Hence proceed obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women for being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.

I have always observed, that women who were chiefly employed without door, in the different branches of husbandry, gardening, and the like, were almost as hardy as their husbands, and that their children were likewise strong and healthy. Bad as the effects of confinement and inactivity upon both sexes

have been already shewn, we shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are, their *monthly evacuations*, *pregnancy*, and *child-bearing*. These, indeed, cannot properly be called diseases, but from the delicacy of the sex, and their being often improperly managed in such situations, they become the source of numerous calamities.

OF THE MENSTRUAL DISCHARGE.

Females generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally, indeed, for the better, though sometimes for the worse. The greatest care is now necessary, as the future health and happiness of the female depends in a great measure upon her conduct at this period *

If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business, which give exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits and vigour decline, and she sinks into a valetudinarian for life. Such is the fate of numbers of these unhappy females, who, either from too much indulgence, or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air.

* It is the duty of mothers, and those who are entrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their life. False modesty, inattention, and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, are often sufficient to ruin the health, or to render the female ever after incapable of procreation.

A lazy indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions amongst the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are in a manner eaten up by the *chlorosis*, or green sickness, and other diseases of this nature. We would therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible.

Another thing which proves very hurtful to girls about this period of life is, unwholesome food. Fond of all manner of trash, they often indulge in it, till their whole humours are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should go properly on. Accordingly we find, that such girls as lead an indolent life, and eat great quantities of trash, are not only subject to obstructions of the *menses*, but likewise to glandular obstructions; as the scrophula, or king's evil, &c.

A dull disposition is also very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health; while the grave, moping, melancholy creature proves the very prey of vapours and hysterics. Youth is the season for mirth and cheerfulness: let it, therefore, be indulged; it is an absolute duty. To lay in a stock of health in time of youth is as necessary a piece of prudence, as to make provision against the decay of old age. While, therefore, wise Nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom the season destined to mirth and innocent festivity.

Another thing very hurtful to females about this period of life is, strait clothes. They are fond of a fine shape, and foolishly imagine that this can be acquired by lacing themselves tight. Hence, by squeezing the stomach and bowels, they hurt the digestion, and oc-

casion many incurable maladies. This error is not indeed so common as it has been, but as fashions change, it may come about again; we therefore think it not improper to mention it. I know many females who to this day feel the dreadful effects of that wretched custom which prevailed some years ago, of squeezing every girl into as small a size in the middle as possible. Human invention could not possibly have devised a practice more destructive to health.

After a female has arrived at that period of life when the *menses* usually begin to flow, and they do not appear, but, on the contrary, her health and spirits begin to decline, we would advise, instead of shutting the poor girl up in the house, and dosing her with steel, asafœtida, and other nauseous drugs, to place her in a situation where she can enjoy the benefit of free air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner; and we have little reason to fear but Nature, thus assisted, will do her proper work. Indeed, she seldom fails, unless the fault is on our side.

This discharge, in the beginning, is seldom so instantaneous as to surprise females unawares. It is, generally, preceded by symptoms which foretel its approach: as a sense of heat, weight, and dull pain in the loins; distention and hardness of the breasts, head-ache, loss of appetite, lassitude, paleness of the countenance, and sometimes a slight degree of fever. When these symptoms appear about the age at which the menstrual usually begins, every thing should be carefully avoided which may obstruct that necessary and salutary evacuation; aud all means used to promote it; as sitting frequently over the steams of warm water, drinking warm diluting liquors, &c.

After the *menses* have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceedingly cautious of what they eat or drink at the time the are out of order. Every thing that is cold, or apt to sour on the stomach, ought to be avoided; as

fruit, butter-milk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful at this particular period. More of the sex date their diseases from colds caught while they are out of order, than from all other causes. This ought surely to put them upon their guard, and to make them very circumspect in their conduct at such times. A degree of cold that will not in the least hurt them at another time, will, at this period, be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more than this. Anger, fear, grief, and other affections of the mind, often occasion obstructions of the menstrual flux which proves absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this purpose, we should recommend sufficient exercise, in a dry, open, and rather cool air; wholesome diet; and, if the body be weak and languid, generous liquors; also cheerful company, and all manner of amusements. If these fail, recourse must be had to medicine.

When obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. Pills composed of equal parts of prepared steel, powdered myrrh, and aloes, may be taken with advantage, two or three every night before going to bed. The principal medicines, however, are iron, and the Peruvian bark, with other bitters and astringents. Filings of iron may be infused in wine or ale, two or three ounces to an English quart, and after it has stood for two or three weeks,

it may be filtered, and about half a wine glass of it taken twice a-day, or prepared steel may be taken in the dose of half a drachm, mixed with a little honey or treacle three or four times a-day. The bark and other bitters may either be taken in substance or infusion, as is most agreeable to the patient.

When obstructions proceed from a viscid state of the blood; or for women of a gross full habit, evacuations, and such medicines as attenuate the humours, are necessary. The patient in this case ought to be bled, to bathe her feet frequently in warm water, to take now and then a cooling purge, and to live upon a spare thin diet. Her drink should be whey, water, or small-beer, and she ought to take sufficient exercise. A tea-spoonful of the tincture of black helebore may be also taken twice a-day in a cup of warm water.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behaviour, to females in this situation is also of the last importance.

An obstruction of the menses is often the effect of other maladies. When this is the case, instead of giving medicines to force that discharge, which might be dangerous, we ought by all means to endeavour to restore the patient's health and strength. When that is effected the other will return of course.

But the menstrual flux may be too great as well as too small. When this happens the patient becomes weak, the colour pale, the appetite and digestion are bad, to which œdematous swellings of the feet, dropsies, and consumptions, often ensue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted

high-seasoned, or acrid food; the use of spirituous liquors; excessive fatigue; relaxation; a dissolved state of the blood; violent passions of the mind, &c.

The treatment of this disease may be varied according to its cause. When it is occasioned by any error in the patient's regimen, an opposite course to that which induced the disorder must be pursued, and such medicines taken as have a tendency to restrain the flux, and counteract the morbid affections of the system whence it proceeds.

To restrain the flux, the patient should be kept quiet and easy, both in body and mind. If it be very violent, she ought to lie in bed, with her head low; to live upon a cool and slender diet, as veal or chicken broths, with bread; and to drink decoctions of nettle-roots, or the greater comfrey. If these be not sufficient to stop the flux, stronger astringents may be used, as Japan earth, alum, elixir of vitriol, the Peruvian bark, &c.*

The *uterine flux* may offend in quality as well as in quantity. What is usually called the fluor albus, or whites, is a very common disease, and proves extremely hurtful to delicate women. This discharge, however, is not always white, but sometimes pale, yellow, green, or of a blackish colour; sometimes it is sharp and corrosive, sometimes foul and fœtid, &c. It is attended with a pale complexion, pain in the back, loss of appetite, swelling of the feet, and other signs of debility. It generally proceeds from a relaxed state of the body, arising from indolence, the excessive use of tea, coffee, or other weak and watery diet.

To remove this disease, the patient must take as much exercise as she can bear without fatigue. Her

* Two drams of alum and one of Japan earth may be pounded together, and divided into eight or nine doses, one of which may be taken three times a-day.

Persons whose stomachs cannot bear the alum, may take two table-spoonsful of the tincture of roses three or four times a-day, to each dose of which ten drops of laudanum may be added.

If these should fail, half a dram of the Peruvian bark, in powder, with ten drops of the elixir of vitriol, may be taken, in a glass of red wine, four times a-day.

food should be solid and nourishing, but of easy digestion; and her drink rather generous, as red port or claret, mixed with Pyrmont, Bristol, or lime water. Tea and coffee are to be avoided. I have often known strong broths have an exceeding good effect, and sometimes a milk diet alone will perform a cure. The patient ought not to lie too long in bed. When medicine is necessary, we know none preferable to the Peruvian bark, which in this case ought always to be taken in substance. In warm weather, the cold bath will be of considerable service.

That period of life at which the menses cease to flow, is likewise very critical to the sex. The stoppage of any customary evacuation, however small, is sufficient to disorder the whole frame, and often to destroy life itself. Hence it comes to pass, that so many women either fall into chronic disorders, or die about this time. Such of them, however, as survive it, without contracting any chronic disease, often become more healthy and hardy than they were before, and enjoy strength and vigour to a very great age.

If the menses cease all of a sudden in women of a full habit, they ought to abate somewhat of their usual quantity of food, especially of the most nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise, and to keep the body open. This may be done, by taking, once or twice a-week, a little rhubarb, or an infusion of hiera picra in wine or brandy.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ancles, or in other parts of their body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or have artificial drains substituted in their stead. Women, who will have such sores dried up, are often soon after carried off by acute diseases, or fall into those of a chronic nature.

OF PREGNANCY.

Though pregnancy is not a disease, yet that state is often attended with a variety of complaints, which merit attention, and which sometimes require the assistance of medicine. Some women indeed are more healthy during their pregnancy than at any other time; but this is by no means the general case; most of them *breed in sorrow*, and are frequently indisposed during the whole time of pregnancy. Few fatal diseases, however, happen during that period; and hardly any, except abortion, that can be called dangerous.

Pregnant women are often afflicted with the heartburn. The method of treating this complaint has been already pointed out. They are likewise, in the more early periods of pregnancy, often harassed with sickness and vomiting, especially in the morning. The method of relieving these complaints has also been shewn. Both the head-ach and tooth-ach are very troublesome symptoms of pregnancy The former may generally be removed by keeping the body gently open by the use of prunes, figs, roasted apples, and such like. When the pain is very violent, bleeding may be necessary. For the treatment of the latter, we must refer to that article. Several other complaints incident to pregnant women might be mentioned, as a cough and difficulty of breathing, suppression and incontinency of urine, &c. but as all of these have been taken notice of before, it is needless to repeat them.

Every pregnant woman is more or less in danger of abortion. This should be guarded against with the greatest care, as it not only weakens the constitution, but renders the woman liable to the same misfortune afterwards.* Abortion may happen at any period of

* Every mother who procures an abortion, does it at the hazard of her life; yet there are not a few who run this risk merely to prevent the trouble of bearing and bringing up children. It is surely a most unnatural crime, and cannot, even in the most abandoned, be viewed without horror; but, in the decent matron, it is still more unpardonable. Those wretches who daily advertise their assistance to women in this business deserve, in my opinion, the most severe of all human punishments.

pregnancy, but it is most common in the second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens within the first month, it is usually called a false conception; but, after the seventh month, the child may often be kept alive by proper care.

The common causes of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; raising great weights; reaching too high; jumping, or stepping from an eminence; vomiting; coughing; convulsion-fits; blows on the belly; falls; fevers; disagreeable smells; excess of blood; indolence; high living, or the contrary; violent passions or affections of the mind, as fear, grief, &c.

The signs of approaching abortion are, pain in the loins, or about the bottom of the belly; a dull heavy pain in the inside of the thighs; a slight degree of coldness, or shivering; sickness; palpitation of the heart; the breasts become flat and soft; the belly falls; and there is a discharge of blood or watery humours from the womb.

To prevent abortion, we should advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea, and other weak and watery liquors; to rise early, and go soon to bed; to shun damp houses; take frequent exercise in the open air, but to avoid fatigue, and never to go abroad in damp foggy weather, if they can shun it.

Women of a full habit ought to use a spare diet, avoiding strong liquors, and every thing that may tend to heat the body, or increase the quantity of blood. Their diet should be of an opening nature, consisting principally of vegetable substances. Every woman with child ought to be kept cheerful and easy in her mind. Her appetites, even though depraved, ought to be indulged as far as prudence will permit.

When any signs of abortion appear, the woman ought to be laid in bed on a mattress, with her head low. She should be kept quiet, and her mind soothed and comforted. She ought not to be kept too hot, nor to take any thing of a heating nature. Her food should consist

of broths, rice and milk, jellies, gruels made of oatmeal, and the like, all of which ought to be taken cold.

If she be able to bear it, she should lose at least half a pound of blood from the arm. Her drink ought to be barley-water sharpened with juice of lemon; or she may take half a dram of powdered nitre, in a cup of water-gruel, every five or six hours. If the woman be seized with a violent looseness, she ought to drink the decoction of calcined hartshorn prepared. If she be affected with vomiting, let her take frequently two table-spoonsful of the saline mixture. In general opiates are of service: but they should always be given with caution.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would generally operate the quite contrary way. Want of exercise not only relaxes the body, but induces a plethora, or too great fulness of the vessels, which are the two principal causes of abortion. There are, however, some women of so delicate a texture, that it is necessary for them to avoid almost every kind of exercise during the whole period of pregnancy.

OF CHILD-BIRTH.

Many diseases proceed from the want of due care in child-bed, and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think, when the labour-pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the fœtus; but proper care and management are certainly necessary for the recovery of the mother. No doubt mischief may be done by too much as well as by too little

care. Hence females, who have the greatest number of attendants in child-bed, generally recover worst. But that is not peculiar to the state of child-bed. Excessive care always defeats its own intention, and is generally more dangerous than none at all.*

During actual labour, nothing of a heating nature ought to be given. The woman may now and then take a little panado, and her drink ought to be toast and water, or thin groat-gruel. Spirits, wines, cordial-waters, and other things which are given with a view to strengthen the mother, and promote the birth, for the most part tend only to increase the fever, inflame the womb, and retard the labour. Besides, they endanger the woman afterwards, as they often occasion violent and mortal hœmorrhages, or dispose her to eruptive and other fevers.

When the labour provestedious and difficult,to prevent inflammations, it will be proper to bleed. An emollient clyster ought likewise frequently to be administered, and the patient should sit over the steams of warm water. The passage ought tobegently rubbed with a little soft pomatum, or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labours; and in all

* Though the management of women in child-bed has been practised as an employment since the earliest accounts of time, yet it is still in most countries on a very bad footing. Few women think of following this employment till they are reduced to the necessity of doing it for bread. Hence not one in a hundred of them have any education or proper knowledge of their business. It is true that Nature, if left to herself, will generally expel the *fœtus*, but it is equally true, that most women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is greater than what is imagined; most of which might be prevented by allowing no woman to practise midwifery but such as are properly qualified. Were due attention paid to this it would not only be the means of saving many lives, but would prevent the necessity of employing men in that indelicate and disagreeable branch of medicine, which is, on many accounts, more proper for the other sex.

preternatural cases, a skilful surgeon or man-midwife ought to be called as soon as possible.

After delivery, the woman ought to be kept as quiet and easy as possible.* Her food should be light and thin, as gruel, panado, &c. and her drink weak and diluting. To this rule, however, there are many exceptions. I have known several women, whose spirits could not be supported in child-bed without solid food and generous liquors; to such, a glass of wine and a bit of chicken must be allowed.

Sometimes an excessive hœmorrhage or flooding happens after delivery. In this case, the patient should be laid with her head low, kept cool, and be in all respects treated as for an excessive flux of the menses. If the flooding proves violent, linen cloths, which have been wrung out of a mixture of equal parts of vinegar and water, or red wine, should be applied to the belly, the loins, and the thighs: these must be changed as they grow dry, and may be discontinued as soon as the flooding abates.†

If there be violent pains after delivery, the patient ought to drink plentifully of warm diluting liquors, as groat-gruel, or tea with a little saffron in it; and to take small broths, with carraway-seeds or a bit of orange-peel, in them; an ounce of the oil of sweet-almonds may likewise be frequently taken in a cup of any of the above liquors: and if the patient be restless, a spoonful of the syrup of poppies may now and then be mixed with a cup of her drink. If she be hot or

* We cannot help taking notice of that ridiculous custom which still prevails in some parts of the country, of collecting numbers of women together upon such occasions. These, instead of being useful, serve only to crowd the house, and obstruct the necessary attendants. Besides, they hurt the patient with their noise, and often, by their untimely and impertinent advice, do much mischief.

† In a violent flooding after delivery, I have seen very good effects from the following mixture: Take of penny-royal water, simple cinnamon-water, and syrup of poppies, each two ounces, elixir of vitriol a drachm. Mix, and take two table-spoonsful every two hours, or oftener if necessary.

feverish one of the following powders may be taken in a cup of her usual drink every five or six hours.*

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are greatly increased upon touching; by the tension or tightness of the parts; great weakness; change of countenance; a constant fever; with a weak and hard pulse; a slight delirium, or raving; sometimes incessant vomiting; a hiccup; a discharge of reddish, stinking, sharp water from the womb; an inclination to go frequently to stool; a heat, and sometimes total suppression of urine.

This must be treated like other inflammatory disorders, by bleeding and plentiful dilution. The drink may be thin gruel or barley-water; in a cup of which half a drachm of nitre may be dissolved, and taken three or four times a-day. Clysters of warm milk and water must be frequently administered; and the belly should be fomented by cloths wrung out of warm water, or by applying bladders filled with warm milk and water to it.

A suppression of the lochia, or usual discharges after delivery, and the milk-fever, must be treated nearly in the same manner as the inflammation of the womb. In all these cases the safest course is plentiful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever the breasts may be imbrocated with a little warm linseed-oil, or the leaves of red cabbage may be applied to them. The child should be often put to the breast, or it should be drawn by some other person

Nothing would tend more to prevent the milk-fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or

* Take of crab's claws prepared half an ounce, purified nitre two drachms, saffron powdered half a drachm; rub them together in a mortar, and divide the whole into eight or nine doses.

When the patient is low-spirited, or troubled with hysterical complaints, she ought to take frequently twelve or fifteen drops of the tincture of asafœtida in a cup of penny-royal tea.

three days, is contrary to Nature and common sense, and very hurtful both to the mother and child.

Every mother who has milk in her breasts, ought either to suckle her own child, or to have her breasts frequently drawn, at least for the first month. This would prevent many of the diseases which prove fatal to women in child-bed.

When an inflammation happens in the breast, attended with redness, hardness, and other symptoms of suppuration, the safest application is a poultice of bread and milk, softened with oil or fresh butter. This may be renewed twice a-day, till the tumour be either discussed or brought to suppuration. The use of repellants, in this case is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapped, they may be anointed with a mixture of oil and bees wax, or a little powdered gum-arabic may be sprinkled on them. I have seen Hungary water applied to the nipples have a very good effect. Should the complaint prove obstinate, a cooling purge may be given, which generally removes it.

The miliary fever is a disease incident to women in child-bed; but as it has been treated of already, we shall take no further notice of it. The celebrated Hoffman observes, That this fever of child-bed women might generally be prevented, if they, during their pregnancy, were regular in their diet, used moderate exercise, took now and then a gentle laxative of manna, rhubarb, or cream of tartar, not forgetting to bleed in the first months, and avoid all sharp air. When the labour is coming on, it is not to be hastened with forcing medicines, which inflame the blood and humours, or put them into unnatural commotions. Care should be taken, after the birth, that the natural excretions proceed regularly: and, if the pulse be quick, a little nitrous powder, or some other cooling medicines, should be administered.

The most fatal disorder consequent upon delivery is

the puerperal, or child-bed fever. It generally makes its attack upon the second or third day after delivery. Sometimes indeed it comes on sooner, and at other times, though rarely, it does not appear before the fifth or sixth day.

It begins, like most other fevers, with a cold or shivering fit, which is succeeded by restlessness, pain of the head, great sickness of the stomach, and bilious vomiting. The pulse is generally quick, the tongue dry, and there is a remarkable depression of spirits and loss of strength. A great pain is usually felt in the back, hips, and region of the womb; a sudden change in the quantity or quality of the lochia also takes place; and the patient is frequently troubled with a tenesmus, or a constant inclination to go to stool. The urine, which is very highly coloured, is discharged in small quantity, and generally with pain. The belly sometimes swells to a considerable bulk, and becomes susceptible of pains from the slightest touch. When the fever has continued for a few days, the symptoms of inflammation usually subside, and the disease acquires a more putrid form. At this period, if not sooner, a bilious, if not putrid, looseness, of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress.

There is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought always to be obtained as soon as possible. In women of a plethoric constitution, bleeding will generally be proper at the beginning; it ought, however, to be used with caution, and not to be repeated, unless where the signs of inflammation rise high; in which case it will also be necessary to apply a blistering plaster to the region of the womb.

During the rigour, or cold fit, proper means should be used to abate its violence, and shorten its duration. For this purpose, the patient may drink freely of warm diluting liquors, and, if low, may take now and then a cup of wine-whey; warm applications to the extremities, as heated bricks, bottles or bladders filled

with warm water, and such like, may also be used with advantage.

Emollient clysters of milk and water, or of chicken-water, ought to be frequently administered through the course of the disease. These prove beneficial, by promoting a discharge from the intestines, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care, however, is requisite in giving them, on account of the tenderness of the parts in the pelvis at this time.

To evacuate the offending bile from the stomach, a vomit is generally given. But as this is apt to increase the irritability of the stomach, already too great, it will be safer to omit it, and to give in its stead a gentle laxative, which will both tend to cool the body, and to procure a free discharge of the bile.*

The medicine which I have always found to succeed best in this disease, is the saline draught. This, if frequently repeated, will often put a stop to the vomiting, and at the same time lessen the violence of the fever. If it runs off by stool, or if the patient be restless, a few drops of laudanum, or some syrup of poppies, may occasionally be given.

If the stools should prove so frequent, as to weaken and exhaust the patient, a starch-clyster, with thirty or forty drops of laudanum in it, may be administered as occasion shall require; and the drink may be rice-water, in every English pint of which half an ounce of gum-arabic has been dissolved. Should these fail, recourse must be had to Columbo-root, or some other strong astringent.

Though in general the food ought to be light, and the drink diluting, yet when the disease has been long protracted, and the patient is greatly spent by evacuations, it will be necessary to support her with nourishing diet, and generous cordials.

* Midwives ought to be very cautious in administering vomits or purges to women in child-bed. I have known a woman, who was recovering extremely well, thrown into the most imminent danger, by a strong purge, which was given her by an officious midwife.

It was observed that this fever, after continuing for some time, often acquires a putrid form. In this case the Peruvian bark must be given, either by itself, or joined with cordials, as circumstances may require. As the bark in substance will be apt to purge, it may be given in decoction or infusion mixed with the tincture of roses, or other gentle astringents; or a scruple of the extract of bark, with half an ounce of the spirituous cinnamon-water, two ounces of common water, and ten drops of laudanum, may be made in a draught, and given every second, third, or fourth hour, as shall be found necessary.

When the stomach will not bear any kind of nourishment, the patient may be supported for some time by clysters of beef-tea or chicken-water.

To avoid this fever, every woman in child-bed ought to be kept perfectly easy; her food should be light and simple, and her bed-chamber cool and properly ventilated. There is not any thing more hurtful to a woman in this situation than being kept too warm. She ought not to have her body bound too tight, nor to rise too soon from bed, after delivery; catching cold is also to be avoided; a proper attention should be paid to cleanliness.

To prevent the milk-fever, the breasts ought to be frequently drawn; and if they are filled previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid, and its being absorbed in this state. Costiveness is likewise to be avoided. This will be best effected by the use of mild clysters and a laxative diet.

We shall conclude our observations on child-bed women by recommending to them, above all things, to beware of cold. Poor women, whose circumstances oblige them to quit their bed too soon, often contract diseases from cold, of which they never recover. It is a pity the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in

a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct is obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church is likewise a very common cause of catching cold. All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

*** As in case of child-birth, professional assistance is not always to be immediately procured, we have given such instructions, in a subsequent part of this work, that the matron may be of great service in case of need, or till professional aid can be obtained

OF BARRENNESS.

Barrenness may be very properly reckoned among the diseases of females, as few married women, who have not children, enjoy a good state of health. It may proceed from various causes, as high-living, grief, relaxation, &c.; but it is chiefly owing to an obstruction or irregularity of the menstrual flux.

It is very certain that high-living vitiates the humours, and prevents fecundity. We seldom find barren women among the labouring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty; and it would be an easy matter to adduce many instances of women, who, by their being reduced to live entirely upon milk and vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants, they would seldom have cause to envy their poor vassals and dependants the blessings of a numerous and healthy offspring, while they pine in sorrow for the want of even a single heir to their extensive domains.

Affluence begets indolence, which not only vitiates the humours, but induces a general relaxation of the solids; a state highly unfavourable to procreation. To remove this, we would recommend the following course: First, sufficient exercise in the open air; secondly, a diet consisting chiefly of milk and vegetables;* thirdly, the use of astringent medicines, as steel, alum, dragon's blood, elixir of vitriol, the Spa or Tunbridge waters, Peruvian bark, &c.; and lastly, above all, the cold bath.

Barrenness is often the consequences of grief, sudden fear, anxiety, or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind, the person ought to be kept as easy and cheerful as possible; all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

The foregoing few and simple remarks are all that are known in medicine of the causes and cure of barrenness. There is no situation in which women are so ready to listen to the delusions of quackery, or to anile receipts, than this, and none so dangerous. All these compositions are of an irritating nature, which will impose on the patient, while, instead of removing the complaint, they ruin their constitution; instead of strengthening, they enfeeble nature, and render the malady entirely incurable.

CHAP. XLIX.

DISEASES OF CHILDREN.

MISERABLE indeed is the lot of a man in the state of infancy! He comes into the world more helpless than any other animal, and stands much longer

* Dr. Cheyne avers, that want of children is oftener the fault of the male than the female; and strongly recommends a milk

in need of the care and protection of his parents; but, alas! this care is not always bestowed upon him; and when it is, he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, becomes one of the most fruitful sources of the disorders of infants.*

It must be obvious to every attentive person, that the first diseases of infants chiefly arise from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every thing that the stomach cannot digest may be considered as poison, and unless it can be thrown up or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table spoonsful of wa-

and vegetable diet to the former as well as the latter; adding, that his friend Dr. Taylor, whom he calls the milk Doctor of Croydon, had brought sundry opulent families in his neighbourhood, who had continued some years after marriage without progeny, to have several fine children, by keeping both parents for a considerable time to a milk and vegetable diet.

* Of the officious and ill-judged care of midwives, we shall adduce only one instance, viz. the common practice of torturing infants, by squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation, and suppuration of the breasts, but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend is a soft poultice, or a little of the diachylon-plaster, spread thin upon a bit of soft leather, about the size of half a crown, and applied over each nipple. These may be suffered to continue till the hardness disappears.

ter, and sweetened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates; or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are not fond of using the emetic tartar, may give six or seven drops of the antimonial wine in a tea-spoonful of water or thin gruel. Small doses of the ipecacuanha will be found more gentle than any of the above, and ought to be preferred.

These medicines will not only cleanse the stomach, but will generally likewise open the body. Should this however not happen, and if the child be costive, some gentle purge will be necessary; for this purpose, some manna and pulp of cassia may be dissolved in boiling water, and given in small quantities till it operates; or, what will answer rather better, a few grains of magnesia alba may be mixed in any kind of food that is given to the child, and continued till it has the desired effect. If these medicines be properly administered, and the child's belly and limbs be frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the internal disorders of infants They will likewise go a considerable way in alleviating those which appear externally, as the rash, gum, or fellon, &c. These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most commonly relieved by gentle evacuations Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

OF THE MECONIUM.

The stomach and bowels of a new-born infant are filled with a blackish coloured matter, of the con-

sistence of syrup, commonly called the *meconium* This is generally passed soon after the birth by the mere effort of Nature; in which case it is not necessary to give the infant any kind of medicine. But if it should be retained, or not sufficiently carried off, a little manna, or magnesia alba, may be given as mentioned above; or if these should not be at hand, a common spoonful of whey, sweetened with a little honey, or raw sugar, will answer the purpose.

The most proper medicine for expelling the meconium is the mother's milk, which is always at first of a purgative quality. Were children allowed to suck as soon as they shew an inclination for the breast, they would seldom have occasion for medicines to discharge the meconium; but even where this is not allowed, they ought never to have daubs of syrups, oils, and other indigestible stuffs, crammed down their throats.

THE APHTHÆ, OR THRUSH.

The aphthæ are little white ulcers affecting the whole inside of the mouth, tongue, throat, and stomach of infants. Sometimes they reach through the whole intestinal canal; in which case they are very dangerous, and often put an end to the infant's life.

If the aphthæ are of a pale colour, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous; but if opake, yellow, brown, black, thick, or running together, they ought to be dreaded.

It is generally thought that the aphthæ owe their origin to acrid humours: we have reason, however, to believe they are more frequently owing to too hot a regimen both of mother and child. It is a rare thing to find a child who is not dosed with wine, punch, cinnamon-waters, or some other hot and inflaming liquors, almost as soon as it is born. It is well known that these will occasion inflammatory disorders even in adults: is it any wonder then that they should heat

and inflame the tender bodies of infants, and set, as it were, the whole constitution on a blaze?

The most proper medicines for the aphthæ are vomits, such as have been already recommended, and gentle laxatives. Five grains of rhubarb, and half a drachm of magnesia alba, may be rubbed together, and divided into six doses, one of which may be given to the infant every four or five hours till they operate. These powders may either be given in the child's food, or a little of the syrup of pale roses, and may be repeated as often as is found necessary to keep the body open. It is common in this case to administer calomel: but as that medicine sometimes occasions gripes, it ought always to be given to infants with caution.

Many things have been recommended for gargling the mouth and throat in this disease; but it is not easy to apply these in very young children; we would therefore recommend it to the nurse to rub the child's mouth frequently with a little borax and honey, or with the following mixture: Take fine honey an ounce, borax a drachm, burnt alum half a drachm, rose-water. two drachms, mix them together. A very proper application in this case, is a solution of ten or twelve grains of white vitriol in eight ounces of barley-water. These may be applied with the finger, or by means of a bit of soft rag tied to the end of a probe.

OF ACIDITIES.

The food of children being for the most part of an acescent nature, it readily turns sour upon the stomach, especially if the body be any way disordered. Hence most diseases of children are accompanied with evident signs of acidity, as green stools, gripes, &c. These appearances have induced many to believe that all these diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively, will find that these symptoms of acidity are oftener the effect than the cause of their diseases.

Nature evidently intended that the food of children should be acescent; and unless the body be disordered, or the digestion hurt from some other cause, we will venture to say that the acescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children; and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purgings, sour smells, &c. shew that the bowels abound with an acid, the child should have a little small broth, with light white bread in it, and should have sufficient exercise in order to promote the digestion. It has been customary in this case to give the pearl-julap, chalk, crabs' eyes, and other testaceous powders. These, indeed, by their absorbent quality, may correct the acidity, but they are attended with this inconvenience, that they are apt to lodge in the bowels and occasion costiveness, which may prove very hurtful to the infant. For this reason, they should never be given, unless mixed with purgative medicines, as rhubarb, manna, or such like.

The best medicine which we know, in all cases of acidity, is that fine insipid powder called magnesia alba. It purges, and at the same time corrects the acidity; by which means it not only removes the disease; but carries off its cause. It may be given in any kind of food, or a mixture, as recommended in the Appendix.

When an infant is troubled with the gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things, but should have its body opened with an emollient clyster, or the medicine mentioned above; and at the same time a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to succeed, a little brandy or other spirits may be mixed with thrice the quantity of warm water, and a tea-spoonful of it given fre-

* See Appendix, *Laxative Absorbent Mixture.*

quently till the infant be easier. Sometimes a little peppermint-water will answer this purpose very well.

GALLING AND EXCORIATION.

These are very troublesome to children. They happen chiefly about the groin and wrinkles of the neck, under the arms, behind the ears, and in other parts that are moistened by the sweat or urine.

As these complaints are in a great measure owing to want of cleanliness, the most effectual means of preventing them are, to wash the parts frequently with cold water, to change the linen often, and, in a word, to keep the child in all respects thoroughly clean. When this is not sufficient, the excoriated parts may be sprinkled with absorbent or drying powders; as burnt hartshorn, tutty, chalk, crabs' claws prepared, and the like. When the parts affected are very sore, and tend to a real ulceration, it will be proper to add a little sugar of lead to the powders, or to anoint the place with the camphorated ointment. If the parts be washed with spring water, in which a little white vitriol has been dissolved, it will dry and heal them very powerfully. One of the best applications for this purpose is, to dissolve some fuller's earth in a sufficient quantity of hot water, and after it has stood till it is cold, to rub it gently upon the galled parts once or twice a-day.

STOPPAGE OF THE NOSE.

The nostrils of infants are often plugged up with a gross mucus, which prevents their breathing freely, and likewise renders it difficult for them to suck or swallow.

Some in this case order, after a suitable purge, two or three grains of white vitriol dissolved in half an ounce of marjoram-water, and filtered, to be applied now and then to the nostrils with a linen-rag. Wedelius says, if two grains of white vitriol, and the

same quantity of elaterium, be dissolved in half an ounce of marjoram water, and applied to the nose as above directed, that it brings away the mucus without sneezing.

In obstinate cases these things may be tried: but I have never found any thing necessary, besides rubbing the nose at bed-time with a little sweet-oil, or fresh-butter. This resolves the filth, and renders the breathing more free.*

OF VOMITING.

From the delicate state of children, and the great sensibility of their organs, a vomiting or looseness may be adduced by any thing that irritates the nerves of the stomach and intestines. Hence these disorders are much more common in childhood than in the more advanced periods of life. They are seldom, however, dangerous, and ought never to be considered as diseases, unless when they are violent, or continue so long as to exhaust the strength of the patient.

Vomiting may be excited by an over-quantity of food; by food that is of such a nature as to irritate the nerves of the stomach too much; or by the sensibility of the nerves being so much increased as to render them unable to bear the stimulus of even the mildest element.

When vomiting is occasioned by too much food, it ought to be promoted, as the cure will depend upon cleansing the stomach. This may be done either by a few grains of ipecacuanha, or a weak solution of emetic tartar, as mentioned before. When it is owing to food of an acrid or irritating quality the diet ought to be changed, and aliment of a milder nature substituted in its stead.

When vomiting proceeds from an increased degree of sensibility, or too great an irritability of the nerves

* Some nurses remove this complaint by sucking the child's nose. This is by no means a cleanly operation; but when nurses have the resolution to do it, I am far from discouraging the practice.

of the stomach, such medicines as have a tendency to brace and strengthen that organ, and to abate its sensibility may be used. The first of these intentions may be answered by a slight infusion of the Peruvian bark, with the addition of a little rhubarb and orange-peel; and the second by the saline draughts, to which a few drops of liquid laudanum may occasionally be added.

In obstinate vomitings the operation of internal medicines may be assisted by aromatic fomentations made with wine, applied warm to the pit of the stomach, or the use of the stomach-plaster, with the addition of a little theriaca.

OF A LOOSENESS.

A looseness may be generally reckoned salutary when the stools are sour, slimy, green, or curdled. It is not the discharge, but the production of such stools, which ought to be remedied. Even where the purging is thin and watery, it ought not to be checked too suddenly, as it often proves critical, especially when the child has caught cold, or an eruption on the skin has disappeared. Sometimes an evacuation of this kind succeeds a humid state of the atmosphere, in which case it may also prove of advantage, by carrying off a quantity of watery humours, which would otherwise tend to relax the habit.

As the principal intention of the cure of looseness is to evacuate the offending matter, it is customary to give the patient a gentle vomit of ipecacuanha, and afterwards to exhibit small and frequent doses of rhubarb; interposing absorbent medicines to mitigate the acrimony of the humours. The best purge in this case, is magnesia alba. It is at the same time absorbent and laxative, and operates without exciting gripes.

The antimonial wine, which acts both as an emetic and purge, is also an excellent medicine in this case. By being diluted with water, it may be proportioned to the weakest constitution, and not being disagreeable

to the palate, it may be repeated as often as occasion requires. Even one dose will frequently mitigate the disease, and pave the way for the use of absorbents. If, however, the patient's strength will permit, the medicine ought to be repeated every six or eight hours, till the stools begin to assume a more natural appearance; afterwards a longer space may be allowed to intervene between the doses. When it is necessary to repeat the medicine frequently, the dose ought always to be a little increased, as its efficacy is generally diminished by use.

Some, upon the first appearance of a looseness, fly immediately to the use of absorbent medicines, and astringents. If these be administered before the offending humours are discharged, though the disease may appear to be mitigated for a little time, it soon afterwards breaks forth with greater violence, and often proves fatal. After proper evacuations, however, these medicines may be administered with considerable advantage.

Should any gripings or restlessness remain after the stomach and bowels have been cleansed, a tea spoonful of the syrup of poppies may be given in a little simple cinnamon-water three or four times a-day till these symptoms have ceased.

OF ERUPTIONS.

Children, while on the breast, are seldom free from eruptions of one kind or other. These, however, are not often dangerous, and ought never to be dried up but with the greatest caution. They tend to free the bodies of infants from hurtful humours, which, if retained, might produce fatal disorders.

The eruptions of children are chiefly owing to improper food and neglect of cleanliness. If a child be stuffed at all hours with food, that its stomach is not able to digest, such food, not being properly assimilated, instead of nourishing the body, fills it with gross humours. These must either break out in form of

eruptions upon the skin, or remain in the body, and occasion fevers, and other internal disorders. That neglect of cleanliness is a very great cause of eruptive disorders must be obvious to ever one. The children of the poor, and of all who despise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with scab, itch, and other eruptions.

When eruptions are the effect of improper food, or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case, some drying medicines will be necessary. When they are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be prudently used. A little of the flour of sulphur may be mixed with fresh butter, oil, or hog's lard, and the parts affected frequently touched with it.

The most obstinate of all the eruptions incident to children, are the tinea capitis, or scabbed head, and chilblains. The scabbed head is often exceedingly difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died soon after the scabbed heads had been healed by the application of drying medicines.* The cure ought

* I some time ago saw a very striking instance of the danger of substituting dry medicines in the place of cleanliness and wholesome food, in the Foundling Hospital at Ackworth, where the children were grievously afflicted with scabby heads, and other cutaneous disorders. Upon inquiry, it was found that very little attention was paid either to the soundness or propriety of their provisions, and that cleanliness was totally neglected; accordingly, it was advised that they should have more wholesome food, and be kept thoroughly clean. This advice, however, was not followed. It was too troublesome to the servants, superintendants, &c. The business was to be done by medicine; which was accordingly attempted, but had nearly proved fatal to the whole house. Fevers and other internal disorders immediately appeared, and at length a putrid dysentery, which proved so infectious, that it carried off a great many of the children, and spread over a considerable part of the neighbouring country.

always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c. If this is not sufficient, let the head be shaved once a-week, washed daily with soap suds, and gently anointed with a liniment made of train-oil, eight ounces, red precipitate, in fine powder, one drachm. And if there be proud flesh, it should be touched with a bit of blue vitriol, or sprinkled with a little burnt alum. While these things are doing, the patient must be confined to a regular light diet, the body must be kept gently open, and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the neck or arm, which may be kept open till the patient becomes more strong, and the constitution be somewhat mended.

Chilblains commonly attack children in cold weather. They are generally occasioned by the feet or hands being long wet or cold, and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humours, and an infraction of the vessels; which being often repeated, the vessels are at last over distended, and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with mustard and brandy, or something of a warm nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes between cloths to the swelled parts, which frequently help to reduce them. When there is a sore, it must be dressed with Turner's cerate, the ointment of tutty, the plaster of cerus, or some other drying ointment. These sores are indeed troublesome, but seldom dangerous. They generally heal as soon as the warm weather sets in.

OF THE CROUP.

Children are often seized very suddenly with this disease, which, if not quickly relieved, proves mortal. It is known by various names in different parts of Britain. On the east coast of Scotland it is called the Croup. On the west they call it the Chock, or Stuffing. In some parts of England, where I have observed it, the good women call it Rising of the Lights. It seems to be a species of asthma, attended with very acute and violent catarrhal symptoms.

This disease generally prevails in cold and wet seasons. It is most common upon the sea-coast, and in low marshy countries. Children of a gross and lax habit are most liable to it. I have sometimes known it hereditary. It generally attacks children in the night, after having been much exposed to damp cold easterly winds through the day. Damp houses, wet feet, thin shoes, wet clothes, or any thing that obstructs the perspiration, may occasion the croup.

It is attended with a frequent pulse, quick and laborious breathing, which is performed with a peculiar kind of croaking noise, that may be heard at a considerable distance. The voice is sharp and shrill, and the face is generally much flushed, though sometimes it is of a livid colour.

When a child is seized with the above symptoms, his feet should immediately be put into warm water. He ought likewise to be bled,* and to have a laxative clyster administered as soon as possible. He should be made to breathe over the steams of warm water and vinegar; or an emollient decoction, or emollient cataplasms or fomentation may be applied round his neck. If the symptoms do not abate, a blistering plaster must be applied round the neck, or between the shoulders, and the child may take frequently a table-spoon-

* In this disease bleeding is not always proper; but in very full habits it must certainly be of use.

ful of the following julep;—Take penny-royal water three ounces, syrup of althea, and poppies, each one ounce; mix them together.

Asafœtida is found to have a good effect in this case. It may be both given in form of a clyster, and taken by the mouth. Two drachms of asafœtida may be dissolved in an ounce of Mindererus's spirit, and three ounces of penny-royal water: a table-spoonful of the mixture may be given every hour, or oftener, if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drachms of the asafœtida may be dissolved in a common clyster, and administered every six or eight hours, till the violence of the disease abates.*

To prevent a return of the disorder, all those things which occasion it must be carefully avoided, as wet feet, cold, damp, easterly wind, &c. Children who have had frequent returns of this disease, or whose constitutions seem to dispose them to it, ought to have their diet properly regulated; all food that is viscid or hard of digestion, and all crude, raw, trashy, fruits, are to be avoided. They ought likewise to have a drain constantly kept open in some part of the body, by means of a seton or issue. I have sometimes known a Burgundy-pitch plaster, worn continually between the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

* I was lately favoured with a letter from Dr. William Turnbull, in London, a physician of great experience, and who, from his former situation on the north-east coast of England had many opportunities of observing the symptoms and progress of this disease. He observes, he never found blistering of any service, and recommends cataplasms of garlic, camphor, and Venice treacle, to be applied to the throat and soles of the feet; he likewise recommends boluses of camphor, castor, valerian root, salt of hartshorn, and musk, adapted to the age, strength, &c. of the patient; after which he advises two spoonsful of the following decoction: take of garlic and distilled vinegar, each an ounce, hyssop-water, eight ounces; beat up the ingredients together, gradually mixing the water, and adding three ounces of honey. Let the whole be simmered over a gentle fire, and afterwards strained for use.

OF TEETHING.

Dr. Arbuthnot observes, above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are in a great measure owing to the great delicate and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education. Hence it comes to pass, that children who are delicately brought up, always suffer most in teething, and often fall by convulsive orders.

About the sixth or seventh month the teeth generally begin to make their appearance; first, the incisores, or fore teeth; next the canini, or dog-teeth; and, lastly, the morlares or grinders. About the seventh year there comes a new set; and about the twentieth the two inner grinders, called dentes sapientiæ, the teeth of wisdom.

Children about the time of cutting their teeth slaver much, and have generally a looseness. When the teething is difficult, especially when the dog-teeth begin to make their way through the gums, the child has startings in his sleep, tumours of the gums, watchings, gripes, green stools, the thrush, fever, difficult breathing, and convulsions.

Difficult teething requires nearly the same treatment as an inflammatory disease. If the body be bound, it must be opened either by emollient clysters or gentle purgatives; as manna, magnesia alba, rhubarb, senna, or the like. The food should be light, and in small quantity; the drink plentiful, but weak and diluting, as infusions of balm or of the lime-tree flowers; to which, about a third or fourth part of milk may be added.

If the fever be high, bleeding will be necessary but this in very young children ought always to be sparingly performed. It is an evacuation which they

bear the worst of any. Purging, vomiting, or sweating agree much better with them, and are generally more beneficial. Harris, however, observes, that when an inflammation appears, the physician will labour in vain if the cure be not begun with applying a leech under each ear. If the child be seized with convulsion fits, a blistering plaster may be applied between the shoulders, or one behind each ear.

Sydenham says, that in fevers, occasioned by teething, he never found any remedy so effectual as two, three, or four, drops of spirit of hartshorn in a spoonful of simple water, or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a larger dose necessary. It may be given from five drops to fifteen or twenty, according to the age of the child, and when costiveness does not forbid it, three or four drops of laudanum may be added to each dose.

In Scotland, it is very common, when children are cutting their teeth, to put a small Burgundy pitch plaster between the shoulders. This generally eases the tickling cough which attends teething, and is by no means an useless application. When the teeth are cut with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c.; but from these much is not to be expected. If any thing of this kind is to be used, we would recommend a little fine honey, which may be rubbed on with the finger three or four times a-day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the presssure of their gums, as a crust of bread, a wax-candle, a bit of liquorice-root, or such like.

With regard to cutting the gums, we have seldom

known it of any great benefit. In obstinate cases, however, it ought to be tried. It may be performed by the finger-nail, the edge of a sixpenny-piece that is worn thin, or any sharp body which can be with safety introduced into the mouth; but the lancet in a skilful hand is certainly the most proper.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and their nerves be braced by sufficient exercise without doors, the use of the cold-bath, &c. Were these things duly regarded, they would have a much better effect than teething-necklaces, or other nonsensical amulets, worn for that purpose

OF THE RICKETS.

This disease generally attacks children between the age of nine months and two years. It appeared first in England about the time the manufactures began to flourish, and still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either to take proper exercise themselves, or to give it to their children.

CAUSES.—One cause of the rickets is diseased parents. Mothers of a weak relaxed habit, who neglect exercise, and live upon a weak watery diet, can neither be expected to bring forth strong and healthy children or to be able to nurse them, after they are brought forth. Accordingly we find that the children of such women generally die of the rickets, the scrophula, consumption, or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, gravel, or other chronic diseases, or who have been often afflicted with the venereal disease in their youth, are likewise very liable to the rickets.

Any disorder that weakens the constitution or relaxes the habit of children, as the small-pox, measles, teething, the hooping-cough, &c. disposes them to this disease. It may likewise be occasioned by improper diet,

as food that is either too weak and watery, or so viscid that the stomach cannot digest it.

Bad nursing is the chief cause of this disease. When the nurse is either diseased, or has not enough of milk to nourish the child, it cannot thrive. But children suffer oftener by want of care in nurses, than want of food. Allowing an infant to lie or sit too much, or not keeping it thoroughly clean in its clothes, has the most pernicious effects.

The want of free air is likewise very hurtful to children in this respect. When a nurse lives in a close small house, where the air is damp and confined, and is too indolent to carry her child abroad into the open air, it will hardly escape this disease. A healthy child should always be in motion, unless when asleep; if it be suffered to lie or sit, instead of being tossed and dandled about, it will not thrive.

SYMPTOMS.---At the beginning of this disease the child's flesh grows soft and flabby; its strength is diminished; it loses its wonted cheerfulness, looks more grave and composed than is natural for its age, and does not choose to be moved. The head and belly become too large in proportion to the other parts; the face appears full, and the complexion florid. Afterwards the bones begin to be affected, especially in the more soft and spungy parts. Hence the wrist and ancles become thicker than usual; the spine or backbone puts on an unnatural shape; the breast is likewise often deformed, and the bones of the arms and legs grow crooked. All these symptoms vary according to the violence of the disease. The pulse is generally quick, but feeble; the appetite and digestion for the most part bad; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Ricketty children generally have great acuteness of mind, and an understanding above their years. Whether this is owing to their being more in the company of adults than other children, or to the preternatural enlargement of the brain, is not material.

REGIMEN.—As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty, or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as sweating is apt to weaken it, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, and the child kept as cheerful as possible.

The diet ought to be dry and nourishing, as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pullets, veal, rabbits, or mutton roasted or minced, are the most proper flesh. If the child be too young for flesh meats, he may have rice, millet, or pearl-barley, boiled with raisins, to which may be added a little wine and spice; his drink may be good claret, mixed with an equal quantity of water. Those who cannot afford claret, may give the child now and then a wine-glass of mild ale, or good porter.

MEDICINES.—Medicines are here of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a gross habit, gentle vomits, and repeated purges of rhubarb, may sometimes be of use, but they will seldom carry off the disease; that must depend chiefly upon such things as brace and strengthen the system; for which purpose, besides the regimen mentioned above, we would recommend the cold-bath, especially in the warm season. It must, however, be used with prudence, as some ricketty children cannot bear it. The best time for using the cold-bath is in the morning, and the child should be well-rubbed with a dry cloth immediately after he comes out of it If the child be weakened by the cold-bath, it must be discontinued

Sometimes issues have been found beneficial in this disease. They are peculiarly necessary for children who abound with gross humours. An infusion of the Peruvian bark in wine or ale would be of service, were it possible to bring children to take it. We might here mention many other medicines which have been recommended for the rickets; but as there is more danger in trusting to these than in neglecting them altogether, we choose rather to pass them over, and to recommend a proper regimen as the thing chiefly to be depended on.

OF CONVULSIONS.

Though more children are said to die of convulsions than of any other disease, yet they are for the most part only a symptom of some other malady. Whatever greatly irritates or stimulates the nerves, may occasion convulsions. Hence, infants, whose nerves are easily affected, are often thrown into convulsions by any thing that irritates the alimentary canal, likewise by teething, strait clothes, the approach of the small-pox, measles, or other eruptive diseases.

When convulsions proceed from an irritation of the stomach or bowels, whatever clears them of their acrid contents, or renders these mild and inoffensive, will generally perform a cure; wherefore, if the child be costive, the best way will be to begin with a clyster, and afterwards to give a gentle vomit, which may be repeated occasionally, and the body in the mean time kept open by gentle doses of magnesia alba, or small quantities of rhubarb, mixed with the powder of crabs' claws.

Convulsions which precede the eruption of the small-pox or measles, generally go off upon these making their appearance. The principal danger in this case arises from the fears and apprehensions of those who have the care of the patient. Convulsions are very alarming, and something must be done to appease the affrighted parents, nurses, &c. Hence

the unhappy infant often undergoes bleeding, blistering, and several other operations, to the great danger of its life, when a little time, bathing the feet in warm water, and throwing in a mild clyster, would have set all to rights.

When convulsion fits arise from the cutting of teeth, besides gentle evacuations, we would recommend blistering, and the use of antispasmodic mea sures, as the tincture of soot, asafœtida, or castor. A few drops of any of these may be mixed with a cup of white wine whey, and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by strait clothes, bandages, &c. these ought immediately to be removed, though in this case taking away the cause will not always remove the effect, yet it ought always to be done. It is not likely that the patient will recover, as long as the cause which first gave rise to the disorder continues to act.

When a child is seized with convulsions without having any complaint in the bowels, or symptoms of teething, or any rash or other discharge that has been suddenly dried up, we have reason to conclude that it is a primary disease, and proceeds immediately from the brain. Cases, however, of this kind happen but seldom, which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause, even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose, is to make some derivation from the head, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck, or between the shoulders.

OF WATER IN THE HEAD.

Though water in the head, or a dropsy in the brain, may affect adults as well as children, yet, as the latter

are more peculiarly liable to it, we thought it would be most proper to place it among the diseases of infants.

CAUSES.—A dropsy of the brain may proceed from injury done to the brain itself by falls, blows, or the like; it may likewise proceed from an original laxity, or weakness of the brain; from scirrhous tumours or excrescences within the skull; a thin watery state of the blood; a diminished secretion of urine: a sudden check of the perspiration; and lastly, from tedious and lingering diseases, which waste and consume the patient.

SYMPTOMS.—This disease has, at first, the appearance of a slow fever; the patient complains of a pain in the crown of his head, or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular, and sometimes low; though he seems heavy and dull, yet he does not sleep; he is sometimes delirious, and frequently sees objects double; towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are generally dilated, the cheeks flushed, the patient becomes comatose, and convulsions ensue.

MEDICINE.—No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring many things to light, of which, at present, we have no idea. The medicines generally used, are purges of rhubarb or jalap with calomel, and blistering-plasters applied to the neck or back part of the head. To which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted, by causing the patient to snuff the powder of asarum, white helebore, or the like.

Some practitioners have of late pretended to cure this disease by the use of mercury. I have not been so happy as to see any instance of a cure being performed

in a confirmed dropsy of the brain; but in so desperate a malady every thing deserves a trial.*

The writers on the disease of children have, under the show of precision, mustered such a catalogue as cannot fail to be alarming to parents. They have directed the application of medicine upon all occasions; whereas a proper treatment of the child, which we have endeavoured to inculcate, will render these in general unnecessary. The milk of the mother is at once the best food and physic, and if she take care of her own health by proper diet and regimen, the child will escape those complaints which are often, in a great measure, occasioned by the drugs it swallows. Exercise in the open air, and the regular use of the cold-bath, will be a complete preservative against all the consequences of a relaxed and nervous system. The skin and body thus braced, will be neither liable to colds, nor in a great measure to external contagion; or where an infectious disease does not attack him, the purity of the habit will destroy its malignity; and the only infantile malady respecting which any particular precaution need be taken, is the small-pox, the process of which is certain and safe, and always at the command of the parent.

CHAP. L.

OF SURGERY

TO describe all the operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far

* One reason why this disease is seldom or never cured, may be, that it is seldom known till too far advanced to admit of a remedy. Did parents watch the first symptoms, and call a physician in due time, I am inclined to think that something might be done. But these symptoms are not sufficiently known, and are often mistaken even by physicians themselves. Of this I lately saw a striking instance in a patient attended by an eminent practitioner in this city who had all along mistaken the disease for teething.

beyond the limits set to it; we must therefore confine our observations to such cases as most generally occur, and in which proper assistance is either not asked, or not always to be obtained.

Though an acquaintance with the structure of the humanbody is indispensably necessary to qualify a man for being an expert surgeon, yet many things may be done to save the lives of their fellow-men in emergencies by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species; yet they seldom fail of success.

Indeed every man is in some measure a surgeon, whether he will or not. He feels an inclination to assist his fellow-man in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment, are apt to mislead. Thus one by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend expire, without so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon such emergencies.

OF BLEEDING.

No operation of surgery is so frequently necessary as bleeding; it ought therefore to be very generally understood. But though practised by midwives, gardeners, blacksmiths, &c. we have reason to believe that very few know when it is proper. Even physicians themselves have been so much the dupes of theory in this article, as to render it the subject of ridicule. It is, however, an operation of great importance, and must, when seasonably and properly performed, be of singular service to those in distress.

Bleeding is proper at the beginning of all inflammatory fevers, as pleurisies, peripneumonies, &c. It is likewise proper in all topical inflammations, as those of the intestines, womb, bladder, stomach, kidneys, throat, eyes, &c.; as also in the asthma, sciatic pains, coughs, head-achs, rheumatisms, the apoplexy, epilepsy, and bloody flux. After falls, blows, bruises, or any violent hurt, received either externally or internally, bleeding is necessary. It is likewise necessary for persons who have had the misfortune to be strangled, drowned, suffocated with foul air, the fumes of metal, or the like. In a word, whenever the vital motions have been suddenly stopped from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein. But in all disorders proceeding from a relaxation of the solids, and an impoverished state of the blood, as dropsies, cacochymies, &c. bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life, and other circumstances relating to the patient. It would be ridiculous to suppose that a child could bear to lose as much blood as a grown person, or that a delicate lady should be bled to the same extent as a robust man.

From whatever part of the body blood is to be let, a bandage mustbe applied between that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow, to slacken it a little. The bandage ought to be applied at least an inch and a half from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or tendon, if they can avoid it. The former may easily be known from its pulsation or beating, and the latter from its feeling hard or tight like a whip-cord under the thumb.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely, a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will lose almost the whole blood of his body before he faints. Swoonings depend more upon the state of the mind than upon the body; besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This, though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are not easily healed. Would those who practise bleeding take a little more pains, and accustom themselves to bleed children, they would not find it such a difficult operation as they imagine.

Certain hurtful prejudices with regard to bleeding still prevail among the country-people. They talk, for instance, of head-veins, heart-veins, breast-veins, &c. and believe that bleeding in these will certainly cure all diseases of the parts from whence they are supposed to come, without considering that all the blood-vessels arise from the heart, and return to it again; for which reason, unless in topical inflammations, it signifies very little from what part of the body blood is taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation, when necessary, in order to reserve it for some more important occasion, and when they think themselves in extreme danger, they fly to it for relief, whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects,

It is a common notion that bleeding in the feet draws the humours downwards, and consequently cures disorders of the head and other superior parts; but we have already observed that, in all topical affections, the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small, and the bleeding is apt to stop too soon, the part ought to be immersed in warm water, and kept there till a sufficient quantity of blood be let.

We shall not spend time in describing the manner of performing this operation; that will be better learned by example than precept. Twenty pages of description would not convey so just an idea of the operations as seeing it once performed by an expert hand. Neither is it necessary to point out the different parts of the body from whence blood may be let, as the arm, foot, forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is only to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

OF INFLAMMATIONS AND ABSCESSES.

From whatever cause an inflammation proceeds, it must terminate either by a dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed: those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented; and, if the skin be very tense, it may be imbrocated with a mixture of three-fourths of sweet-oil and one-fourth of vinegar, and afterwards covered with a piece of wax-plaster.

If, notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceed but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, fluctuation of matter which may easily be felt under the finger, and, generally, an abatement of the pain, it may be opened with a lancet, or by means of caustic.

The last way in which an inflammation terminates is in a gangrene or mortification, the approach of which may be known by the following symptoms: the inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor, of different colours, spread all over it; the tumour subsides, and, from a duskish complexion, becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death.

When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran. Should these symptoms become worse, the part must be scarified, and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian bark exhibited in as large doses as the stomach will bear it.

If the mortified parts should separate, the wound would become a common ulcer, and must be treated accordingly.

This article includes the treatment of all those diseases which in different parts of the country go by the names of boils, imposthumes, whitloes, &c. They are all abscesses, in consequence of a previous inflammation, which, if possible, ought to be discussed; but when this cannot be done, the suppuration should be promoted, and the matter be discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

OF WOUNDS.

No part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters are possessed of wonderful healing powers, and imagine that no wound can be cured without the application of them. It is, however, a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint, as by the most popular applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of Nature. It is Nature alone that cures wounds. All that art can do is, to remove obstacles, and to put the parts in such a condition as is the most favourable to Nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavour to point out such steps as ought be taken to facilitate their cure.

The first thing to be done, when a person has received a wound, is to examine whether any foreign

body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth, or the like. These, if possible, ought to be extracted, and the wound cleansed before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that if it be not stopped, the patient may die, even before a surgeon, though at no great distance, can arrive. In this case something must be done by those who are present. If the wound be in any of the limbs, the bleeding may generally be stopped by applying a tight ligature or bandage round the member a little above the wound. The best method of doing this, is to put a strong broad garter round the part, but so slack as easily to admit a small piece of stick to be put under it, which must be twisted in the same manner as a countryman does a cart-rope to secure his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as straining it too much might occasion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents &c. Cloths dipped in a solution of blue vitriol in water, or the styptic water of the dispensatories may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommend the agaric * of oak as preferable

* Dr. Tissot, in his Advice to the People, gives the following directions for gathering, preparing, and applying the agaric; ---Gather in autumn, (says he) while the fine weather lasts, the agaric of oak;

to any other styptics ; and indeed it deserves considerable encomiums. It is easily obtained, and ought to be kept in every family, in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on.

Though spirits, tinctures, and hot balsams, may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem as it were to solder up the wound, that they therefore heal it; but this is only a deception. They may, indeed, stop the flowing by searing the mouths of the vessels; but by rendering the parts callous, they obstruct the cure.

In slight wounds which do not penetrate much deeper than the skin, the best application is a bit of the common black sticking-plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all that is necessary, When a wound penetrates deep, it is not safe to keep its lips quite close ; this keeps in the matter, and is apt to make the wound fester. In this case, the best way is to fill the wound with soft lint, commonly called caddis. It must, however, not be stuffed too hard, otherwise it will do hurt. The caddis may be covered with a cloth dipped in oil, or spread with

which is a kind of fungus, or excrescence issuing from the wood of that tree. It consists at first of four parts, which present themselves successively. 1. The outward rind or skin, which may be thrown away. 2. The part immediately under this rind, which is the best of all. This is to be beat well with a hammer till it becomes soft and pliable ; this is the only preparation it requires, and a slice of it of a proper size is to be applied directly over the bursting open blood-vessels. It constringes and brings them close together, stops the bleeding, and generally falls off at the end of two days. 3. The third part adhering to the second, may serve to stop the bleeding from the smaller vessels ; and the fourth and last part may be reduced to powder, as conducing to the same purpose. Where the agaric cannot be had, sponge may be used in its stead. It must be applied in the same manner, and has nearly the same effects.

the common wax-plaster,* and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body; common sense will generally suggest the most commodious method of applying a bandage; besides, descriptions of this kind are not easily understood or remembered.

The first dressing ought to continue on at least two days; after which it may be removed, and fresh lint applied as before. If any part of the first dressing sticks so close as not to be removed with ease or safety to the patient, it may be allowed to continue, and fresh lint dipped in sweet-oil laid over it. This will soften it, so as to make it come off easily at the next dressing Afterwards the wound may be dressed twice a day in the same manner till it be quite healed. Those who are fond of salves or ointments may, after the wound is become very superficial, dress it with the yellow basilicon;† and if fungous, or what is called proud flesh should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum or red precipitate of mercury.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a-day.

If the wound be large, and there is reason to fear an inflammation, the patient must be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled; and if the symptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted. It is

* See Appendix, *Wax plaster.* † See Appendix, *Yellow Basilicon.*

always more safe to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to keep perfectly quiet and easy. Every thing that ruffles the mind, or moves the passions, as love, anger, fear, excessive joy, &c. are very hurtful. They ought above all things to abstain from venery. The body should be kept gently open, either by laxative clysters, or by a cool vegetable diet, as roasted apples stewed prunes, boiled spinage, and such like.

OF BURNS.

In slight burns, which do not break the skin, it is customary to hold the part near the fire for a competent time, to rub it with salt, or to lay a compress upon it, dipped in spirits of wine or brandy. But when the burn has penetrated so deep, as to blister or break the skin, it must be dressed with some of the liniment for burns mentioned in the Appendix, or with the emollient and drying ointment, commonly called Turner's Cerate.* This may be mixed with an equal quantity of fresh olive-oil, and spread upon a soft rag, and applied to the part affected. When this ointment cannot be had, an egg may be beat up with about an equal quantity of the sweetest salad-oil. This will serve very well till a proper ointment can be prepared. When the burning is very deep, after the first two or three days, it should be dressed with equal parts of yellow basilicon and Turner's Cerate mixed together.

When the burn is violent, or has occasioned a high degree of inflammation, and there is reason to fear a gangrene or mortification, the same means must be used to prevent, as are recommended in other violent inflammations. The patient, in this case, must live low, and drink freely of weak diluting liquors. He must likewise be bled, and have his body kept open. But if the burnt

* See Appendix, *Turner's Cerate.*

parts should become livid or black, with other symptoms of mortification, it will be necessary to bathe them frequently with warm camphorated spirits of wine, tincture of myrrh, or other antiseptics, mixed with a decoction of the bark. In this case the bark must likewise be taken internally, and the patient's diet must be more generous, with wine, &c.

As example teaches better than precept, I shall relate the treatment of the most dreadful case of this kind that has occurred in my practice. A middle-aged man, of a good constitution, fell into a large vessel full of boiling water, and miserably scalded about one half of his body: as his cloaths were on, the burning in some parts was very deep before they could be got off. For the first two days the scalded parts had been frequently anointed with a mixture of lime-water and oil, which is a very proper application for recent burnings. On the third day, when I first saw him, his fever was high, and his body costive; for which he was bled, and had an emollient clyster administered. Poultices of bread and milk softened with fresh-butter, were likewise applied to the affected parts, to abate the heat and inflammation. His fever still continuing high, he was bled a second time, was kept strictly on the cooling regimen, took the saline mixture with small doses of nitre, and had an emollient clyster administered once a-day. When the inflammation began to abate, the parts were dressed with a digestive composed of brown cerate and yellow basilicum. When any black spots appeared, they were slightly scarified, and touched with the tincture of myrrh; and, to prevent their spreading, the Peruvian bark was administered. By this course the man was so well in three weeks as to be able to attend his business.

OF BRUISES.

Bruises are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often

happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the mode of treating it.

In slight bruises it will be sufficient to bathe the part with warm vinegar, to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung I have often seen this cataplasm applied to violent contusions, occasioned by blows, falls, bruises, and such like, and never knew it fail to have a good effect.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak, and of an opening nature; as whey sweetened with honey, decoctions of tamarinds, barley, cream-tartar whey, and such like. The bruised part may be bathed with vinegar and water, as directed above; and a poultice, made by boiling crumbs of bread, elder-flowers, and camomile-flowers, in equal quantities of vinegar and water, applied to it. The poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens that these sores are frequently mistaken for the king's evil, and treated as such, though in fact they proceed solely from the injury which the solid parts received from the blow.

patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them but some simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile-flowers, or the like, may be put to nourish the part, and keep it soft and warm. Nature, thus assisted will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

Ulcers may be the consequence of wounds, bruises, or imposthumes, improperly treated; they may likewise proceed from an ill state of the humours, or what may be called a bad habit of the body.

In the latter case, they ought never to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, and the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humour, which is often so acrid as to inflame and corrode the skin, by the hardness and perpendicular situation of its sides or edges, by the time of its duration, &c.

It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body, should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem dis-

posed to heal of their own accord. Ulcers, which are the effect of malignant fevers, or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not, however, to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by a wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronical diseases, or come in their stead, they must be cautiously healed. If an ulcer conduces to the patient's health, from whatever cause it proceeds, it ought not to be healed; but if, on the contrary, it wastes the strength, and consumes the patient by a slow fever, it should be healed as soon as possible.

We would earnestly recommend a strict attention to these particulars, to all who have the misfortune to labour under this disorder, particularly persons in the decline of life; as we have frequently known people throw away their lives by the want of it, while they were extolling, and generously rewarding those whom they ought to have looked upon as their executioners.

The most proper regimen for promoting the cure of ulcers is, to avoid all spices, salted and high seasoned food, all strong liquors, and to lessen the usual quantity of flesh meat. The body ought to be kept gently open by a diet consisting chiefly of cooling laxative vegetables, and by drinking butter-milk, whey sweetened with honey, or the like. The patient should be cheerful, and take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a day with a little red precipitate of mercury, and afterwards dressed with the yellow basilicum ointment. Sometimes it will be necessary to have the edges of the ulcer scarified with the lancet.

Lime-water has been frequently known to have a very happy effect in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel.

My late learned and ingenious friend Dr. White, strongly recommends the use of the solution of corrosive sublimate of mercury in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the doctor's directions, prove very successful. The dose is a table-spoonful night and morning; at the same time washing the sore twice or thrice a-day with it. In a letter which I had from the doctor a little before his death, he informed me, that he observed washing the sore twice a day with the solution of a triple strength was very beneficial.*

A fistulous ulcer can seldom be cured without an operation. It must either be laid open, so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away by the knife; but as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the anus are most apt to become fistulous, and are very difficult to cure. Some indeed pretend to have found Ward's fistula-paste very successful in this complaint. It is not a dangerous medicine, and being easily procured, it may deserve a trial; but as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen, assisted by medicines, which are calculated to correct that particular habit, and to produce an almost total change in the constitution.

CHAP. LI.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be luxated or dislocated. As this often hap-

* In ulcers of the lower limbs great benefit is often received from tight rollers, or wearing a laced stocking, as this prevents the flux of humours to the sores, and disposes them to heal.

pens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient, than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction; and by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for any considerable time, and a swelling or inflammation has come on, it will be necessary to bleed the patient, and after fomenting the part, to apply soft poultices with vinegar to it for some time before the reduction is attempted.

All that is necessary after the reduction, is to apply cloths dipped in vinegar, or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.

The lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily

known from the patient's being unable to shut his mouth; or to eat any thing, as the teeth of the under jaw do not correspond with those of the upper; besides, the chin either hangs down or is thrown toward one side, and the patient is neither able to speak distinctly, nor to swallow without considerable difficulty.

The usual method of reducing a dislocated jaw, is to set the patient upon a low stool, so as an assistant may hold the head firm by pressing it against his breast. The operator is then to thrust his two thumbs, being first wrapped up with linen cloths, that they may not slip, as far back into the patient's mouth as he can, while his fingers are applied to the jaw externally. After he has got firm hold of the jaw, he is to press it strongly downwards and backwards, by which means the elapsed heads of the jaw, may be easily pushed into their former cavities.

The peasants in some parts of the country have a peculiar way of performing this operation. One of them puts a handkerchief under the patient's chin, then turning his back to that of the patient, pulls him up by the chin so as to suspend him from the ground.

This method often succeeds, but we think it a dangerous one, and therefore recommend the former.

DISLOCATION OF THE NECK.

The neck may be dislocated by falls, violent blows, or the like. In this case, if the patient receives no assistance, he soon dies, which makes people imagine the neck was broken; it is, however, for the most part, only partially dislocated, and may be reduced by almost any person who has resolution enough to attempt it. A complete dislocation of the neck is instantaneous death.

When the neck is dislocated, the patient is immediately deprived of all sense and motion; his neck swells, his countenance appears bloated, his chin lies upon his breast, and his face is generally turned towards one side.

To reduce this dislocation, the unhappy person should immediately be laid on his back upon the

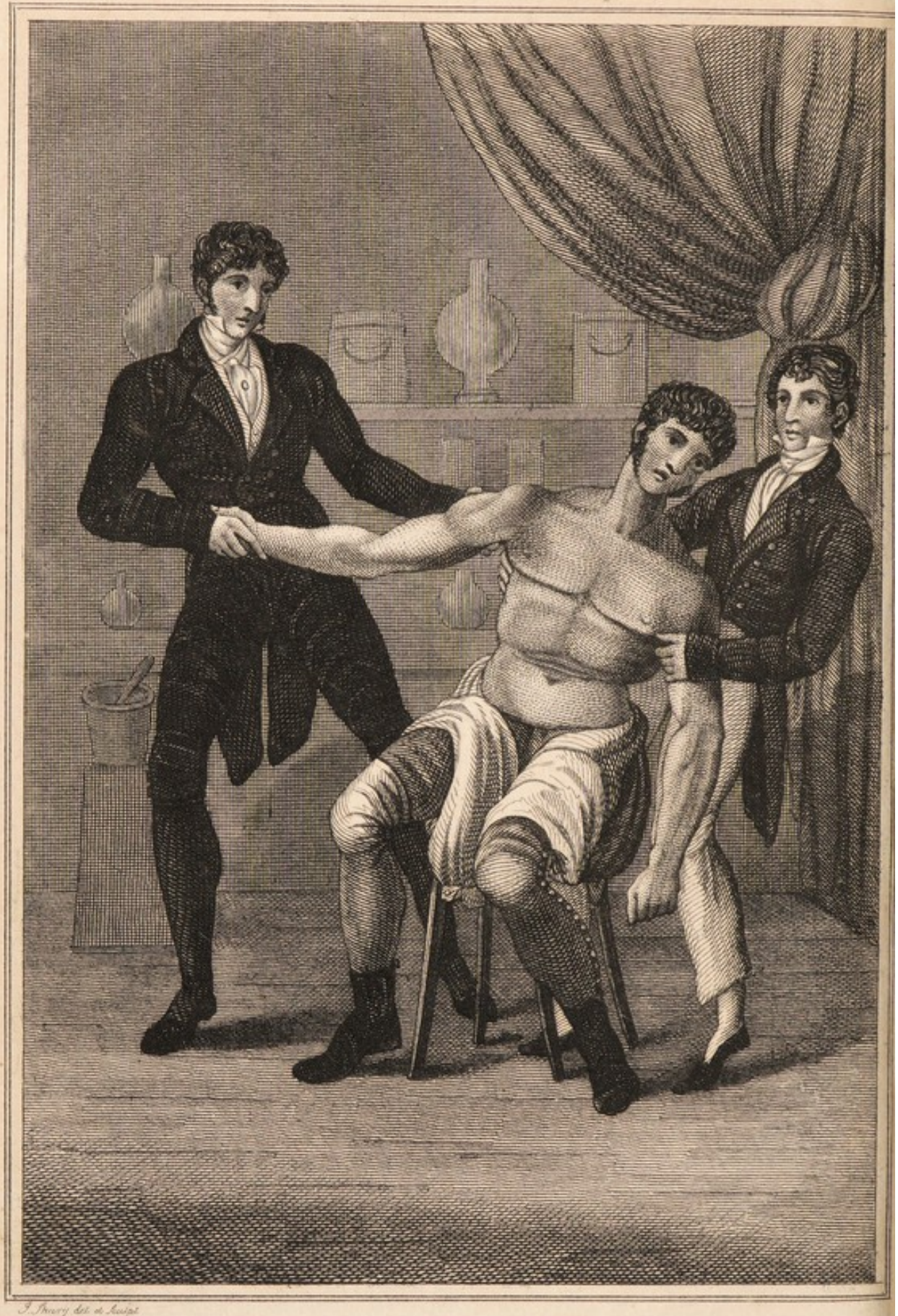
ground, and the operator must place himself behind him, so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural state.

This is one of those operations which it is more easy to perform than describe. I have known instances of its being happily performed, even by women, and often by men of no medical education. After the neck is reduced, the patient ought to be bled, and should be suffered to rest for some days, till the parts recover their proper tone.

DISLOCATION OF THE RIBS.

As the articulation of the ribs with the back-bone is very strong, they are not often dislocated. It does, however, sometimes happen, which is a sufficient reason for our taking notice of it. When a rib is dislocated either upwards or downwards, in order to replace it, the patient should be laid upon his belly on a table, and the operator must endeavour to push the head of the bone into its proper place. Should this method not succeed, the arm of the disordered side may be suspended over a gate or ladder, and while the ribs are thus stretched asunder, the heads of such as are out of place may be thrust into their former place.

Those dislocations wherein the heads of the ribs are forced inwards, are both more dangerous and the most difficult to reduce, as neither the hand nor any instrument can be applied internally to direct the luxated heads of the ribs; almost the only thing that can be done is, to lay the patient upon his belly over a cask, or some gibbous body, and to move the fore part of the rib, inward towards the back, sometimes shaking it;



J. Storer del. et Sculpt.

Dislocation of the Shoulder.

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by this means the heads of the luxated ribs may slip into their former place.

DISLOCATION OF THE SHOULDER.

The humerus or upper bone in the arm may be dislocated in various directions; it happens, however, most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to internal injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression or cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm-pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast.

The usual methods of reducing dislocations of the shoulder is, to set the patient upon a low stool, and to cause an assistant to hold his body, so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck: by this, while a sufficient extension is made, he lifts up the head of the bone, and with his hands directs it into its proper place. There are various machines invented for facilitating this operation, but the hand of an expert surgeon is always more safe. In young and delicate patients, I have generally found it a very easy matter to reduce the shoulder, by extending the arm with one hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

The bones of the fore-arm may be dislocated in any direction. When this is the case, a protube-

rance may be observed on that side of the arm towards which the bone is pushed, from which, and the patients inability to bend his arm, a dislocation of this joint may easily be known.

Two assistants are generally necessary for reducing a dislocation of the elbow, one of them must lay hold of the arm above, and the other below the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow, viz. by making an extension in different directions, and thrusting the head of the bone in its place.

DISLOCATION OF THE THIGH.

When the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other; but when it is displaced backward, it is usually pushed upward at the same time, by which means the limb is shortened, and the foot is turned inward.

When the thigh bone is displaced forward and downward, the patient, in order to have it reduced, must be laid upon his back, and made fast by bandages, or held by assistants, while by others an extension is made by means of slings fixed about the bottom of the thigh a little above the knee. While the extension is made, the operator must push the head of the bone outward, till it gets into the socket. If the dislocation be outward, the patient must be laid upon his face, and, during the extension, the head of the bone must be pushed inward.

Dislocations of the knees, ankles, and toes, are reduced much in the same manner as those of the upper extremities, viz. by making an extension in opposite directions, while the operator replaces the bones. In many cases, however, the extension alone is sufficient, and the bone will slip

into its place, merely by pulling the limb with a sufficient force. It is not hereby meant, that force alone is sufficient for the reduction of dislocations. Skill and address will often succeed better than force. I have known a dislocation of the thigh reduced by one man, after all the force that could be used by six had proved ineffectual.

CHAP. LII.

OF BROKEN BONES, &c.

THERE is, in most country villages, some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves that a small degree of learning, with a sufficient share of common sense, and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skilful surgeon can be had; but when that is impracticable, they must be employed; we shall therefore recommend the following hints to their consideration:

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters; or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought, however, to be here remarked that persons who have been accustomed to live high, are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any

bruise or contusion. This operation should not only be performed soon after the accident happens, but if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed-chair, or the like, which will greatly relieve him. Great care, however, must be taken in laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place.*

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this, he is often so galled and excoriated, that he is forced to keep shifting places for ease. I have known a fractured thigh-bone, after it had been kept straight for above a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary, when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient, and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limb when it

* Various pieces of machinery have been contrived for counteracting the force of the muscles, and retaining the fragments of broken bones; but as descriptions of these without drawings would be of little use, I shall refer the reader to a cheap and useful performance *On the Nature and Cure of Fractures*, lately published by my ingenious friend, Mr. Atkin, surgeon, in Edinburgh; wherein that gentleman has not only given an account of the machines recommended in fractures by former authors, but has likewise added many improvements of his own, which are peculiarly useful in compound fractures, and in cases where patients with broken bones are obliged to be transported from one place to another.

goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into several pieces. In this case it will sometimes be necessary to have the limb immediately taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation, often occasions its being delayed in such cases till too late I have known this principle operate so strongly, that a limb, where the bones were shattered into more than twenty pieces, was not amputated before the third day after the accident, when the gangrene had proceeded so far as to render the operation useless.

When a fracture is accompanied with a wound, it must be dressed in all respects as a common wound.

All that art can do towards the cure of a broken bone, is to lay it perfectly straight, and to keep it quite easy. All tight bandages do hurt. They had much better be wanting altogether. A great many of the bad consequences which suceeed to fractured bones, are owing to tight bandages. This is one of the ways in which the excess of art, or rather the abuses of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cures of broken bones which were ever known, happened where no bandages were applied at all. Some method, however, must be taken to keep the member steady; but this may be done many ways, without bracing it with a tight bandage.

The best method of retention is by two or more splints made of leather or pasteboard. These, if moistened before they are applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The bandage which we would recommend is that made of twelve or eighteen tails. It is much easier applied and taken off than rollers,

and answers all the purposes of retention equally well. The splints should always be as long as the limb, with holes cut for the ancles, when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors.

The most proper external applications for a fracture is oxycrate, or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

Strains are often attended with worse consequences than broken bones. The reason is obvious: they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is only strained the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady, what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper, provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels, and prevents the action of the parts from increasing the

disease. It should not, however, be applied too tight. I have frequently known bleeding near the affected part have a very good effect: but what we would recommend above all, is ease. It is more to be depended on than any medicine, and seldom fails to remove the complaint.*

CHAP. LIII.

OF CASUALTIES.

IT is certain that life, when to all appearance lost, may often, by due care, be restored. Accidents frequently prove fatal, merely because proper means are not used to counteract their effects. No person ought to be looked upon as killed by any accident, unless where the structure of the heart, brain, or some organ necessary to life, is evidently destroyed. The action of these organs may be so far impaired, as even to be for some time imperceptible, when life is by no means gone. In this case, however, if the fluids be suffered to grow cold, it will be impossible to put them again in motion, even though the solids should recover their power of acting. Thus, when the motion of the lungs has been stopped by unwholesome vapour, the action of the heart by a stroke on the breast, or the functions of the brain by a blow on the head, if the person be suffered to grow cold, he will in all probability continue so; but if the body be kept warm, as soon as the injured part has recovered its power of acting, the fluids will again begin to move, and all the vital functions will be restored.

It is a horrid custom, immediately to consign over to

* A great many external applications are recommended for strains, some of which do good, and others hurt. The following are such as may be used with the greatest safety, viz. poultices made of stale beer or vinegar and oatmeal, camphorated spirits of wine, Mindererus's spirit, volatile liniment, volatile aromatic spirit diluted with a double quantity of water, and the common fomentation, with the addition of brandy or spirit of wine.

death every person who has the misfortune, by a fall, a blow, or the like, to be deprived of the appearance of life. The unhappy person, instead of being carried into a warm house, and laid by the fire, or put to a warm bed, is generally hurried away to church, or a barn, or some other cold damp house, where, after a fruitless attempt has been made to bleed him, perhaps by one who knew nothing of the matter, he is given over for dead, and no farther notice taken of him. This conduct seems to be the result of ignorance, supported by an ancient superstitious notion which forbids the body of a person killed by accident to be laid in an house that is inhabited. What the ground of this superstition may be, we shall not pretend to inquire; but surely the conduct founded upon it is contrary to all the principles of reason, humanity, and common sense.

When a person seems to be suddenly deprived of life, our first business is to inquire into the cause We ought carefully to observe whether any substance be lodged in the windpipe or gullet; and, if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped, from any cause whatever, except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c. to promote the circulation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the patient with hot cloths or salt, and covering his body with warm sand, ashes, or the like.

I should now proceed to treat more fully of those accidents, which, without immediate assistance, would prove fatal, and to point out the most likely means for relieving the unhappy sufferers; but as I have been happily anticipated in this part of my subject by the learned and humane Dr. Tissot, I shall content myself with selecting such of his observations as seem to be

the most important, and adding such of my own as have occurred in the course of practice.

OF SUBSTANCES STOPT BETWEEN THE MOUTH AND STOMACH.

Though accidents of this kind are very common, and extremely dangerous, yet they are generally the effect of carelessness. Children should be taught to chew their food well, and to put nothing into their mouth which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who put pins, nails, and other sharp-pointed substances, in their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly injudicious, as a fit of coughing, or twenty other accidents, may force them down over the substance before the person is aware *.

When any substance is detained in the gullet, there are two ways of removing it, viz. either by extracting it, or pushing it down. The safest and most certain way is to extract it; but this is not always the easiest; it may therefore be more eligible sometimes to thrust it down, especially when the obstructing body is of such a nature, that there is no danger from its reception into the stomach. The substances which may be pushed down without danger, are all common nourishing ones, as bread, flesh, fruits, and the like. All indigestible bodies, as cork, wood, bones, pieces of metal, and such like, ought, if possible, to be extracted, especially if these bodies be sharp-pointed, as pins, needles, fish-bones, bits of glass, &c.

When such substances have not passed in too deep, we should endeavour to extract them with our fingers; which method often succeeds. When they are lower, we must make use of nippers, or a small pair of for-

* A woman in one of our hospitals in this city lately discharged a great number of pins, which she had swallowed in the course of her business, through an ulcer in her side.

ceps, such as surgeons use. But this attempt to extract rarely succeeds, if the substances be of a flexible nature, and has descended far into the gullet.

If the fingers and nippers fail, or cannot be duly applied, crotchets, a kind of hooks, must be employed. These may be made at once, by bending a piece of pretty strong iron-wire at one end. It must be introduced in the flat way; and, for the better conducting it, there should likewise be a curve or bending at the end it is held by, to serve as a kind of handle to it; which has this further use, that it may be secured by a string tied to it; a circumstance not to be omitted in any instrument employed on such occasions, to avoid such ill accidents as have sometimes ensued from these instruments slipping out of the operator's hand. After the crotchet has passed below the substance that obstructs the passage, it is drawn up again, and hooks up the body along with it. The crotchet is also very convenient, when a substance somewhat flexible, as a pin or fish-bone, sticks across the gullet, the hook, in such cases, seizing them about the middle part, crooks and thus disengages them; or, if they are very brittle substances, serves to break them.

When the obstructing bodies are small, and only stop up a part of the passage, and which may either easily elude the hook, or straighten it by their resistance, a kind of rings, made either of wire, wool, or silk, may be used. A piece of fine wire of a proper length may be bent into a circle about the middle, of about an inch diameter, and the long unbent sides brought parallel, and near each other: these are to be held in the hand, and the circular part or ring introduced into the gullet, in order to be conducted about the obstructing body, and so to extract it. More flexible rings may be made of wool, thread, silk, or small packthread, which may be waxed for their greater strength and consistence. One of these is to be tied fast to a handle of iron wire, whalebone, or any kind of flexible wood, and by this means introduced, in order to surround the obstructing substance, and to draw it out. Several of these rings

passed through one another, may be used, the more certainly to lay hold of the obstructing body, which may be involved by one, if another should miss it. These rings have one advantage, which is, that when the substance to beextracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted, as to be moved every way, which must in many cases be a considerable advantage.

Another material employed on these unhappy occasions is the sponge. Its property of swelling considerably on being wet is the principal foundation of its usefulness here. If any substance is stopped in the gullet, but without filling up the whole passage, a bit of sponge may be introduced into that part which is unstopped, and beyond the substance. The sponge soon dilates, and grows larger in this moist situation; and indeed the enlargement of it may be forwarded by making the patient swallow a few drops of water. Afterwards it is to be drawn back by the handle to which it is fastened; and as it is now too large to return through the small cavity by which it was conveyed in, it draws out the obstructing body along with it.

The compressibility of sponge is another foundation of its usefulness in such cases. A pretty large piece of sponge may be compressed or squeezed into a small size, by winding a string of tape closely about it, which may be easily unwound and withdrawn, after the sponge has been introduced. A bit of sponge may likewise be compressed by a piece of whalebone split at one end; but this can hardly be introduced in such a manner as not to hurt the patient.

I have often known pins and other sharp bodies, which had stuck in the throat, brought up by causing the person to swallow a bit of tough meat tied to a thread, and drawing it quickly up again. This is safer than swallowing sponge, and will often answer the purpose equally well.

When all these methods prove unsuccessful, there remains one more, which is, to make the patient vomit; but this can scarcely be of any service, unless when such obstructing bodies are simply engaged in

and not hooked or stuck into the sides of the gullet, as in this case vomiting might sometimes occasion farther mischief. If the patient can swallow, vomiting may be excited by taking half a drachm or two scruples of ipecacuanha in powder made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting, by tickling his throat, with a feather: and if that should not succeed, a clyster of tobacco may be administered. It is made by boiling an ounce of tobacco in a sufficient quantity of water. This has often been found to succeed, when other attempts to excite vomiting had failed.

When the obstructing body is of such a nature that it may with safety be pushed downwards, this may be attempted by means of a wax-candle oiled, and a little heated, so as to make it flexible; or a piece of whalebone, wire, or flexible wood, with a sponge fastened to one end.

Should it be impossible to extract even those bodies which it is dangerous to admit into the stomach, we must then prefer the least of two evils, and rather run the hazard of pushing them down, than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened, where the swallowing of such hurtful and indigestible substances has been followed by no disorder.

Whenever it is manifest that all endeavours either to extract or push down the substance must prove ineffectual, they should be discontinued; because the inflammation occasioned by persisting in them, might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been entirely removed.

While the means recommended above are making use of, the patient should often swallow, or, if he cannot, he should frequently receive by injection, through a crooked tube or pipe that may reach down to the gullet, some emollient liquor, as warm milk and water, barley-water, or a decoction of mallows. Injections of

this kind not only soften and soothe the irritated parts, but, when thrown in with force, are often more successful in loosening the obstruction than all attempts with instruments.

When, after all our endeavours, we are obliged to leave the obstructing body in the part, the patient must be treated as if he had an inflammatory disease. He should be bled, kept upon a low diet, and have his whole neck surrounded with emollient poultices. The like treatment must also be used, if there be any reason to suspect an inflammation of the passages, though the obstructing body be removed.

A proper degree of agitation has sometimes loosened the inhering body more effectually than instruments. Thus a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the windpipe. In this case vomiting and sneezing are likewise to be excited. Pins, which stuck in the gullet, have been frequently discharged by riding on horseback or in a carriage.

When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits, and farinaceous substances, as puddings, pottage, and soups. He should avoid all heating and irritating things as wine, punch, pepper, and such like; and his drink should be milk and water, barley-water, or whey.

When the gullet is so strongly and fully closed, that the patient can receive no food by the mouth, he must be nourished by clysters of soup, jelly, and the like.

When the patient is in danger of being immediately suffocated, and all hope of freeing the passage is vanished, so that death seems at hand, if respiration be not restored, the operation of bronchotomy, or opening of the wind-pipe, must be directly performed. As this operation is neither difficult to an expert surgeon, nor very painful to the patient, it is often the only method which can be taken to preserve

life in these emergencies. We thought proper to mention it, though it should only be attempted by persons skilled in surgery.

OF NOXIOUS VAPOURS.

Air may be many ways rendered noxious, or even destructive to animals. This may either happen from its vivifying principle being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire or the life of animals. Hence the danger of sleeping in close chambers, with charcoal-fires. Some indeed suppose the danger proceeds from the sulphureous oil contained in the charcoal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the air of the room being charged with phlogiston. Be this as it may, it is a situation carefully to be avoided. Indeed, it is dangerous to sleep in a small apartment with a fire of any kind. I lately saw four persons who had been suffocated by sleeping in an apartment where a small fire of coal had been left burning.

The vapour which exhales from wine, cyder, beer, or other liquors in the state of fermentation, contains something poisonous, which kills in the same manner as the vapour of coal. Hence there is always danger in going into cellars where a large quantity of these liquors is in a state of fermentation, especially if they have been close shut up for some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterraneous caves, that have been very long shut, are opened, or when deep wells are cleaned which have not been emptied for several years, the vapours arising from them produce the same effects as those mentioned above. For this reason, no person ought to venture into a well, pit, cellar, or any place that is damp, and has been long shut up, till

the air has been sufficiently purified, by burning gunpowder in it. It is easy to know, as has been observed in a former part of this work, when the air of such places is unwholesome, by letting down a lighted candle, throwing in burning fuel, or the like. If these continue to burn, people may safely venture in; but where they are suddenly extinguished, no one ought to enter till the air has been first purified by fire.

The offensive stink of lamps and of candles, especially when their flames are extinguished, operate like other vapours, though with less violence, and less suddenly. There have, however, been instances of people killed by the fumes of lamps which had been extinguished in a close chamber; and persons of weak delicate breasts generally find themselves quickly oppressed in apartments illuminated with many candles.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air, or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned, as to have lost their feeling and understanding, the following means might be used for their recovery.

The patient should be exposed to very pure, fresh, and open air; and volatile salts, or other stimulating substances, held to the nose. He should next be bled in the arm, or, if that does not succeed, in the neck. His legs ought to be put into warm water. and well rubbed. As soon as he can swallow, some lemonade, or water and vinegar, with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected; these may be made, by adding to the common clyster, syrup of buckthorn, and tincture of senna, of each two ounces; or in their stead half an ounce of Venice turpentine dissolved in the yolk of an egg. Should these things not be at hand, two or three large spoonsful of common salt may be put into the

clyster. The same means, if necessary, which were recommended in the former part of this chapter, may be used to restore the circulation, warmth, &c.

Mr. Tossach, surgeon at Alloa, relates the case of a man, suffocated by the steam of burning coal, whom he recovered by blowing his breath into the patient's mouth, bleeding him in the arm, and causing him to be well rubbed and tossed about. And Dr. Frewen, of Sussex, mentions the case of a young man who was stupified by the smoke of sea-coal, but was recovered by being plunged into cold water, and afterwards laid in a warm bed.

The practice of plunging persons suffocated by noxious vapours in cold water, would seem to be supported by the common experiment of suffocating dogs in the *grotto del cani*, and afterwards recovering them by throwing them into the neighbouring lake.

EFFECTS OF EXTREME COLD.

When cold is extremely severe, and a person is exposed to it for a long time, it proves mortal in consequence of its stopping the circulation in the extremities, and forcing too great a proportion of blood towards the brain; so that the patient dies of a kind of apoplexy, produced by great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, would, if indulged, prove his last.

Such violent effects of cold are happily not very common in this country; it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen, as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the fire; yet reason and observation shew that this is a most dangerous and imprudent practice.

Every peasant knows, if frozen meat, fruits, or roots of any kind, be brought near the fire, or put into warm water, they will be destroyed by rottenness, or a kind of mortification; and that the only way to recover them is, to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed, in cold water, or rubbed with snow, till they recover their natural warmth and sensibility; after which, the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder-flowers sweetened with honey. Every person must have observed, when the hands were even but slightly affected with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

When a person has been long so exposed to the cold, that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been exposed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours, have nevertheless been revived.

I have always thought that the whitloes, kibes, chilblains, and other inflammations of the extremities, which are so common among the peasants in the cold season, were chiefly occasioned by their sudden transitions from cold to heat. After they have been exposed to an extreme degree of cold, they immediately apply their hands and feet to the fire, or, if they have occasion, plunge them into warm water, by which means, if a mortification does not happen, an inflammation seldom fails to ensue. Most of the ill conse-

quences from this quarter might be easily avoided, by only observing the precautions mentioned above.

EFFECTS OF EXTREME HEAT.

The effects of extreme heat, though not so common in this country, are no less fatal, and much more sudden, than those of cold. In hot countries, people frequently drop down dead in the streets, exhausted with heat and fatigue. In this case, if any warm cordial can be poured into the mouth, it ought to be done. If this cannot be effected, they may be thrown up in form of a clyster. Volatile spirits, and other things of a stimulating nature, may be applied to the skin, which should be well rubbed with coarse cloths, whipped with nettles, or other stimulating things. Some of the ancient physicians are said to have restored to life persons apparently dead, by beating them with rods.

Head-achs that proceed from too great exposure to the sun in hot climates, may be cured by applying linen cloths, soaked in cold water, to the head.

CHAP. LIV.

OF FAINTING FITS, AND OTHER CASES WHICH REQUIRE IMMEDIATE ASSISTANCE.

STRONG and healthy persons, who abound with blood, are often seized with sudden fainting fits, after violent exercise, drinking freely of warm or strong liquors, exposure to great heat, intense application to study, or the like.

In such cases the patient should be made to smell to some vinegar. His temples, forehead, and wrists, ought, at the same time, to be bathed with vinegar mixed with an equal quantity of warm water; and two or three spoonfuls of vinegar, with four or five

times as much water, may, if he can swallow, be poured into his mouth.

If the fainting proves obstinate, or degenerates into a syncope, that is, an abolition of feeling and understanding, the patient must be bled. After the bleeding, a clyster will be proper, and then he should be kept easy and quiet, only giving him every half hour a cup or two of an infusion of any mild vegetable, with the addition of a little sugar and vinegar.

When swoonings, which arise from this cause, occur frequently in the same person, he should, in order to escape them, confine himself to a light diet, consisting chiefly of bread, fruits, and other vegetables. His drink ought to be water or small beer, and he should sleep but moderately, and take much exercise.

But fainting fits proceed much oftener from a defect than an excess of blood. Hence they are very ready to happen after great evacuations of any kind, obstinate watching, want of appetite, or such like. In these, an almost directly opposite course to that mentioned above must be pursued.

The patient should be laid in bed, with his head low, and, being covered, should have his legs, thighs, arms, and his whole body, rubbed strongly with hot flannels. Hungary water, volatile salts, or strong smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth may be wet with a little rum or brandy; and, if he can swallow, some hot wine, mixed with sugar and cinnamon, which is an excellent cordial, may be poured into his mouth. A compress of flannel dipt in hot wine or brandy, must be applied to the pit of his stomach, and warm bricks, or bottles filled with hot water, laid to his feet.

As soon as the patient is recovered a little, he should take some strong soup or broth, or a little bread or biscuit, soaked in hot spiced wine. To prevent the return of the fits, he ought to take often, but in small quantities, some light yet strengthening nourishment, as panado made with soup instead of

water, new laid eggs lightly poached, chocolate, light roast meats, jellies, and such like.

Those fainting fits, which are the effect of bleeding, or of the violent operations of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed, persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting, however, continue longer than usual, volatile spirits may be held to the nose, and robbed on the temples, &c.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, barley-water, or such like; emollient clysters will likewise be proper, and the patient's strength should afterwards be recruited, by giving him generous cordials, and anodyne medicine.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile-flowers, carduus benedictus, or the like. When the disorder proceeds from the nature of the food, the patient, as in the case of weakness, must be revived by strong smells, &c.; after which he should be made to swallow a large quantity of light warm fluid, which may serve to drown, as it were, the offending matter, to soften its acrimony, and either to effect a discharge of it by vomiting, or force it down into the intestines.

Even disagreeable smells will sometimes occasion swoonings, especially in people of weak nerves. When this happens, the patient should be carried into the open air, have stimulating things held to his nose, and those substances which are disagreeable to him ought immediately to be removed. But we have

already taken notice of swoonings which arise from nervous disorders, and shall therefore say no more upon that head.

Fainting fits often happen in the progress of diseases. In the beginning of putrid diseases, they generally denote an oppression at the stomach, or a mass of corrupted humours, and they cease after evacuations, either by vomit or stool. When they occur at the beginning of malignant fevers, they indicate great danger. In each of these cases, vinegar used both externally and internally is the best remedy during the paroxysm, and plenty of lemon-juice and water of it. Swoonings, which happen in diseases accompanied with great evacuations, must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained. They are generally the effect of mere weakness or exhaustion. Dr. Engleman relates the case of a woman in child-bed, who, after being happily delivered, suddenly fainted, and lay upwards of a quarter of an hour apparently dead. A physician was sent for: her own maid, in the mean time, being out of patience at this delay, attempted to assist her herself, and extending herself upon her mistress, applied her mouth to her's, blew in as much breath as she possibly could, and in a very short time the exhausted woman awaked as out of a profound sleep, when proper things, being given her, she soon recovered.

The maid being asked how she came to think of this expedient, said she had seen it practised at Alten-

burgh, by midwives upon children with the happiest effect.

We mention this case chiefly, that other midwives may be induced to follow so laudable an example. Many children are born without any signs of life, and others expire soon after their birth, who might, with out all doubt, by proper care, be restored to life.

From whatever cause fainting fits proceed, fresh air is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends while they are endeavouring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air, and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate, and such persons as fall into fainting fits from mere exhaustion, or the violence of some disease. No more persons ought ever to be admitted into the room where the patient lies in a swoon, than are absolutely necessary for his assistance, and the windows of the apartment should always be open, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings or fainting fits, should neglect no means to remove the cause of them, as the consequences are always injurious to the constitution. Every fainting fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humours disposed to stagnation, coagulations and obstructions are formed, and, if the motion of the blood be totally intercepted, or very considerably checked, polypuses are sometimes formed in the heart or larger vessels. The only kind of swoonings not to be dreaded, are those which sometimes mark the crisis in fevers; yet even these ought, as soon as possible, to be removed

OF INTOXICATION.

The effects of intoxication are often fatal. No kind of poison kills more certainly than an overdose of ardent spirits. Sometimes, by destroying the nervous energy, they put an end to life at once; but in general their effects are more slow, and in many respects similar to those of opium. Other kinds of intoxicating liquors may prove fatal when taken to excess, as well as ardent spirits; but they may generally be discharged by vomiting, which ought always to be excited when the stomach is overcharged with liquor.

More of those unhappy persons who die intoxicated, lose their lives from an inability to conduct themselves, than from the destructive quality of the liquor. Unable to walk, they tumble down, and lie in some awkward posture which obstructs the circulation or breathing, and often continue in this situation till they die. No drunken person should be left by himself till his clothes have been loosened, and his body laid in such a posture as is most favourable for continuing the vital motions, discharging the contents of the stomach, &c. The best posture for discharging the contents of the stomach is to lay the person upon his belly; when asleep, he may be laid on his side with his head a little raised, and particular care must be taken that his neck be no ways bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors, often induces people to quench it by taking what is hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine, or sour punch: these acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that it could never be digested. The safest drink after a debauch is, water with a toast, tea, infusions of balm,

sage, barley-water, and such like. If the person wants to vomit, he may drink a weak infusion of camomile flowers, or lukewarm water and oil; but in this condition vomiting may generally be excited by only tickling the throat with the finger or a feather.

Instead of giving a detail of all the different symptoms of intoxication which indicate danger, and proposing a general plan of treatment for persons in this situation, I shall briefly relate the history of a case which lately fell under my own observation, wherein most of those symptoms usually reckoned dangerous occurred, and where the treatment was successful.

A young man, about fifteen years of age, had for a hire drank ten glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for several hours, till, at length, his uneasy manner of breathing, the coldness of the extremities, and other threatening symptoms, alarmed his friends, and made them send for me: I found him still sleeping, his countenance ghastly, and his skin coverd with a cold clammy sweat. Almost the only signs of life remaining were a deep laborious breathing, and a convulsive motion or agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits, and other stimulating things to his nose, &c. A few ounces of blood were likewise taken from his arm, and a mixture of vinegar and water was poured into his mouth; but as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered the legs to be put into warm water, and a sharp clyster to be immediately administered This gave nim a stool, and was the first thing that relieved him. It was afterwards repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to shew some signs of life, to drink when it was offered him, and came gradually to his senses: he continued, however, for several days weak and feverish, and complained

much of a soreness in his bowels, which gradually went off, by means of a slender diet, and cool mucilaginous liquors.

This young man would probably have been suffered to die, without any assistance being called, had not a neighbour, a few days before, who had been advised to drink a bottle of spirits to cure him of an ague, expired under very similar circumstances.

OF SUFFOCATION AND STRANGLING.

These may sometimes proceed from an infraction of the lungs, produced by viscid clammy humours, or a spasmodic affection of the nerves of that organ. Persons who feed grossly, and abound in rich blood, are very liable to suffocating fits from the former of these causes. Such ought, as soon as they are attacked, to be bled, to receive an emollient clyster, and to take frequently a cup of diluting liquor with a little nitre in it. They should likewise receive the steams of hot vinegar into their lungs by breathing.

Nervous and asthmatic persons are most subject to spasmodic affections of the lungs. In this case, the patient's legs should be immersed in warm water, and the steams of vinegar applied as above. Warm diluting liquors should likewise be drank; to a cup of which a tea-spoonful of the paragoric elixir may occasionally be added. Burnt paper, feathers, or leather, may be held to the patient's nose, and fresh air should be freely admitted to him.

Infants are often suffocated by the carelessness or inattention of their nurses.* An infant, when in bed, should always be laid so, that it cannot tumble down with its head under the bed-clothes; and, when in a

* These accidents are not always the effects of carelessness. I have known an infant overlaid, by its mother being seized in the night with an hysteric fit. This ought to serve as a caution against employing hysteric women as nurses; and should likewise teach such women never to lay an infant in the same bed with themselves, but in a small adjacent one.

cradel, its face ought never to be covered A small degree of attention to these two simple rules would save the lives of many infants, and prevent others from being rendered weak and sickly all their days by the injuries done to their lungs.

Instead of laying down a plan for the recovery of infants who are suffocated, or overlaid, as it is termed, by their nurses, I shall give the history of a case related by Monsieur Janin, of the Royal College of Surgery at Paris, as it was attended with success and contains almost every thing that can be done on such occasions.

A nurse having had the misfortune to overlay a child, he was called in, and found the infant without any signs of life; no pulsation in the arteries, no respiration, the face livid, the eyes open, dull, and tarnished, the nose full of snivel, the mouth gaping, in short it was almost cold. Whilst some linen cloths and a pareel of ashes were warming, he had the boy unswathed, and laid him in a warm bed, and on the right side. He then was rubbed all over with fine linen for fear of fretting his tender and delicate skin. As soon as the ashes had received their due degree of heat, Mr. Janin buried him in them, except the face, placed him on the side opposite to that on which he had been at first laid, and covered him with a blanket. He had a bottle of eau de luce, in his pocket, which he presented to his nose from time to time; and between whiles some puffs of tobacco were blown up his nostrils: to these succeeded the blowing into his mouth, and squeezing tight his nose. Animal heat began thus to be excited gradually; the pulsations of the temporal artery were soon felt, the breathing more frequent and free, and the eyes closed and opened alternately. At length the child fetched some cries expressive of his want of the breast, which being applied to the mouth he catched at it with avidity, and sucked as if nothing had happened to him. Though the pulsations of the arteries were by this time very well re-established, and it was hot weather, yet Mr. Janin thought it adviseable to leave his patient three quarters of an hour longer under the

ashes. He was afterwards taken out, cleaned, and dressed as usual; to which a gentle sleep succeeded, and he continued perfectly well.

Mr. Janin mentions likewise an example of a young man who had hanged himself through despair, to whom he administered help as effectually as in the preceding case.

Mr. Glover, surgeon, in Doctors' Commons, London, relates the case of a person who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after.

The principal means used to restore this man to life were, opening the temporal artery and the external jugular; rubbing the back, mouth, and neck with a quantity of volatile spirits, and oil; administering the tobacco clyster by means of lighted pipes, and strong frictions of the legs and arms. This course had been continued for about four hours, when an incision was made into the wind-pipe, and air blown strongly through a canula into the lungs. About twenty minutes after this, the blood at the artery began to run down the face, and a slow pulse was just perceptible at the wrist. The frictions were continued for some time longer; his pulse became more frequent; and his mouth and nose being irritated with spirit of sal ammoniac, he opened his eyes. Warm cordials were then administered to him, and in two days he was so well as to be able to walk eight miles.

These cases are sufficient to shew what may be done for the recovery of those unhappy persons, who strangle themselves in a fit of despair.

OF PERSONS WHO EXPIRE IN CONVULSION FITS.

Convulsion fits often constitute the last scene of acute or chronic disorders. When this is the case, little hopes can remain of the patient's recovery after expiring in a fit. But when a person who appears to be

in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well authenticated accounts of infants having been restored to life, after they had, to all appearance, expired in convulsions; but we shall only relate the following instance mentioned by Dr. Johnson, in his pamphlet *on the practicability of recovering persons visibly dead.*

In the parish of St. *Clements, Colchester,* a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing-bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman, who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child, found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath; upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed, and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the babe quite recovered, eager to lay hold of the breast, and able to suck again. The child throve, had no more fits, is grown up, and at present alive.

These means, which are certainly in the power of every person, were sufficient to restore to life an infant to all appearance dead, and who, in all probability, but for the use of these simple endeavours, would have remained so. There are, however, many other things

which might be done in case the above should not succeed, as rubbing the body with strong spirits, covering it with warm ashes or salt, blowing air into the lungs, throwing up warm stimulating clysters, or the smoke of tobacco, into the intestines, and such like.

When children are dead born, or expire soon after the birth, the same means ought to be used for their recovery, as if they had expired in circumstances similar to those mentioned above.

These directions may likewise be extended to adults, attention being always paid to the age and other circumstances of the patient,

The foregoing cases and observations afford sufficient proof of the success which may attend the endeavours of persons totally ignorant of medicine, in assisting those who are suddenly deprived of life by any accident or disease. Many facts of a similar nature might be adduced, were it necessary; but these, it is hoped, will be sufficient to call up the attention of the public, and to excite the humane and benevolent to exert their utmost endeavours for the preservation of their fellow men.

The success of the humane society for the recovery of drowned persons, has been equal to its philanthropic purpose; and a great proportion of these have been restored without medical aid. In other cases of suspended animation, similar means might be used with success, especially in sudden apparent death in fits, where the person, without any visible cause, falls down and expires; or when proceeding from casualties, suffocation from the sulphureous damps of coal-pits, mines, and the air of shut-up caverns, or other noxious vapours; lastly, in apparent deaths, from cold, hunger, strangling, &c.; in all these cases remedies should always be attempted and persevered in, till actual death be completely ascertained.

Every person should be acquainted with such remedies, as these are not cases to wait for medical aid, nor do they require medical skill. The principal thing is to restore warmth and the vital motions, by blowing

air into the lungs, friction, bleeding, and administering clysters and cordials, according to circumstances. The premium offered for the reward of recovering drowned or apparently dead persons, is highly proper; but the innate satisfaction of restoring a fellow-creature to life will itself be a complete reward to every benevolent mind.

CHAP. LV.

OF COLD-BATHING, WITH REMARKS ON THE CASES IN WHICH THE WARM-BATH IS MORE ADVISEABLE.

IMMERSION in cold water is a custom which lays claim to the most remote antiquity. Indeed it must have been coeval with man himself. The necessity of water for the purpose of cleanliness, and the pleasure arising from its application to the body in hot countries, must very early have recommended it to the human species. Even the example of other animals was sufficient to give the hint to man. By instinct, many of them are led to apply cold water in this manner; and some, when deprived of its use, have been known to languish, and even to die. But whether the practice of cold-bathing arose from necessity, reasoning, or imitation, is an inquiry of little consequence; our business is to point out the advantages which may be derived from it, when judiciously resorted to, and the danger attending its improper use.

People are apt to imagine that the simple element of water can do no hurt, and that they may plunge into it at any time with impunity In this, however, they are much mistaken. I have known apoplexies occasioned by going into the cold-bath,—fevers excited by staying long in it. There are also instances of maladies being so much aggravated by its constant use, as to be rendered incurable.

Absurd prejudices against cold-bathing are no less

blameable and injurious. As a preservative of health, its regular use cannot be too much inculcated. It strengthens the lax fibres of children, and in all periods of life gives tone and vigour to the body, and enables the vital organs fully to perform their functions. It steels the frame against cold, damp, and changeable weather, and is the best preventive of diseases arising from debility, a relaxed skin, or from obstructed or excessive perspiration.

Remaining too long in the water, however, is dangerous, and instead of strengthening is apt to relax the system, and to chill the blood, cramp the muscles, and occasion an excessive flow of humours towards the head. A single plunge is sufficient, though swimmers accustomed to the water may continue their favourite amusement for five or six minutes, and, if in the sea, considerably longer, without injury.

The morning is in every respect the best time for persons in health using this exercise, and it never should be used immediately after dinner, after much fatigue, or when over-heated. At the same time the body ought to have a gentle glow or temperate warmth by a little exercise before bathing, and after it is over, and the body rubbed dry instantly on coming out of the water: half an hour's exercise will be essentially serviceable.

With respect to the cold bath used as a remedy in disease, much will depend on the nature and state of the disease; if it be a case of delicacy and danger, this remedy should not be resorted to without the best advice. In less essential situations, the following rules and observations may be of service.

It is always important to consider whether the patient have strength to bear the shock; for although it is true that the bath is an excellent bracer in all cases of relaxation, languor, and muscular or nervous weakness, yet it must ever be understood with a proviso that there remains sufficient stamina to produce a due re-action of the heart and arteries, on which all the salutary effects of cold-bathing depend. If

the immersion be followed by an agreeable glow, and sense of alacrity, it is a sure sign that it agrees with the constitution.

In scrophula, the cold bath, and particularly in the sea, has been found of the greatest service, especially if the sea-water be taken also inwardly. It will then act both as a tonic or bracer, and a detergent or purifier; and certainly a regular course of sea-bathing, with the internal use of the salt water, with good air, exercise, and a light nourishing diet, are the best means of checking the progress of the evil, and counteracting its morbid effects. But this is only with respect to the external symptoms of the malady, and before it has arrived at a certain pitch, or reduced the patient to extreme weakness. In this case, and where any external effects of the disorder are present, salt-water bathing or drinking would be extremely injurious.

In cutaneous diseases in general, the cold bath should not be ventured upon without medical advice. There are many of them, and many stages, where it would repel the eruption, and perhaps drive its seeds into some vital part, in spite of nature's efforts to throw them off. In such cases the warm bath must have the decided preference. Wherever sea-bathing is used, in cases where blotches or pimples appear externally, the sea water should be taken at the same time, as a moderate and cooling aperient, to carry off impurities. Half a pint taken in the morning, immediately on coming out of the sea, and as much half an hour after, will generally be sufficient; but, if necessary, the dose may be increased without inconvenience.

In diseases of the skin and habit, sea-water, from the gently stimulating, detergent, and healing properties of its saline impregnation, is much preferable to river-water. It cleanses sores, and promotes the process of granulation, and has been often known to discuss swellings that have resisted the most powerful medicines. Deep seated ulcers, beyond the reach of other applications, sometimes yield to its penetrating action.

A great advantage of the sea-water in chronic dis-

eases is, that it may be persevered in for a long time, without weakening the intestines or the constitution. Both the external and internal use of it, however, (which it is to be remembered should always go together,) must be employed at first only two or three times a week, and proceeding gradually till the patient can bear it properly every day; and it should be gradually discontinued in the same manner.

When the cold bath occasions chillness, loss of appetite, listlessness, pain of the breasts, head-achs, or bowel-disorders, such consequences prove its disagreement with the patient.

But it may sometimes be highly dangerous to try the experiment. In all obstinate obstructions, and in diseases of the lungs or brain, as well as particular affections of the stomach and bowels, the consequences may be fatal. A nervous asthma, or atrophy, may be mistaken for a consumption of the lungs, yet for the two first the cold bath is beneficial, and in the last injurious, and probably fatal.

Persons of a plethoric or full habit ought not without precaution to use the cold bath. They run the risk of bursting a blood-vessel, or producing an inflammation in an important part; but if they previously employ proper evacuants, and particularly the sea-water, for some time, bathing will have the best effects, either in plethoric or extremely nervous debilitated habits; even a single dip may produce fevers, palsies, apoplexies, and death.

Persons of extreme nervous debility, however, will be much benefited by the cold bath, if not taken too precipitately. Not only women of delicate habits and weakly children, but men in the same predicament, should begin with the tepid bath, at the same degree as that of animal heat, namely, 96° of Farhenheit's thermometer, and reduce it gradually, according to the increase of the patient's strength, and internal powers of reaction.

This mode of beginning with the warm bath, reducing it gradually, and almost imperceptibly, till

perfectly cold, and persevering in the cold bath, is particularly to be recommended in hysteric and hypochondriac cases, in rheumatic complaints, in the convulsive motions and muscular contractions, called St. Vitus's dance; and generally in all that branch of nervous disorders which comprehend spasms, convulsions, epilepsies, and other symptoms of debility, or irritability of the system.

The principal exceptions to these rules are, in the treatment of spasmodic affections of the intestines, hooping-coughs, and coughs in general, convulsive asthmas, and complaints of the bowels or chest, where the cold bath would at any time, and under any management, be extremely improper. In coughs, and bowel-complaints, bathing the feet in warm water is of great service, but to immerge the whole body either in the warm or cold bath, would aggravate the system.

Where there are any symptoms of paralytic affections discoverable, the inconsiderate use of the cold bath cannot be too strictly prohibited. This complaint requires a great degree of external heat; the hot bath is a sovereign remedy. Here, and indeed in every case, friction should never be neglected immediately after bathing.

After immoderate drinking, the cold bath should never be resorted to. It will certainly cool the body, but it will be too powerful a refrigerant, and may for ever extinguish animal heat; or should nature resist the shock, still it must increase the disorder of the stomach, the violence of the head-ach, and the derangement of the circulation, and will probably be attended with fever, or very troublesome eruptions.

In this case, however, the shower-bath, which can be easily procured, or which may be supplied by a common watering pan, may afford beneficial relief. This application is in many cases extremely useful. Its action may be regulated at pleasure; and as the water descends like rain, it gently impels the blood toward the lower extremities, and prevents the dan-

ger which would arise from its sudden and too rapid determination to the lungs and head, in some of the cases before mentioned.

In hœmorrhages of every description, cold water may be applied with good effect, as also in immoderate flux of the menses, and in the interval of menstruation, cold bathing, and drinking chalybeate-waters. But where the discharge of blood proceeds from affections of the brain, lungs, &c. or is habitual, as in piles, nothing could be so improper as to check the evacuation.

In the gout, and all its symptoms, cold bathing would repel the disorder, and probably throw it into some vital part.

Although the warm bath is in general to be recommended in obstructions of the menses, there are cases of retention after the usual age, when the cold bath may contribute to restore the tone of the system; ot these, however, a skilful physician must judge.

Persons returning from a hot climate, will find the warm bath not only safer than the cold, but more conducive to restore their strength. It may be reduced by degrees to the cold bath, as recommended in cases of debility.

CHAP. LVI.

OF MINERAL WATERS

MINERAL waters are classed as hot and cold, and as Chalybeate, Saline, Sulphureous, and Calcareous, as they are impregnated with iron, salts, sulphur, or lime.

Chalybeates may be distinguished as simple chalybeates, having no prominent impregnation but iron; and saline or purgative chalybeates, having a strong mixture of purging salt, which are very different from the others, both in taste and effect. Tunbridge is at

the head of the former, and Cheltenham of the latter class.

The Tunbridge waters greatly stimulate the relaxed nerves, and brace the system; afford relief in flatulencies, bilious vomitings, irregular digestion, and other consequences either of debility or intemperance, and promote the circulation of the blood and the various secretions. They are particularly serviceable in obstructions of the menses; but in floodings they are injurious. They are beneficial in obstructions of the urinary passages; and may be used with great advantage in chronic diseases, which arise from slow beginnings, and are attended with laxity of the solids, without much organic disease. But if the weakness proceeds from morbid affections of the mesentery, lungs, or other important organs, they are improper.

Plethoric persons should not use these waters, without blood letting, or other gentle attenuants.

They are often at first an active purgative, but their continued use is rather apt to produce costiveness; in which case gentle laxatives are necessary. The water itself may be converted to a purgative chalybeate, by the addition of a little magnesia or Glauber's salts. In the removal of obstructions, the warm bath is also recommended.

At first, the patient should take a quarter of a pint half an hour before breakfast, repeating the same at intervals in the forenoon, and augmenting the doses according to the sensations they excite. The usual hours for these dozes are, eight, ten, and twelve, o'clock. At first, however, they should not be taken fasting.

They may, in the first instance, produce giddiness, nausea, vomiting, pain of the head and of the heart, and sense of fulness over the whole body; but unless these symptoms continue obstinately, they should not be considered as unfavourable. It is a judicious practice to immerge a bottle of the chalybeate in hot water, to take off the chill.

The waters of Islington and Hampstead are in their qualities not much inferior to the Tunbridge.

A great matter, however, in the use of all the waters is, to attend to a proper regimen. Pure air, temperate living, early and regular hours, active diversions, agreeable company, and relaxation from business, are essentially necessary.

The waters of the German Spa and Pyrmont being more active, their use requires greater caution.

The Spa water is four times as strong as the Tunbridge, and of course the dose must be proportionate. At first a sufficient quantity of warm water mixed with it will be useful both to reduce it, and bring it to a temperature proper for the constitution of the patient; and here it is particularly indispensable for persons of a plethoric habit previously to use attenuants.

The Pyrmont waters contain as much iron, and twice as much fixed air, as those of the German Spa; a necessary and appropriate caution must therefore be observed. The waters of Pyrmont and Spa afford the most refreshing and wholesome draught, to relieve in the morning a weakness of the stomach, occasioned by the free use of the bowl or the bottle the night before.

Pyrmont waters, when diluted with new milk, are found very serviceable in gouty cases, and may be safely prescribed in this form, during the intervals of the fits and the absence of inflammatory symptoms.

These waters may be conveyed to any distance, and will retain their medical properties, with little or no diminution, for two years, if inclosed in bottles well corked, and covered with cement. They contain so much fixed air, that it is usual, after filling the bottles, to leave them uncorked for awhile, to let the excess of the fixed air escape.

Purging chalybeats, as those of Cheltenham and Scarborough, besides their iron impregnation, contain such a portion of purgative salt, as to give them a regular determination to the bowels. On first drinking, they are apt to excite a giddiness and slight headach; but this soon goes off, and their good effects

are sensibly felt. Of all laxatives, they are perhaps the most agreeable, as they never occasion griping or languor. They improve the appetite, give tone to the stomach, promote vivaciousness, and cleanse the body. Half a pint, repeated three or four times a day, is enough for any patient; but this must be determined by the habit and the effects they produce. When taken as an alterative, a considerably smaller quantity will of course suffice. The best time to take them is summer, and they may be well accompanied with the warm bath. They are beneficial in glandular and visceral obstructions, in the first symptoms of dropsy, in scrophula, in bilious complaints, and in scorbutic eruptions.

The Scarborough waters contain not above one-third of the purging salts of those of Cheltenham, and thus act for the most part only as an alterative, unless when they receive the addition of some purgative salt, similar to what they hold in solution. Scarborough, however, to counterbalance this, enjoys an uncommon salubrious air, and excellent sea-bathing; and there is here also a simple chalybeate spring, convenient for patients, where a determination to the kidnies may be desireable.

Simple saline mineral waters are of the same nature, but not so strongly impregnated with purging salts, nor so efficacious as sea-water. They are numerous about the metropolis, as Bagnigge-wells, Kilburn, and Acton; but they are now of little repute. When they were in vogue, it was usual and necessary to add a further solution of a similar salt.

The most celebrated saline water is that of Seltzer, which may be said to form a particular species, being also slightly alkaline, with a strong impregnation of fixed air. A great deal of it is brought to this country; and, to preserve its virtue, it must be instantly bottled and kept close corked, otherwise the fixed air will quickly evaporate, and the water become not only vapid, but putrescent. If well preserved, it sparkles when poured into a glass, and has a gentle saline and somewhat pungent or acidulous taste. One of the

stone bottles in which it is imported, may be taken in a day at three intervals. It is by no means disagreeable to the taste, and its effects are generally exhilarating. In cases of hectic fever, it is very serviceable diluted with milk. It corrects expectoration, checks sweating, and contributes much to the patient's repose.

Its rapid determination to the kidneys, the action of its stimulus, and perhaps some power as a solvent, concur to produce very agreeable effects from it, particularly in nervous affections of the stomach and bowels, indigestion, bile, acidity heartburn, spasmodic pains in the alimentary canal, and diseases of the urinary organs. In these cases, with the addition of a proper quantity of vitriolated magnesia, taken every two or three days, it will form a proper aperient.

Several of the foregoing waters have a slight impregnation of sulphur; but there are also waters where this is the chief ingredient, and which are accordingly termed sulphureous. The principal of these is Harrowgate.

Great benefit has been derived from the proper use of the Harrowgate waters in eruptions of the skin, in rheumatisms combined with scurvy, in obstructions, and in disorders of the first passages; acidity, indigestion, vitiated bile, worms, putrid sores, piles, and jaundice. They answer two important purposes; first acting as an alterative, and inducing, by a mild operation, a gradual change in the habit; and secondly, when employed in larger doses, are an easy and delicate purge, which does not weaken the patient so much as other laxatives. There are also at Harrowgate, baths of the same mineral, which in many disorders are a powerful auxiliary to the drinking.

It only now remains to speak of the calcareous minerals, better understood under the description of hot springs. Of these the hot springs of Bath have a decided superiority.

The Bath waters, drank fresh from the spring, increase heat, raise the pulse, and excite the secretions, acting at the same time on the nervous system. They

not only promote perspiration and urine, but increase saliva, and quench thirst better than any other liquid, but should not be taken when there is any tendency to fever. The relief they afford in cholics and convulsive reachings attending the gout in the stomach, and similar affections, evince their antispasmodic powers.

This, like the saline mineral, is strongly purgative, and, as constant purging for months together must debilitate the strongest constitution, the popular idea of perseverance in its use should be corrected. Purging is often necessary in acute diseases to cleanse the body, and in chronical cases it may pave the way for the operation of other medicines; but it will seldom effect a cure, and, by exhausting the patient, will generally leave him in a worse condition than it found him. A powerful stimulant like sulphur, however useful when taken in moderation and at proper intervals, must, if improperly and habitually employed, weaken and destroy the digestive organs.

Those who take the sulphureous or saline waters to cure any obstinate malady, should use them as an alterative, and so as to produce hardly any effect on the bowels. With this view a half-pint glass may be taken at bed-time, (but by no means after eating a hearty supper,) and the same quantity an hour before breakfast, dinner, and supper, varying the dose according to the chalybeate.

These waters give a great stimulus to the appetite, but it ought to be checked. A light or rather diluting food is most proper, and no person, during such a course, should eat to the full extent of his stomach. Moderate exercise and exhilarating amusements are also highly necessary.

The Bath waters, used externally, unite all the virtues of warm baths, and may be used of any heat, from one hundred and six degrees and under; the baths are also commodious and extensive, so as to afford the patient room to move freely about in them with a uniform warmth. They are more stimulant than the common warm bath, raise the pulse and heat of the body

to a higher degree, without being violently sudorific; they are an excellent diuretic, and, instead of debilitating, they impart vigour and alertness, and promote the appetite.

The diseases in which they are to be recommended are, the green sickness before it is gone too far; visceral obstructions; palsy; gout, when the inflammatory symptoms have abated; and swellings of the knee; hypochondria; weakness of the organs of digestion; cholic; jaundice, when arising from obstructions of the biliary ducts: hysterics; spasmodic affections of the womb, and painful menstruation; and in cutaneous and leprous eruptions.

It is safest to begin with a wine-glassful before breakfast. If this feel easy and cordial, and excite no pain or sense of fulness in the head or eyes, it may be repeated at noon, and increased by degrees as it suits the constitution.

The Cross-water bath, the warmth of which, when fresh from the spring, is one hundred and twelve degrees, is usually recommended to begin with. After that, the king's or hot bath, which is four degrees higher in temperature, may be resorted to.

In respect to the bath, the patient should at first continue in it only five or six minutes. Should this produce no disagreeable symptoms, but improve the health, strength, and spirits, it may be gradually increased, till even half an hour, but never so as to create lassitude or faintness. The waters of the hot bath are twelve degrees warmer than the cross bath, which is a much greater difference than at the pumps.

There are also private baths of any temperature to suit the patient's habit or complaint. The best time for bathing is early in the morning; and it may be repeated twice, or at most thrice a-week. A partial bathing is in many respects preferable to a total immersion.

Buxton waters approach nearest to those of Bath of any in the kingdom; but their temperature is only eighty-two degrees.

Taken internally in doses of near a pint before breakfast, and as much before dinner, they afford relief in flatulence, heartburn, nausea, and indigestion, and affections of the kidneys and bladder. As a bath, they contribute to restore the action of limbs that have lost their power from violent inflammation, either occasioned by external injury, or preceding acute rheumatism ; but if it be the consequence of a paralytic stroke or gout, the warmer temperature of the Bath waters afford more benefit.

Matlock tepid springs are sixteen degrees cooler than those of Buxton, and form a good intermediate bath between Buxton and the sea. They are, therefore, properly employed in preparing invalids for the latter, when this is necessary to complete a cure. Taken internally, they have little medicinal virtue.

The hot well of Bristol is of an intermediate warmth between Buxton and Matlock, being seventy-four degrees. It is not used to bathe in, but has acquired great reputation in consumptive cases. Part of its virtues in this obstinate complaint must be ascribed to the mild sheltered, yet ventilated, situation of the hot wells, and to the rational plan of diet, exercise, and amusements, pursued there.

It is also efficacious in relaxations of the stomach or bowels, occasioned by long residence in hot climates, bilious diarrhœa, dysentery, and diabetes. A regular course of these waters is excellent in quenching the thirst, keeping the skin moist, allaying fever, and correcting a preternatural discharge of urine. Being impregnated with a little purgative salt, aperient medicines ought in many cases to accompany their use.

The full dose is half a pint, drank early in the morning, and repeated before breakfast, after an interval of half an hour's gentle exercise. The same two doses to be repeated midtime between breakfast and dinner.

Of the hot springs on the continent, at the German spa, Aix la Chapelle, Bareges, Bourbon Loncey, Prudel, and others, it is unnecessary here to go into any particular notice. Persons intending to use these will

require much more detailed accounts of their virtues and use than the limits of the present work would permit.

On the subject of mineral waters, it is only necessary to add, that artificial minerals of all kinds are now made fully equal in their virtue to the natural ones, and with this important superiority, that they can be made to any degree of strength; a circumstance which cannot fail in time to render this beneficial curative more generally diffused.

CHAP. LVII.

OF THE COW-POX.

IT is to be regretted, as has already been observed under its proper head, that notwithstanding the beneficial effects of inoculation for the small-pox, yet, from its not being general, or confined to one season of the year, and thus diffusing the disease by contagion among the uninoculated, its introduction into Europe has been injurious rather than salutary. Dr. Heberden observes, that he examined carefully the bills of mortality, and, by comparing the destruction occasioned by the small-pox among our countrymen, before and since inoculation, was reluctantly brought to this melancholy conclusion, that at the present period the proportional *increase of deaths* from this disease, was as *five* to *four* *.

The subject of regret we hope and trust will soon be remedied, and this most destructive disorder be totally eradicated by the introduction of the *cow-pox*, and the general employment of that certain and safe

* The following paragraph is copied from the British Press of August 2, 1805.

"We have great reason to regret the perverseness and ill-timed predetermination of a great number of the lower classes of the people in this country. Nearly *twenty children* have been buried out of, and near to, Leg-court, Peter-street, Westminster, within the last *three weeks*, of the *small-pox*.

preventive through the laudable exertions of the Royal Jennerian Society. Here, indeed, there is the same prejudice to contend with as in the inoculation for the small-pox. From its being, as yet, only partially used, the deaths from the small-pox are scarce sensibly diminished; whereas at Vienna, where it is general, the small-pox is already almost eradicated, and the deaths from this disorder reduced to near nothing.

It would, perhaps, be no improper measure to pass an Act of Parliament, obliging all persons, of every age and station, whether they have had the small-pox or not, to be inoculated with the cow-pox at the same time. Although such a compulsory measure may appear inimical to freedom, and would probably introduce a momentary discontent, the result would almost immediately give universal satisfaction, and thus, by one blow, one of the most fatal scourges of the human race would be banished from the United Kingdom.

It would be afterwards necessary to compel every person, whether native or foreigner, coming from abroad, to undergo the operation; and it would also perhaps be safe, at least for a time, to oblige parents to inoculate their future offspring, within a certain time after their coming into the world.

It is not intended here to go into details respecting this preventive, for it can hardly be called disease. The numerous publications on this subject, although extremely valuable, are intended only for the medical and scientific researchers; and it will be here sufficient to point out the advantages resulting from this practice; the mode of performing the operation; and the treatment under it.

Various cases have been brought forward with laudable industry to shew the inefficacy of the vaccine inoculation as a preventive of the small-pox. On these it is observed,

1. They are so few out of the innumerable thousands who have been inoculated for the cow-pox, as to be like a drop of water in the sea; and the cases themselves are by no means decisive.

II. There are few rare instances of persons inoculated for the small-pox, afterwards having them in the natural way.

From the oral testimony taken before a Committee of the House of Commons, they report the following result:

"That the discovery of vaccine inoculation is of the most general utility, inasmuch as it introduces,

"A milder disorder in the place of the inoculated small-pox,

"Which is not capable of being communicated by contagion,

"That it does not excite other humours or disorders in the constitution,

"That it has not been known in any one instance to prove fatal,

"That the inoculation may be safely performed at all times of life, (which is known not to be the case with regard to the small pox,) in the earliest infancy, as in old age, as also during pregnancy,

"And, lastly, that it tends to lessen, and, if its use becomes universal, must absolutely extinguish, one of the most destructive disorders by which the human race has been visited."

The written evidence, which was also received, relates to the very extensive and successful practice of this inoculation in every quarter of the globe, the efficacy of which does not seem abated by the cold of the northern, nor the heat of the southern or tropical climates.

After this solemn resolution of a Committee of the House of Commons, and after the general conviction of the most eminent physicians, who are proverbially fastidious in the introduction of any new practice, can any person of sense doubt the efficacy of vaccination; can any hesitate to communicate it to a child? Shall it be said, that in this enlightened country, such evidence as is already mentioned is refused; whilst the most improbable tales of every quack are believed, of the efficacy of his nostrum?

The cow-pock is a sort of mild disorder of pustules on the teats, to which this animal is subject, and which is prevalent in Gloucestershire, Dorset, Somerset, Hants, Middlesex, Norfolk, Bucks, Oxford, Leicester, and Stafford. It has been also traced in Ireland, Italy, and other parts of the continent. This disorder is communicated to the milkers; and, it having been observed that no person who had it was ever after affected with the small-pox, or that it ever proved fatal, Dr. Jenner, a name more illustrious than all the heroic destroyers of mankind, made a full investigation of the facts, and proved, that the inoculation first from the cow, and then transferring the cow-pox from one human being to another indefinitely, may be done, without any diminution of its specific power; and that it is a complete preservative against the small-pox. For this invaluable discovery, Parliament liberally and properly rewarded this great friend of the human race with 10,000*l.* He has also received the most ample testimonies of gratitude and approbation from the most illustrious bodies in all nations; and, lastly, he enjoys a reward paramount to all these, a consciousness that his discovery will preserve the lives of more millions than all the conquerors of Europe have ever destroyed.

An objection is made to the employment of vaccination, on account of its being the disease of a beast transferred to the human frame. It is so: and what then? If it produce the desired effect, what matters it whence it proceeds? Besides, does any one scruple to take milk from the same beast? Does any one hesitate to eat its flesh; and shall we object to take any other good it affords, for no other reason than because it is a beast? Such an objection is completely anile; but every such objection requires notice and refutation in a popular work of this nature.

The mode of inoculation is extremely simple:—a lancet being held upright, is made to puncture the pustule on the sixth, seventh, or eighth day. There soon issues a globule of the cow-pock matter, which

keeps gradually rising on the surface. The point of the lancet is immersed in this fluid, and in the same direction, without raising blood, inserted between the outer and inner skin of the arm above the elbow; then, being withdrawn, it is wiped over the inoculated part. To prevent failure, two separate insertions may he made. Instead of a lancet, a common needle, or even a pin, will fully answer the purpose, and neither so much as frighten the child, or be so apt to draw blood.

The cow-pock being a local disease, usually without much constitutional affection, there is seldom required any medical attention, and that only as far as regards the pustule. Should this become inflamed, which will be determined about the tenth or eleventh day, nothing more is required than to apply a single drop of acitated litharge-water on the pustule, and having suffered it to remain two or three minutes, to cover the efflorescence surrounding the pustule with a piece of linen dipped in litharge-water. The former may be repeated twice or thrice a day; the latter as often as it may feel agreeable to the patient.

When the scab is prematurely rubbed off, a circumstance not unfrequent among children and working people, the application of a little acitated litharge water to the part, immediately coagulates the surface, which supplies its place, and prevents a sore.

It is only necessary to get the true vaccine matter, as there is a spurious sort, which is inefficacious. Of this, however, there can be no difficulty. It may be always had at any of the stations of the Royal Jennerian Society.

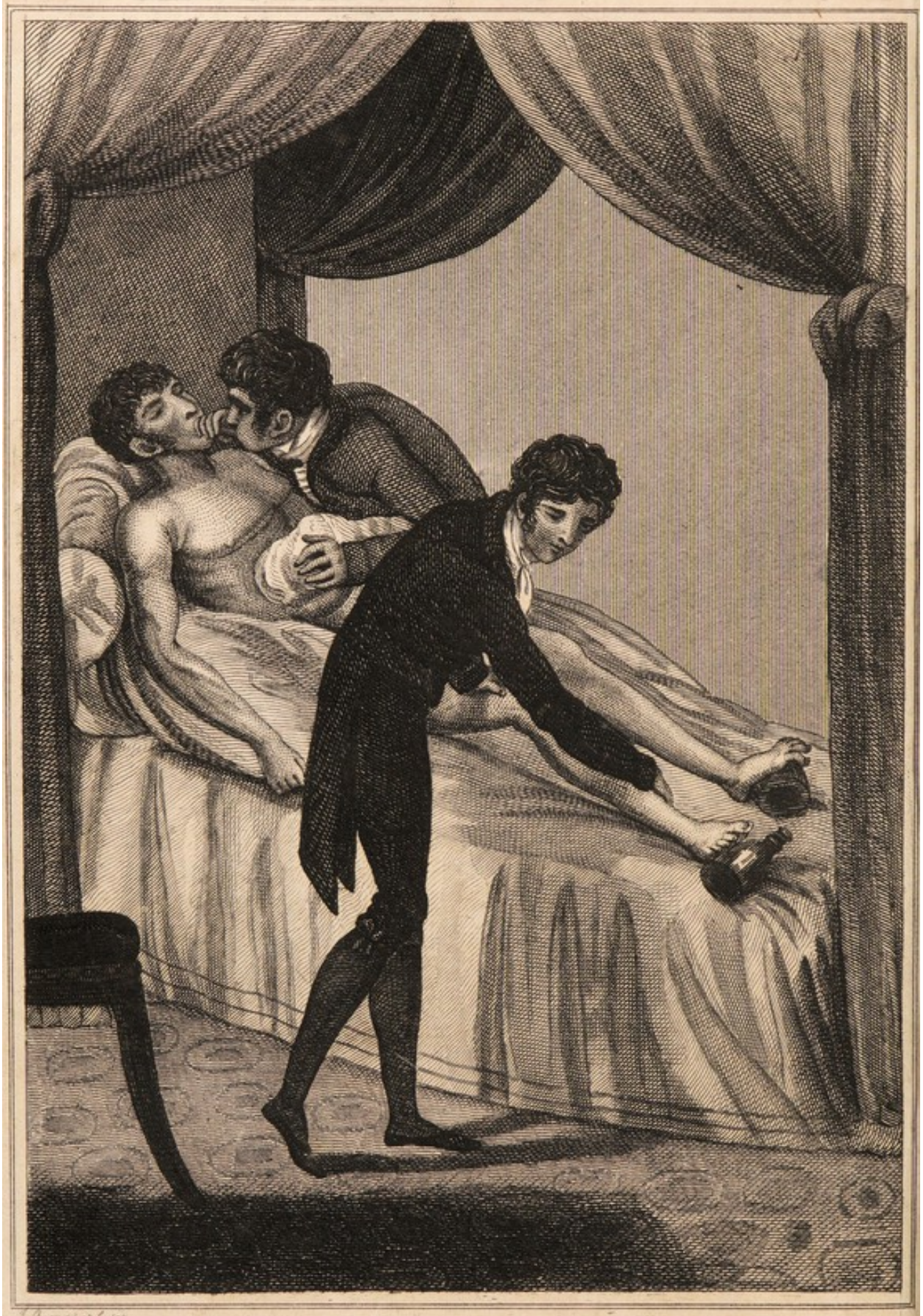
To sum up the whole, the following comparative view of the effects of the natural small-pox, the inoculated small-pox, and the inoculated cow-pox, will most forcibly recommend the employment of the latter.

The *natural small-pox* is contagious, and sometimes violent, painful, loathsome, and fatal: one person in six dies of it. In the United Kingdom, 40,000 die of

it annually; one in three has it in a dangerous form; the eruptions are numerous, painful, and disgusting; it requires confinement, loss of time, and more or less expense; precautions against it are mostly unavailing; medical treatment is necessary both during the disease and afterwards; it occasions pits, scars, seams, &c., especially on the face; it induces scrophula, diseases of the skin, glands, joints, blindness, deafness, &c. &c.

The *inoculated small-pox* is contagious, generally mild, but in some instances attended with all the violence, disgustingness, and danger of the natural; one in three hundred inoculated dies; in the United Kingdom probably twelve hundred anually; one in thirty or forty has the disease in a dangerous form; forms eruptions more or less; requires confinement, loss of time, and expense; necessary preparation by diet and medicine; care to avoid certain seasons, as extremities of heat and cold; certain periods of life, as early infancy and old age, and certain states of constitution, as general ill health, teething, pregnancy, &c.; medical treatment usually necessary; deformities liable to take place whenever the disease proves severe; induces subsequent diseases, though not so frequently as the natural small-pox.

The *inoculated cow-pox* is not contagious; it is uniformly mild and inoffensive, and not loathsome; never fatal; attended with no danger; forms no eruption, except a pustule on the inoculated part; needs neither confinement, loss of time, nor expense; requires no medicine; occasions no subsequent deformity or disfiguration, and, lastly, induces no supervenient disease.



Recovering a Drowned Man.

Published by T. Kinnersley, Nov.r 1.st 1819.

CHAP. LVIII.

OF THE RECOVERY OF DROWNED PERSONS.

OF the numerous philanthropical and charitable institutions of this country, none is more meritorious in its purposes, nor more successful in its effects, than the Royal Humane Society. By its exertions, many useful members have been rescued from a premature death: many hapless individuals prevented from the daring crime of suicide. To second as much as possible the benevolent intentions of this institution, we shall give a few rules and observations on this important subject to enable every individual to give assistance in a critical moment, when time cannot be spared to procure medical relief.

While there is the least prospect or chance of a spark of the vital power remaining, in this or any other species of sudden death, no means or perseverance should be spared to restore life.

When a body is taken out of the water apparently dead, care must be taken to carry it in a proper posture, and as much as possble with the head erect, to a suitable place, where the necessary operations for recovery can be performed.

The principal object to be pursued is, to restore the natural warmth, on which all the vital functions depend, by application of stimulants, not only to the skin, but to the lungs and intestines.

The body being stripped, must be strongly rubbed for a considerable time with linen cloths, made as hot as possible, and the patient laid in a bed completely warmed, as quickly as can be, and the friction being continued, warm cloths ought to be applied to the stomach and belly, and hot bricks, or bottles of hot water, to the soles of the feet.

Strong volatile spirits should be frequently applied to the nose; the spine of the back, and pit of the sto-

mach rubbed with warm spirits; the temples should also be rubbed with volatile spirits; and stimulants, as tobacco, blown up the nostrils.

A person should blow with all his force into the patient's mouth, holding his nostrils at the same time. When from the rising of the chest or belly it appears that the lungs are thus filled with air, the blowing should be suspended, and the person press the breast and belly, so as to dispel it; and alternately inflate and depress the lungs in this manner for some time so as to imitate natural breathing. Or a pair of bellows or blow-pipe may be used, more powerfully than the mouth (but none so efficacious in other respects,) stopping the nostrils as much as possible.

To stimulate the intestines, the smoke of tobacco may be thrown up as a clyster, and for want of a proper apparatus, a common tobacco pipe may be used for this purpose. The bowl of the pipe must be filled with tobacco well kindled, and the small tube being introduced into the fundament, the smoke may be forced up by blowing through a piece of paper full of holes, wrapped round the mouth of the bowl, or by blowing through an empty pipe, the mouth of which is applied close to the other. Should it be found impracticable to throw up the fumes of tobacco, clysters of warm water, with a little salt, or some wine or spirits, may be repeatedly administered, by means of a common clyster bag and pipe, or still better by a pretty large syringe.

In the mean time a warm bath should be prepared and the patient put into it, should the above means fail; or, where this cannot be had, the body should be covered with warm salt, ashes, sand, grains, or such other substances as are at hand.

Till the patient show signs of life, no attempts must be made to pour liquors into his mouth, but his lips and tongue may be wetted with a feather dipped in warm spirits, and as soon as he has recovered the power of swallowing, a little warm wine or cordial ought every now and then to be administered. After the

patient is a little re-animated, some gentle means may be used to occasion vomiting, as tickling the throat with a feather, or administering strong camomile or sage tea; but no powerful emetic is to be attempted.

Still the warm and stimulating applications are to be persevered in, and small quantities of some cordial liquors ought frequently to be administered. Should the person, after being perfectly re-animated, retain an oppression or cough, he ought to be blooded, and drink plentifully of barley-water, or other soft pectoral.

Persons apparently deprived of life by any accident, should be treated in nearly the same manner.

We cannot conclude this article better, than by a verbatim copy of the card published and circulated by the Royal Humane Society.

CAUTIONS

RECOMMENDED BY

THE ROYAL HUMANE SOCIETY.

1. Never to be held up by the heels.
2. Not to be rolled on casks, or other rough usage.
3. Avoid the use of salt in all cases of apparent death.*

THE DROWNED.

1. Convey carefully the body, with the head raised to the nearest convenient house.
2. Strip and dry the body; clean the mouth and nostrils.
3. Young children between two persons in a warm bed.
4. An adult. Lay the body on a blanket or bed, in a warm chamber, in winter; to be exposed to the sun in summer.
5. It is to be gently rubbed with flannel, sprinkled with spirits;—a heated warming pan, covered, lightly moved over the back and spine.

* Warm flannel, lightly sprinkled with spirits.

6. To restore breathing—introduce the pipe of a pair of bellows (when no apparatus) into one nostril; the other, with the mouth closed, inflate the lungs, till the breast be a little raised; the mouth and nostril must then be let free;—repeat this process till life appears.

7. Tobacco smoke is to be thrown gently into the fundament with a proper instrument, or the bowl of a pipe covered, so as to defend the mouth of the assistant.

8. The breast to be fomented with hot spirits; if no signs of life appear, the warm bath; or hot bricks, &c. applied to the palms of the hands and soles of the feet.

9. Electricity, early employed by a medical assistant.

INTENSE COLD.

Rub the body with snow, ice, or cold water.—Restore warmth, &c. by slow degrees, and after some time, if necessary, the plans may be employed for the resuscitation of drowned persons.

SUSPENSION BY THE CORD.

1. A few ounces of blood may be taken from the jugular vein, and cupping glasses may be applied to the head and neck; leeches also to the temples.

2. The other methods of treatment, the same as recommended for the apparently drowned.

SUFFOCATION BY NOXIOUS VAPOURS OR LIGHTNING.

Cold water to be repeatedly thrown on the face, &c. drying the body at intervals. If the body feels cold, employ gradual warmth; and the plans of the drowned.

INTOXICATION.

The body is to be laid on a bed, &c. with the head a little raised the neckcloth, &c., removed. Obtain immediately medical assistance, as the modes of treatment must be varied according to the state of the patient.

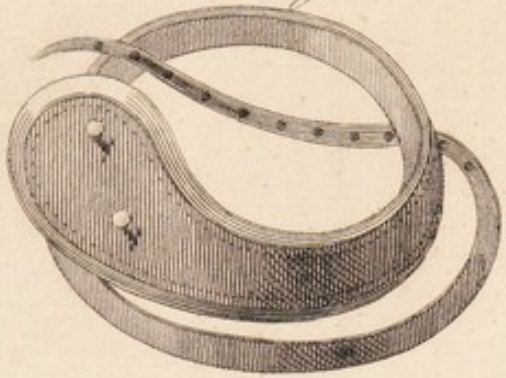
GENERAL OBSERVATIONS.

1. On signs of restoring life, a tea-spoonful of warm water may be given; and, if swallowing be returned, warm or diluted brandy. To be put into a warm bed, and if disposed to sleep will generally awake restored to health.

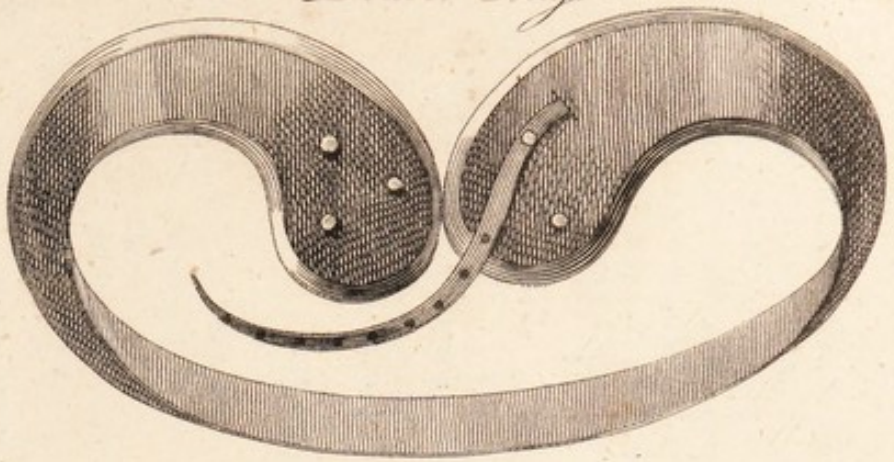
2. The plans above recommended are to be used for three or four hours. It is an absurd and vulgar opinion to suppose persons as irrecoverable, because life does not soon make its appearance.

3. Electricity and bleeding never to be employed, unless by the direction of medical assistants.

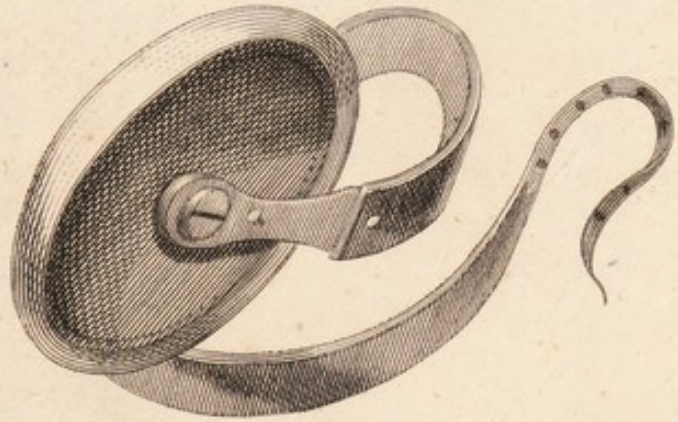
Common Truss



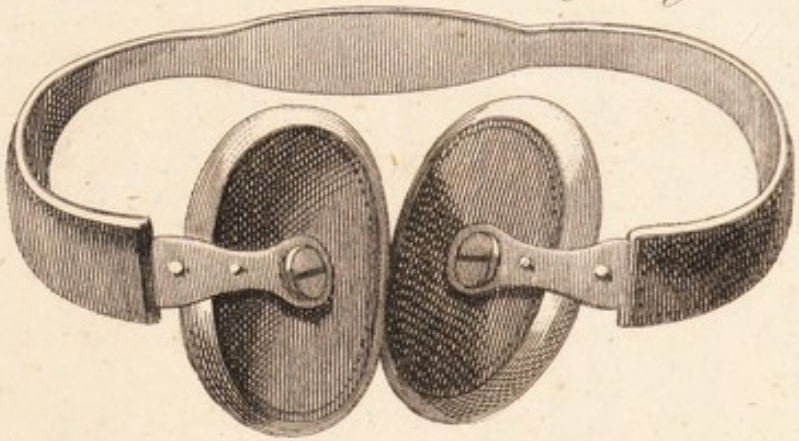
Double Truss



Single adjusting Truss



Double universal adjusting Truss



The Pad of the adjusting Truss is moveable and by means of the centre screw can be fixed in any direction the Hernia protrudes.—Filkins, Truss Maker, 60, Old Street Road.

Brown sc. T. Brown

Published by T. Kinnersley May 20, 1819

CHAP. LIX.

OF RUPTURES.

A RUPTURE is a disorder occasioned by a displacement of the bowels or intestines.

When the intestines or other contents of the belly obtrude at the navel, it is called a *navel-rupture*—when forced through the insertions of the muscles of the belly, it is called *ventral*—when in the groin, *inguinal*, and when in the upper part of the thigh, *femoral*.

The descent of the bowels usually takes place in such parts of the belly as are weakest. It is occasioned by immoderate laughter, crying, coughing, over exertion of bodily strength, leaping, falls, blows, fatigue, riding, immoderate grief, and difficult parturition. Persons afflicted with a general laxity of body, are particularly liable to ruptures.

On the first appearance of the disorder, every means should be taken to return the intestines; it is much more difficult to cure after a long continuance. The truss is the most effectual remedy, and it should be fitted with every possible exactness to whatever part of the body it is applied. A cushion or compress, possessing a sufficient degree of softness and resistance, should be placed between the pad of the truss and the groin; for this purpose take three slips of calico twenty inches long and three broad; fold them into a square form. For young persons and children the size must be in proportion. The patient should on no account apply the truss himself on the first appearance of the rupture, but submit it entirely to the surgeon, whose province it is to determine whether the whole of the intestines be returned, or part remains in the opening through which they descended.

In the latter case, the application of a truss would be highly injurious. But if the assistance of a surgeon cannot immediately be had, the patient must give up all exercise and labour; immediate rest becomes essential, and his position should always be with the head lower than the body.

To favour a return of the intestines, the feet of the patient should be placed over the shoulders of another person, and his body be permitted to hang downwards, jolting him a good deal at the same time.

At this moment a gentle pressure of the hands and fingers should be made. The person operating in this way should grasp the swelling with one hand at the bottom, while with the fingers of the other he attempts to push gently the contents of the tumour into their place, observing that the parts last descended be first reduced.

The patient when in bed should suffer the part affected to rest on his hand, and all exertion should if possible be avoided.

When the return of the gut cannot be effected by the means above mentioned, apply repeatedly cold water or ice if it can be procured. If not, in order to increase the coldness of the water, dissolve into a quart of it, two ounces and a half of crude sal ammoniac, making a father solution as it loses its cooling quality. If these bathings do not succeed in ten or twelve applications they must not be repeated. Should neither ice or sal ammoniac be ready to be had, mix the water with an equal quantity of vinegar. An injection of cold water may be likewise administered with great effect with a pewter syringe, containing a pint or a pint and a half. Dashing cold water on the legs and thighs, in cases of difficult reduction, has been also recommended.

In addition to the above refrigerants, the following warm application should be made to the belly. Take an ox's bladder, two thirds full of warm water, and cover it with flannel to prevent any moisture from touching the body. Apply this so as to cover the

whole belly above the tumour, and at the same moment let the cold bathings before mentioned be made directly to the ruptural part.

If the patient be costive, with sickness at the stomach, internal medicines should not be administered, but clysters made of half a pint of camomile tea, two table spoonsful of oil, and one spoonful of common salt, should be thrown up, one dram, or a dram and a half of soap dissolved in a pint of warm water, will answer the purpose much better than an injection of tobacco smoke, which has been generally recommended. One of these clysters should be repeated every three or four hours till evacuation be obtained. If fever attend, the patient should lose a little blood.

When the patient goes to stool he must not strain but take time, and discharge the fœces without violence. He must also keep his hand on the diseased part with a considerable degree of pressure, to prevent the bowels from farther descending, and should do the same when the truss is applied. An increased pressure on the pad will be necessary at the time of voiding.

The patient must be extremely careful in removing the truss either by night or day, till every apprehension of its return be done away; he must likewise take care to keep the pad from shifting. In a certain time he may be informed that he can sleep in safety without it; but to avoid a return of the disease, he must not remove it but when in bed, and lying on his back with his feet drawn close up. Previous to his rising in the morning, he must restore the truss to its former situation, with as little motion as possible, and take care that all his movements be gently and with caution.

The irreducible hernia, or ruptures of long standing, are where the contents have fallen into the purse, and formed adhesions to its side, or from the quantity of the intestines that have descended, have experienced an alteration in the form or texture, so as to render them incapable of being returned. In this case the

steel truss recommended for ruptures of the groin would be injurious. A bag or suspensory truss in this situation is recommended to support the loaded scrotum. When the tumour is very large, a soft quilted bolster should be worn at the bottom of the suspensory, to prevent excoriation, and the scrotum should be frequently washed. An attention to the state of the bowels, in every species of rupture is essential, but particularly in this state of the disorder.

After the rupture has been reduced, and while wearing the truss, the parts should be daily bathed with either of the following cold astringent washes.

Take of oak bark two ounces, and water three pints, and boil them together over a slow fire till they be reduced to one quart; strain them, and add half an ounce of alum. Let the mixture stand till it be perfectly cool, before applying it.

These bathings are to applied in the morning after the patient gets up. He must lie down on his back, and gently loose the truss, and raise the pad to prevent it being wetted. Four or five folds of linen soaked in the above lotion, must then be applied to the part, and suffered to remain till it has lost its coldness; when it should be repeated and continued eight or ten minutes. Medicines of a tonic or strengthening nature should also be administered, as Peruvian bark, or chalybeate waters, natural or artificial. The food must be light and of easy digestion, particularly avoiding oily substances, and such as produce flatulence; the body being kept gently open.

The efforts of women in labour are frequently the immediate cause of rupture, particularly the navel rupture. Women, therefore, who are afflicted with this disease, should, on the approach of the pains, and during the time of labour, have a proper person present to make a compressure on the navel, with a double cloth or flannel warmed. In every other species of rupture to which the female is liable in common with man, the treatment is similar.

Infants are particularly liable to navel-ruptures; and therefore it cannot be too strongly impressed on the minds of those mothers or nurses who have the care of children, never to undress and wash them without examining the state of the private parts and navel.

If a swelling about the navel be observed, a roller, called the belly-roller, should be made a little tighter than usual; and, if the swelling continue, it would be advisable to get proper assistance without delay In this case, a piece of sheet-lead, large enough to cover the swelling, folded in a linen-rag, and kept constantly on the part, will frequently reduce it in a short time. Or, instead of this, a pyramidical compress of round pieces of sticking-plaster, spread on thin leather, with bits of card placed between them, or what is still easier, a bit of bees' wax of the size of a shilling, and fastened with a pretty tight bandage. The cold bath is also extremely useful, and will of itself sometimes effect a cure.

Ruptures in the groin, when they happen to children, must be treated in the same manner as in adults.

The watery rupture, which is apt to appear in boys at their birth, is a distension of the purse, similar to that in adults. It may be distinguished from the common rupture by the tumours being transparent, without pain, and not retiring on pressure, nor being increased by the child crying. This is attended with no danger whatever, and the water may be removed without inconvenience, by puncturing the bottom of the tumour with a lancet.

FALLING DOWN OF THE FUNDAMENT.

This melancholy disorder, so frequent with the indigent and industrious classes, consists in a protrusion of the rectum, arising from a debility of the surrounding muscle and the adjacent parts, which serve to support that intestine, and keep it in its situation It may be occasioned by violent straining at stool, b the natural efforts of persons troubled with costivene

by worms, by an indiscriminate use of aloetic pills, or other purges, and in infants by excesssive crying.

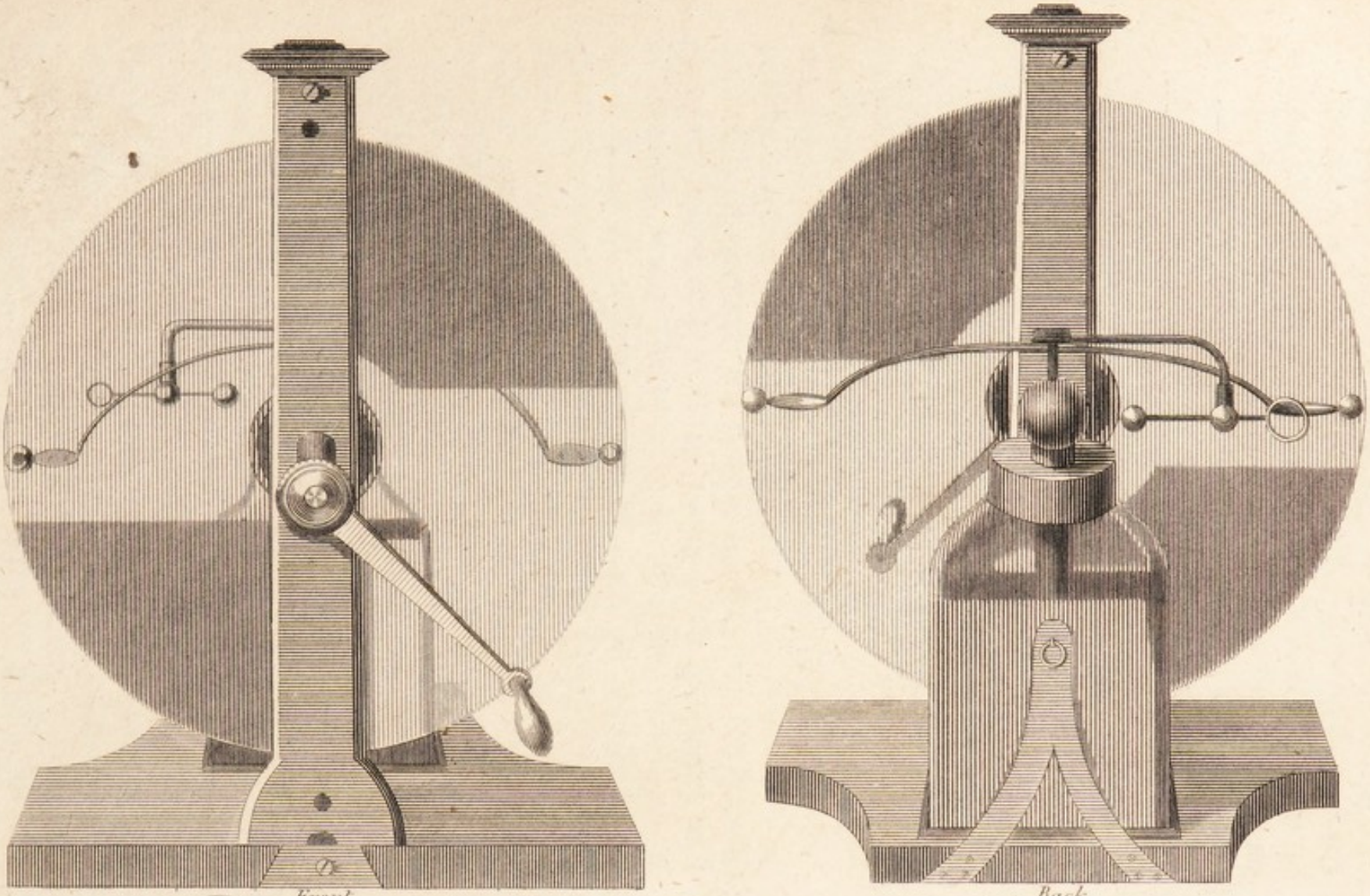
To reduce or replace the protruded intestine, when it forms a thick cushion round the anus, the patient ought to be placed on the side of the bed, lying on his face, with his feet on the ground. The buttocks, being elevated, should be pressed against each other, and, by making gentle semicircular motions from right to left, and from left to right, on the middle of the protruding part of the intestine, it generally re-enters very easily.

Should this means not be sufficient, the higher part of the gut must be pressed upwards, by introducing the fingers of one hand, previously oiled, while the palm of the other supports its lower extremity.

Bleeding from the arm, and applying leeches to the inflamed part, will be of essential service. It is also recommended to sit over the steam of hot-water, or rather a decoction of poppy-heads and camomile flowers, fomenting also the parts with the same, and afterwards wash them with a solution of sugar of lead, made of fifteen grains of sugar of lead and one pint of water. Bathe the descended intestine with this mixture, made moderately warm, and kept constantly applied compresses of linen wetted with it, of a sufficient thickness to retain the moisture.

After the inflammation has subsided, the intestine may be returned with ease and safety, but it is often difficult to retain it in its situation, from the debility of the muscle. This can only be affected by a suitable bandage. If the intestine, relieved from this bandage, should fall down on going to stool, the person himself can easily return it, by pressing two fingers on each side of the anus, in order to push the intestine upwards, in proportion as the excrement is discharged. A clyster of half a pint of milk, one ounce of brown sugar, and one ounce of olive-oil, should be injected every morning, to facilitate the evacuation; and, in voiding, an almost upright posture should be observed.

As debility is the prominent cause of this disease, a copious use is recommended of tonic and astringent



The New Invented Electrical Machine.

medicines, and injections of decoctions of bark, galls, and other vegetable astringents. The diet should consist of solid food, roasted or baked, and avoiding all fat, oily, or flatulent substances. A few glasses of red port will assist in promoting the tone of the system.

CHAP. LX.

OF MEDICAL ELECTRICITY.

HAVING, in the course of this work, recommended electricity in various cases, we shall devote a short space for the general consideration of this remedy, which deserves, much more than it is, to be employed in practice, being in general a safe application, and, from its incredible force, most potent in its effects on the human frame; and having been successful in numerous cases of different natures, where the diseases had resisted the power of medicine. In short, it is a bold experiment, which may be safely tried, but only by a skilful hand; for its power, as we see in lightning, is capable of extinguishing life at a stroke, while with discretion, it may be passed through the tender fabric of the brain.

The application of the electric fluid to diseases of the human body, may be divided into three heads; first, under the form or radii of sparks, when projected from a point; secondly, under the form of a star, when a number of these radii are connected on a brass ball; and, thirdly, under the form of a globe, when the radii are condensed in a Leyden jar. To each of these belong a specific virtue. The first, or radiated state, acts as a sedative; the second, or concentrated state, as a deobstruent.

In local complaints, its power alone will, in many cases be sufficient; in constitutional diseases, it is a concomitant of medicine.

The apparatus, in the simple form to which it is now reduced, consists of a cylinder, a conductor, and a Leyden jar, with an insulated chair, an electrometer, a glass mounted director, with a wooden handle, to the extremity of which a brass ball, or wooden point, is fitted, and a brass director mounted in wood.

When the fluid is to be applied, the operator, connects by a smooth wite glass the mounted director to the conductor with a point at its extremity, and the radii are projected thence to the part affected. When desirous of propelling the sparks, he changes the point for the ball. When the shock is intended, the circuit of the Leyden jar must be made. The person insulated may be subjected to a double intention at one moment. Suppose a pain in the eye requires a sedative application to the affected part, and the stimulus of a blister at a remote place, the fluid may be thrown from the wooden point on the eye, and at the same instant stimulating sparks may be drawn by the brass ball applied to the seat of the disease alone.

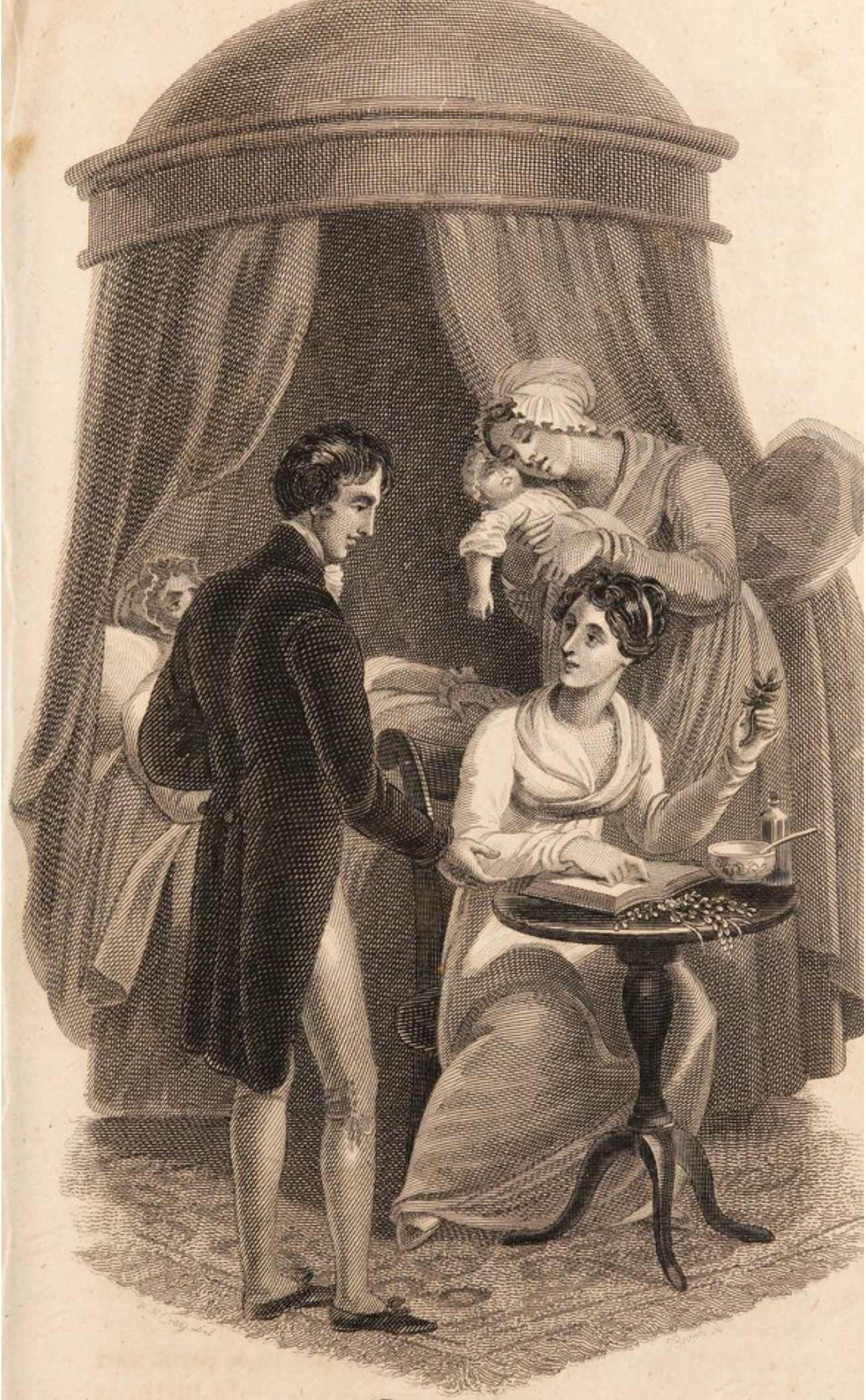
The following are a few of the diseases in which the electric fluid has been applied with success:

In its radiated state—eruptions of the skin; contractions of the muscles; loss of the use of the limbs from cold; abscesses; swellings; tumours after the smallpox; constipation of the bowels. In its concentrated state—ague and paralytic affections. In the form of a shock—locked jaw; acute pain of the head; sprains; sprain and swelling of the joints; schirrus of the testes; suspension of the procreative powers; hypochondria or melancholy, and palsy in the urinary bladder

CHAP. LXI.

OF CHILD-BIRTH.

IN a former part of this work (p. 487.) we promised to give such instructions respecting child-birth, as might be requisite to enable matrons and nurses to give



A wise and experienced Midwife prescribing for her Lying-in patient at the request of the Husband.

assistance in deliveries in cases where immediate professional obstetric aid may not be at hand. This necessary information will form the present chapter, in which we shall communicate such plain advice as may not only be useful at this crisis, but will give to unexperienced pregnant women such a knowledge of their situation as may tend to prevent those evils which ignorance and apprehension too frequently produce.

It may be necessary to premise, that the process of child-bearing is by no means attended with that difficulty and danger which interested practitioners have industriously held forth. In ninety-nine cases out of a hundred, Nature does the work herself, or at least requires very little assistance, and that there is seldom danger, except from injudicious management and improper interference.

Were women properly instructed in the obstetric art, in every point of view they are much better calculated than men to assist nature in deliveries. Besides the indelicacy and immoral consequences, which too often attend the employment of men-midwives in this natural occupation of the other sex, females are altogether much better qualified than males. They are more tender, careful, and observant, and to them the patient can more freely disclose her situation. The employment of men is of modern introduction, copied from the manners of the French, where women pay little regard to that delicacy for which the British females are deservedly admired; and it may be asserted, without fear of refutation, that, in former times, women were as safely delivered as now, when the male practice has become so universal. In fact, it is no harsh assertion, that their interference has been of the worst consequences. Their constant use of instruments, which are not requisite once in a thousand times, has occasioned, in innumerable instances, the death both of mother and child, or maiming them in such a manner as to produce incurable maladies during the rest of their lives; of this some very recent in-

stances in high life could easily be given. We, therefore, most sincerly hope that, by the regular instruction of women as midwives, the male practice may be done away, except in cases where surgical aid is necessary.*

After this necessary preface, we proceed to practical instruction.

When the labour approaches or comes on suddenly, and a proper midwife is not at hand, it will be proper to procure the assistance of one or more experienced matrons in the neighbourhood, and in the mean time the patient should be kept as quiet and free from apprehension as possible.

Labour may be divided into three stages.—The first consists in opening the mouth of the womb, and of the bag which contains the child; the second comprises the actual passage of the child, and its separation from the mother; and the third is the removal of the after-birth, &c. The first stage lasts from three to ten hours, and sometimes it extends to fourteen or fifteen.

In the beginning of labour, any interference of the midwife or other attendant, unless there be some unusual resistance, or the waters come too early, can never be of use, and may often prove injurious.

The dress of the woman should be as light, uncumbersome, and easy, as possible. There should be ready a pot of hog's lard, with which the inside of the passage of the womb is to be rubbed. Thread for the navel-string, and a number of soft cloths, well aired, should also be at hand.

When the first stage is nearly completed, the woman should be put to bed, laid on her left side, and her face to the back of the bed, with a pillow doubled, and placed between her knees. There should be a free

* In this respect, we have a very flattering hope in the recent establishment of "THE BRITISH LADIES' INSTITUTION, for the Encouragement and Instruction of Female Midwives, and Delivery of pregnant woman at their own Houses, gratis," an establishment patronised by her Royal Highness the Princess of Wales, the Prince of Wales, and several other branches of the Royal family, with a numerous list of the most distinguished characters among the nobility and persons of high rank.

circulation of air; but the patient must not be placed in a current. A blanket doubled thick, and wrapped in a sheet, should be laid under her, and removed after delivery.

When the first stage is pretty far advanced, the pains generally return with greater regularity every three or four minutes.

Women should not be impatient in the first stage of labour. The more slowly it goes on at that time, the more certain will be the chance of a speedy delivery.

When the bag bursts, and the waters are discharged, the parts should be anointed with hog's lard.

In common deliveries, the head first protrudes, the largest part of it being applied to the widest part of the bason; but, in its passage, the position is altered by the mere contraction of the womb.

After the waters are discharged, there is sometimes a bearing-down pain, which continues till delivery: in other instances, the pains return at longer or shorter intervals, and gradually increase.

By means of the contraction of the womb, the substance which had sealed it up is discharged: it is a slimy matter, frequently tinged with blood, called the SHEWS.

By degrees the pains increase, and come on at regular intervals of ten minutes.

There are also fales pains, which generally occur in the evening or night: they may be known by neither being so regular nor so violent as the true pains; and better as not occasioning a change of the orifice of the womb, and bringing down the shews.

False pains are occasioned either by the womb pressing on the surrounding parts, or by costiveness; in the former case, change of position and opiates will give ease; in the latter, the costiveness must be removed, which will be best done by clysters.

The bearing down pains, which force the child through the passage, should in all cases be the absolute work of Nature; and neither the woman

herself, nor her attendants, should attempt to assist.

When the head is passed through the narrow passage, the mother experiences some relief from the violence of the pain. This interval should be allowed to continue for a minute or two, before any effort be made to pull out the child. Nature being the principal operator in the whole process, she relaxes her effort for a moment, and it will easily be felt when the struggle returns; at which time the child should be carefully, but neither by force, haste, or violence, assisted in coming entirely away.

The midwife, or whosoever takes charge of the delivery, should be particulary careful in tying the navel-string; for if it be too loose, a discharge of blood ensues; if too tight, there is equal danger in cutting it.

After the child has fully come into the world, the next business is to separate it from the after-birth, or placenta cake, to which it is attached by the navel-string, and then to clear the womb of all the appendages left in it. The navel-string must be separated from the mother, and tied, leaving a small part beyond the ligature. To this, a piece of scorched rag is to be applied, till it drop off.

After some interval beyond the labour, there occur after-pains, occasioned by the reversed contraction of the womb, and designated grinding pains, but which are much less violent than those of labour.

When these contractions have continued for a quarter or half an hour, the after-birth, &c. is thrown off, and the womb returns to its natural size. When from mismanagement, or the diseased state of the after-birth, it does not come away at a proper time there is considerable danger.

Before the after-birth is come away, it is necessary to ascertain if another child remain in the womb; and in the view of this, the midwife should always make a

ligature above, on the navel-string, when she separates the child that is born.

A midwife can generally know, from feeling attentively the state of the belly, whether there be a second child. If only one has been contained in the womb, it very soon after delivery resumes its former size; when there is a second child, it does not appear to lessen; the bowels keep behind, and at the sides, and the belly feels nearly as hard as before the child was born.

In some rare instances, the midwife cannot judge perfectly by this easy and delicate mode, whether one or more children be contained in the womb: in this case, the midwife must ascertain the fact by introducing her hand, previously rubbing it with lard or pomatum. If this be done immediately after delivery there is no danger, and little pain; but if too long delayed, it may be both dangerous and painful.

In assisting to carry away the after-birth, the midwife must stop for the contraction of the womb.

When the grinding pains are felt, the midwife should assist to bring away the after-birth, by gently pulling the navel-string during a pain, and so managing as to bring the after-birth through the bason, without interruption.

When there are more than one child, the blood-vessels of the cake frequently unite: if, therefore, that part of the navel-string which is fixed to the after-birth be not tied, the life of the second child may be lost.

If there be a second child, some time should be allowed the patient to rest after delivery of the first.

These are the principal directions to be given in ordinary labours. In lingering and cross labours, instructions here would be of little service; as they require not only experienced midwives, but sometimes scientific men. In general we have only here to observe, that an officious interference by ignorant

individuals may be attended with the worst consequences.

Here, and indeed in all cases, much depends on the patient being kept as composed as possible: and extraordinary agitation is of the worst consequences. She ought to bear with fortitude, and submit with resignation to the management of the midwife, if she regard her own or her child's life.

CHAP. LXII.

OF DIET.

THERE is no country in the world where the people eat so much solid animal food as in England. This, and bread, constitutes their principal diet, without a due proportion of vegetables. This mode of life is not only expensive in itself, but excites thirst, and leads to an immoderate use of strong beer, and other stimulating liquor, which keeps the lower orders in indigence. To indulge this propensity, they sacrifice every thing, and particularly their health.

The following pages are written with a view of teaching the common people a cheaper, more healthful, and more nutritious, regimen, in regard to diet, which we trust may not be altogether unattended to at the time when every thing has risen to an enormous price, and in a country whose riches in a great measure depend on the cheapness of labour.

We are well aware of the difficulty of overcoming rooted habits, and have but little expectation of inducing the adult to alter their mode of life; but if we can prevail on them by reason to train up their children in a better regimen, a reform in this part will gradually ensue, and a total change may in time take place in the people's manner of living;—a change that would be salutary in every respect, and would render the people less dependent on animal food and bread

for their subsistence, thus arming them against the hardships occasioned by a scarcity or dearth of either of these articles in future.

No animal eats such a variety of food as man. Fitted by Nature for an inhabitant of every clime, he devours them all, and, in a civilized state, his table is supplied from all the quarters of the world. To suit his palate, and to correct the improper qualities of meats in their natural state, he calls in the aid of cookery, and extends it to all degrees of luxury.

Man's frame and structure mark him as intended by Nature to use both animal and vegetable food: to apportion them properly is a most important point, and for which no universal rule can be laid down; much depends on the person's constitution, situation in life, and other circumstances. The most general recommendation that can be given, but for which there are many exceptions, is to use of vegetables double the quantity eaten of animal food.

Animal food is certainly more nutritious than vegeable. The use, however, of it alone, or nearly so, is extremely injurious. It acts as too great a stimulus of the system, accelerates too much the circulation of the blood, excites nausea and thirst, occasions putrescence in the stomach and bowels, and brings on violent griping pains, cholera, and dysentery. The laborious may, and perhaps ought to, use a considerable proportion of animal food, their pursuits requiring it; but the sedentary, the plethoric, and, above all, the studious, ought to live chiefly on vegetables, and to abstain from the free use of strong liquors.

To the great use of animal food, we may ascribe the frequency of consumptions in England, and a variety of other disorders, particularly scurvy, which few families escape, and which it is universally known is only to be corrected by a copious use of vegetables.

But the body is not affected alone by this diet. It also greatly influences the mind. It blunts the

imagination, and induces a ferociousness unknown to men whose food is chiefly taken from the vegetable kingdom.

A moderate use of animal food is doubtless to be recommended: the mode of using it, however, deserves consideration. The people of England are too fond of solids; a pound of meat is merely a pound of meat, which a hearty man can eat for his dinner; whereas, the same quantity stewed down with proper vegetables, will furnish an ample and nourishing meal for half a dozen of persons. To inculcate, therefore, among our countrymen the great advantage they would receive from this mode of cookery, is the great object of this part of the work. It is a subject which of late years has beneficially occupied public attention, and many useful receipts have been published for making cheap, nourishing, and wholesome, dishes for the poor, consisting of broths, soups, stews, and pottage, and calculated to afford a hearty and plentiful meal, without either bread or drink. Count Rumford has, of all others, paid most attention to this improvement in cookery for the poor, and, in his Economical and Philosophical Essays, given a variety of forms well adapted for the purpose, but which, we fear, have in general been too little attended to. The soup-shops, established some years ago, in a time of great dearth, were formed on a good principle, and were on the whole a useful species of charity. They were not, however, without objections, and one great disadvantage of them was, that they raised to an extraordinary price those coarser parts of the meat, which the poor and economical were formerly wont to purchase for soups, but which were now become out of the reach of those above receiving charity.

In Scotland, from time immemorial, the common people have been in habit of living in the manner now recommended. Their breakfast and supper is hasty-pudding or oatmeal, eaten with milk; and their dinner, broth, with variety of vegetables and meat; often with-

out meat, or what the French call *soup maigre*. They thus require no bread for breakfast or supper, and little at dinner: and the Scotch peasants rarely taste any other liquor than water; yet no persons are more healthy, cheerful, or active, nor retain their strength to a longer period of life, while their external appearance denotes comfort and respectability. The English labourer, on the other hand, who is burnt up with broiled salt meat, or dry bread and cheese, has a continual thirst, and spends most of his earnings in liquor. This food, by acting as a powerful stimulant, may make him do more work for some time, but he seldom lives long, and is an old man when he should be in his prime. Meanwhile his expenses for food and drink preclude him from a decent and proper attention to dress, and he is too often seen dirty and in rags, while he is earning from one to three pounds a week.

Roasting or broiling meat are most wasteful modes of cookery, which should be avoided by the poorer class, as much of the substance, and the most nutritious parts, are lost by scorching, and fly off by evaporation. But what shall we say to the extravagance of the many thousands, even of the poor, who throw into the kennel the liquor or soup of the meat which they boil? Surely, in these hard and expensive times, if persons will not take the benefit themselves of this essence of the meat, they might at least give it to the poorer part, who would, from such refuse boiled up with vegetables, make many a hearty meal.

To those accustomed to broth, it is not only healthy, but particularly agreeable to the palate. The natives of North Britain, who come into England, feel a very sensible want of their early food, and greedily devour a mess of barley-broth or herb-soup, when accident throws in their way this their rational luxury. In all the nations of the Continent, broths, soups, and stews, form the principal modes of cookery. In England alone, the general mass of the peo-

ple live on solid butcher's meat, bread, cheese, butter, and ale or porter. An alteration in this respect cannot, we repeat, be expected in persons grown to manhood. Every change of diet, to be introduced with effect, must begin with children. Whatever we are accustomed to eat when young, we generally prefer during life. Were the children of this country taught to eat hasty-pudding and milk for breakfast and supper, and broth with vegetables and meat boiled in it for dinner, they would relish these dishes as long as they lived, would find little occasion for bread, and less for drink; they would thrive better than on their present diet, and their morality would be improved by temperance and sobriety. At present, the father, fond of strong beer, makes his son from infancy guzzle it at every meal, while the mother does not fail to give her little favourite tea, as often as she indulges in that debilitating beverage. Thus the son becomes a tippler, and the daughter sippers tea, instead of taking solid food; is eaten up with vapours and nervous disorders.

It has been said that the poor cannot afford time or fuel to make soups. Yet they find means to afford both to boil a kettle and make tea. A much smaller fire, with scarcely any attendance, would make a comfortable soup or stew. The English boast of their good living, while there is no nation in Europe which so little understands the culinary art, or dresses to so little advantage, either to the palate or pocket, the excellent animal food and esculent vegetables with which the country abounds.

Bread, or what the West Indians term bread-kind; that is, any farinaceous substitute for bread, forms a considerable part of the diet of all nations. Most people, however, in this country, eat more bread than is conducive to health. A due proportion of it is wholesome, but excess in this as in any thing else, is injurious. A surfeit of bread is of all others the worst. The French consume a vast quantity of bread, but its

bad effects are corrected by their copious use of soups and fruit.

One great use of bread is, to form a mass adapted to fill up the alimentary canal, and carry the nutritious juices through that passage, in such a state as to render them fit to be acted on by the lacteal absorbents, which take up the nourishment and convey it to the blood. Hence bread may be considered the soil from which the nutriment is drawn. Considering it in this light, the finest bread, though certainly most nutritious in itself, is by no means the best adapted to distend the alimentary canal, and to blend with the more substantial articles of the diet. It is nutritive in itself, but its chief purpose is what we have just mentioned.

Bread is the most expensive mode of using grain, especially as it is charged with two heavy additional charges in passing through the hands of the miller and baker. The former frequently grinds down with the wheat extraneous and improper matter, while the latter bakes up with it lime, chalk, alum, and other deleterious ingredients.

Fine flour too much approaches to starch, an article far too astringent and viscid for this branch of food.

Household bread, made by grinding down the whole grain, and separating from it only the coarser bran, is doubtless the most wholesome, and even most palatable, though it may not so greatly please the eye; indeed a mixture of wheat with other grain, particularly with rye, will be found, after a little use, both most palatable and conducive to health. Mixtures of wheat with potatoes, rice, and other farinaceous substances, which the late high prices considerably introduced, is much preferable to bread made of fine flour, which is so much a favourite, especially among the lower orders. For the more laborious, peas, beans, oats, and maize or Indian corn, form a proper mixture either with wheat or rye. Oats alone, which are used for bread in a great part of Scotland and some part of Ireland, make a healthful bread. Barley-bread passes

too quickly through the alimentary canal; but bread of barley and peas-meal is very nourishing. Of peas alone, it is both hard and indigestable, and still more so of beans.

Much of the bread in this country is consumed by children. It is always ready, and when the child cries for food, a piece of bread is put into his hand. As a corrector of other food, it is, as we have already said, beneficial, but here too much of it is particularly improper. Children are apt to be troubled with acidities in the first passages; and it is well known that bread, mixed with water, and kept in a degree of heat equal to that of the human stomach, will soon turn sour.

Tea may here properly be introduced and considered, as with it there is by far the greatest consumption of bread. This beverage is of very late introduction, almost within the memory of aged persons of the present day, but now become universal in this country. The inhabitants of Great Britain consume a greater quantity of this herb than all other nations of Europe. The lowest English woman must have her tea for herself and family; and as it contains no nourishment, it must of course be accompanied with bread and butter. The quartern loaf goes little way among a family of children, and, if we add the cost of tea, sugar, butter, and milk, the expense of one meal might fill their bellies with wholesome and nutritious food three times a day. Tea among the higher classes is a luxury; among the lower it is an article of diet. Many women in particular, in humble life, make it and its accompaniments, almost their sole food.

This immoderate use of tea has already, in a great measure, effected a general change of constitution in the people of this country. Debility, and a constant irritability of fibre, have become common not only in women, but in men. It has been the principal promoter of nervous disorders; has nearly made a conquest of one sex, and is making rapid strides towards vanquishing the other.

Were women aware of the train of diseases induced

by debility, did they consider how disagreeable these diseases make them to the male sex, they would avoid an excess in tea as a most pernicious poison.

To the heavy, sluggish, or plethoric habit, it may be serviceable, nor is it to be condemned as an article of luxury after a full meal, or in a crowded assembly; but as an article of diet it is fraught with the most pernicious consequences.

Boiled Grain.--Bread is the readiest and most portable mode of using grain; other forms, however, are no less agreeable, and some of them more wholesome. Simple boiling is of all others the best, and does not, like bread, produce either the acidity or viscidity; it, besides, precludes, all adulteration, and is a preparation much less laborious and artificial than baking.

A greater proportion of mankind use boiled rice than they do bread; and several other sorts of grain, particularly barley and oats, boiled in the same manner, make good substitutes for bread. Pease, likewise, made in the form of a pudding, are a hearty substitute, of which most persons are fond, and many prefer to bread. Both pease and beans boiled in soup are nourishing, as well as palatable, and require not the addition of bread. They are of all grain the most hearty; of this there is a good proof in labourers, who, after having been much fed on this legume, remove to farms where they use other species of grain, and who soon complain of a diminution of strength, and long for their pease-meal.

Boiled barley, eaten with milk, butter, or molasses, is considered a luxury in Holland; it is the principal food of the Dutch sailors, who are both healthy and robust. Barley is, perhaps, the best lithing ingredient, for broth; and grits, or coarse oatmeal, is little inferior.

Oatmeal is frequently made into bread, but its best form is hasty-pudding, eaten with milk, as we have already mentioned. It is a general, but a very erroneous, idea, that it is heating, and inducive of cutaneous diseases. These proceed more from the want of cleanliness than from any particular aliment. The frequency

of these complaints with which Scotland is derided, and which are attributed to the use of oatmeal, is so far unfounded, that they are much more common among the lower orders in London, than in any part of North Britain. If oatmeal were heating, it would hardly be recommended as forming in gruel one of the most diluting and cooling beverages.

A late learned lexicographer sarcastically defined oats to be in England the food of horses, and in Scotland the food of men. Were the horses in England to eat less of it, and the men more, it would be of considerable advantage, and tend greatly to lessen the expense of living. The Scotch, it is to be hoped, will neither be reasoned nor laughed out of the use of this wholesome article of diet.

Indian corn is a very hearty substitute for bread, and is best plain boiled, or formed into puddings or dumplings. The negroes in America prefer it to rice, and the Bavarian peasants to flour: it is highly nutritious, and the cheapest food known.

Buck-wheat boiled is of a very mucilaginous nature, and consequently nourishing. It constitutes a principal part of the food of the common people in several countries, particularly Russia.

Butter, though a good article of diet, is used much too freely in England. Like all other oleaginous substances, it has a disposition to rancidity, which is greatly accelerated by the heat of the stomach, and often produces an uncomfortable rising in the stomach, proceeding from the difficulty of its oily quality mixing with the watery fluids. Like other oils, it relaxes the stomach, and impedes the action of digestion: hence the custom of giving rich broths and fat meats to persons of a voracious appetite. Bread and butter constitutes a great part of the food of children, which without doubt occasions in a great degree the humours with which they are troubled. We hear women often complain of indigestion. Is this to be wondered at, when we consider the sedentary lives they lead, and the quantities of muffins, crumpets, and other spongy breads, they devour twice a day, soaked in

liquid butter; when we see the loads of pastry, the most indigestible of all forms of butter, which they greedily consume? With some vegetables, and with the leaner sort of fish, butter is properly used; but to use it with fat meat, or with such heavy fish as salmon and herrings, must be extremely prejudicial, except in strong athletic persons employed in hard labour.

Cheese eaten in small quantities after meals is serviceable, but as a diet nothing can be worse. It is extremely indigestible, occasions constipation, fires the blood, and excites a constant craving for drink, and, while it loads the stomach, imparts little or no nourishment: at the same time it is one of the most expensive articles of food that can be used. Many of the working people in London expend a third more in bread and cheese and porter, than would procure them palatable and nutritious dishes.*

Roots and *fruits* form a large class of the substitutes for bread. In warm climates, these in general preclude the use of bread altogether. The inhabitants of South America use the plantain, banana, and yam, either boiled or roasted, almost exclusively. In like manner, the natives of the South Sea islands use the bread-fruit, now introduced into our West India colonies.

Potatoes in this country form the principal substitute for bread. Still, however, they are not cultivated and used to the extent they ought to be. In Ireland, and a great part of Scotland, they are a principal article of diet: they are not so hearty a food as corn,

* A labouring man will be very poorly fed with half a pound of cheese in the day: this costs - - - - 5*d.*
Bread - - - - - - - 4
Porter - - - - - - - 10

1*s.* 7*d.*

Whereas he would be amply satisfied with a soup or stew made of half a pound of beef, costing - - 4
Vegetables - - - - - - 2
Bread - - - - - - - 2
Porter - - - - - - - 5

1*s.* 1*d.*

but no man will perish for hunger who has potatoes. As they thrive on every soil, and are less liable than grain to suffer from the inclemency of the season, we must blame ourselves if we suffer a famine to exist. Indeed, no such thing can ever happen, if due attention be paid to the culture of this valuable root. A far greater quantity of farinaceous food can be raised on an acre of ground, than if sown with any sort of corn. Some of the stoutest men are brought up on milk and potatoes; and Dr. Pearson, who has bestowed much pains in analysing this root, says, that potatoes and water alone, with common salt, will be complete nutriment. To render them a good substitute for bread, nothing more is required than simple boiling or roasting; but when intended to serve as a meal, they require the addition of milk, butter, or gravy. Stewed mutton and potatoes, known by the name of Irish stew, is a cheap, nourishing, and palatable dish. The excess of fat in the mutton, which would be otherwise lost, is advantageously absorbed in the potatoes. It is, however, to be observed, when potatoes are used in stews or broths, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Indeed, botanists have classed this as a species of nightshade, which it is well known is an active poison.

After the potatoe, the *Jerusalem artichoke* deserves to be mentioned, not only as being somewhat of the same nature, but is still more productive, and easily raised; yet it is a root hardly known by the generality of people, so little has it been cultivated. The plant grows six or seven feet high, and has a number or roots attached to it like potatoes. Their taste being somewhat similar to artichoke bottoms, it has been called an artichoke; but why it has obtained the epithet of Jerusalem is not so evident, as it is a native of Brazil.

The *parsnip* is reckoned one of the most nourishing of our esculent roots, as containing the greatest quantity of saccharine matter, and being at the same time of easy digestion.

Carrots are something of the same nature as parsnips, but more solid and harder of digestion. When pro-

perly cultivated, they grow large, succulent and palatable, particularly in soups and stews. The culture of this root much deserves attention. The farmer would find it extremely profitable, as well as a useful crop, to alternate with grain, and it is well known to be an excellent food for horses. Much of the oats they consume might be saved by this much less expensive substitute. It is also an admirable food for cows, and greatly enriches their milk.

The *turnip* possesses little or no saccharine matter, and is therefore not so nutritive as several other roots. It is however wholesome and emulcent, when properly cultivated, and forms the principal article of food for cattle in the winter.

Salsifie, skirrets, and several sorts of *beets,* particularly that called the *root of scarcity,* are pleasant, nutritious, and digestible.

Cabbage, and other sorts of *kale,* including *cauliflowers* and *broccoli,* are all likewise useful and wholesome vegetables, although rather inclined to create flatulency, but which is completely corrected by a proper accompaniment of meat.

Onions have long been considered a most valuable vegetable. In Egypt, they were a favourite article of food four thousand years ago. They are in that country more sweet and less pungent than here. The onions of Portugal have a similar quality. They are best dressed simply boiled, and are thus rendered mild, of easy digestion, and go off without leaving any disagreeable heat on the stomach and bowels. They also form a savoury addition in soups, as do likewise their pungent species *shalots* and *garlick.* The strong smell these roots communicate to the breath, may be remedied by eating a few parsley-leaves immediately after. The *leek* is somewhat similar to the onion, only that the stalk may be used as a pot-herb as well as the root. Indeed it is one of the best, most savoury, and wholesome, of herbs. The Welsh are fond of it to enthusiasm, and the Scotch make an admirable dish, by stewing an old cock, a piece of corned beef, or both, with plenty of leeks.

There are many other roots and plants valuable for culinary purposes; what we have mentioned, however, are the principal. It may be proper to observe, that, were they better boiled than they generally are in this country, it would extract a considerable quantity of the air contained in them, and thus diminish their flatulence.

We cannot conclude this article without observing, that every reasonable attention should be paid to the constitution and habit: and that the choice of food, for the preservation of health, and the support of the human frame, will depend, very frequently, on these previous considerations. A tendency to flatulence and windy affections in the stomach or intestines, must convince any rational mind of the impropriety of excessive indulgence in those vegetable substances, which naturally produce it. A propensity to animal food, on the contrary, must be no less pernicious, in the most common intimation of reason, as well as by the corroboration of experience, to the habit and constitution of others. In one respect, an accumulation of bile will be created; in the other, the most dangerous symptoms of inflammation must certainly follow. We will not disturb the feelings of our readers by alarming them without an evident necessity; but we feel it our duty to impress upon their minds the great expediency of making themselves acquainted with the nature and peculiarities of their own constitution. After all that can be said, the most eminent physician must, in all chronical cases, whensoever it may be deemed adviseable to consult him, be compelled to grope his way in the dark, without such a communication as this knowledge would always afford.* In most cases, also, the necessity of that advice would be prevented; for, although we are unwilling to repeat to our friends the words of an ancient adage, its pertinency is so fully impressed on our minds, that we think it cannot be regarded or considered, by any rational person, without the fullest conviction of its importance.

* Nay, we will add that, in acute cases, and such as leave no time for hesitation, we could adduce instances where a reserve of communication of previous habits, and the uses and operations of previous medicines, must have been productive of fatal effects.

CONCLUSION.

MUCH as we may recommend the culture and use of farinaceous and other roots and vegetables, as substitutes for bread, we by no means wish to discourage the culture of grain. On the contrary, we consider the culture of grain as the culture of man. While the husbandman raises food for his fellow-creatures, he is laying the foundation of health and longevity to himself and his offspring. While the manufacturer or artificer is sitting in an awkward posture, breathing a confined air, the ploughman rises with the sun, eats his wholesome meal of milk and farinaceous vegetables, hies him to the field, where he spends the day in useful labour, inhales the salubrious breezes, and at even retires, with a contented mind and keen appetite, to enjoy his simple repast and sound repose.

No manufacture enriches a nation so much as the culture of grain, and when the almost incredible sums are considered, which this country pays for the importation of grain, its culture cannot be too much inculcated. Were the waste lands brought into cultivation, the advantage would be incalculable. Look at some countries abroad, particularly Mecklenburgh ; by its attention to agriculture, and its vast exports to this country, it is become now like a garden ; its proprietors are rich, and its farmers happy.

Britain, if proper encouragement were given to agriculture, could not only supply herself, but have a surplus of grain for exportation. This would contribute more to the real wealth, the happiness of her people, and the stability of government, than either the increase of her trade, the flourishing of her manufactures, or the extension of her territory. Not that we mean to depreciate any of these ; for they have all contributed, though in different respects, to render the

island of Great Britain the bulwark of liberty, the land of plenty and of opulence, and the envy of surrounding nations.

But, in this consideration, we are disposed to regard not so much what our true interest and our permanent welfare may seem immediately to require from us, as what hereafter, perhaps at no very distant period, may be demanded from our united exertions on a principle of self-preservation. To alarm our readers is far from our design; but to endeavour to excite their attention to future probabilities, we cannot but feel to be a laudable attempt. If in the revolutionary vortex, it should ultimately happen that the sources of supplying our deficiencies should be ingulphed and swallowed up, and we should be so completely isolated, as to be confined solely to our own resources for this essential article of human subsistence; it would then be found, of what vast importance to our comfort such encouragement of agricultural pursuits must be, amidst all the projected advantages of commerce, and the great extension of trade by the facilities of machinery.

In this view we cannot refrain from bestowing all possible praise and eulogium on the numerous agricultural societies of this nation. It would be very easy to point out some particulars in most of them, to promote more effectually the objects we are considering; but our readers, we are persuaded, will anticipate our meaning, by proposing premiums for producing the greatest quantity of grain on an acre, in proportion to the soil, from a certain specific proportion of seed, convinced, as we are, that much is annually thrown away, to the prejudice of the crops, and the injury of the public.

APPENDIX:

CONTAINING

A List of Simples, and of such Medicinal Preparations as ought to be kept in Readiness for private Practice.

The Method of preparing and compounding such Medicines as are recommended in a former part of the Book, with the Addition of several others of a similar Nature.

Remarks on the Doses, Uses, and Manner of applying the different Preparations.

List of the Medicines commonly used in Practice, with their proper Doses,

Medicamentorum varietas ignorantiæ filia est.——BACON.

INTRODUCTION

TO

THE APPENDIX.

IGNORANCE and superstition have attributed extraordinary medical virtues to almost every production of nature. That such virtues were often imaginary, time and experience have sufficiently shewn. Physicians, however, from a veneration for antiquity, still retain in their lists of medicine many things which owe their reputation entirely to the superstition and credulity of our ancestors.

The instruments of medicine will always be multiplied in proportion to men's ignorance of the nature and cause of diseases: when these are sufficiently understood, the method of cure will be simple and obvious.

Ignorance of the real nature and permanent properties of these substances employed in the cure of diseases, is another reason why they have been so greatly multiplied. Physicians thought they could effect, by a number of ingredients, what could not be done by any one of them. Hence arose those amazing farragos which have so long disgraced the medical art, and which were esteemed powerful in proportion to the number of simples that entered their composition.

The great variety of forms into which almost every article of medicine has been manufactured, affords another proof of the imperfection of the medical art. A drug, which is perhaps most efficacious in the simplest form in which it can be administered, has been nevertheless served up in so many different shapes, that one would be induced to think the whole art of physic lay in exhibiting medicine under as many different modes as possible.

Different forms of medicine, no doubt, have their use; but they ought never to be wantonly increased. They are by no means so necessary as is generally

imagined. A few grains of powdered rhubarb, julap, or ipecacuanha, will actually perform all that can be done by the different preparations of these roots, and may also be exhibited in as safe and agreeable a manner. The same observation holds with regard to the Peruvian bark, and many other simples, of which the preparations are very numerous.

Multiplying the ingredients of a medicine, not only renders it more expensive, but also less certain, both in its dose and operation. Nor is this all. The compound, when kept, is apt to spoil, or acquire qualities of a different nature. When a medicine is rendered more safe, efficacious or agreeable, by the addition of another, they ought, no doubt, to be joined; in all other cases, they are better kept asunder. The combination of medicines embarrasses the physician, and retards the progress of medical knowledge. It is impossible to ascertain the precise effect of any one medicine, as long as it is combined with others, either of a similar or dissimilar nature.

In the exhibition of medicine, regard should not only be had to simplicity, but likewise to elegance. Patients seldom reap much benefit from things that are highly disagreeable to their senses. To taste or smell like a drug, this becomes a proverb; and, to say truth, there is too much ground for it. Indeed no art can take away the disagreeable taste and flavour of some drugs, without entirely destroying their efficacy; it is possible, however, to render many medicines less disgustful, and others even agreeable;—an object highly deserving the attention of all who administer medicine.

The design of the following pages is, to exhibit such a list of drugs and medicines as may be necessary for private practice. They are considerably more numerous indeed than those recommended in the former part of the book, but are still greatly within the number contained in the most reformed dispensatories. The same medicine is seldom exhibited under different forms; and where different medicines answer nearly the same intention, there is commonly no more than

one of them retained. Multiplying forms of medicine for the same intention, tends rather to bewilder than assist the young practitioner, and the experienced physician can never be at a loss to vary his prescriptions as occasions require.

The chemical and other difficult preparations are for the most part omitted. All of them that are used by any private practitioner are not worth preparing. He will buy them much cheaper than he can make them. Great care, however, is necessary to obtain them genuine. They are often adulterated, and ought never to be purchased unless from persons of known veracity. Such of them as are in common use, are inserted in the list of drugs and medicines. Their proper doses, and manner of application, are mentioned in the practical part of the book, wherever they are prescribed.

Such articles of medicine as are to be found in the house or garden of almost every peasant, as barley, eggs, onions, &c., are likewise, for the most part, omitted. It is needless to swell a list of medicines with such things as can be obtained whenever they are wanted, and which spoil by being kept.

The preparations made and sold by distillers and confectioners are also generally left out. These people, by operating upon a larger plan, generally make things better, while it is in their power to afford them much cheaper, than they can be prepared by any private hand.

The quantity ordered to every medicine is as small as could well be prepared, both to prevent unnecessary expence, and that the medicine might not spoil by keeping. Almost every medicine suffers by being kept, and should be used as soon after it has been prepared as possible. Even simple drugs are apt to spoil, and should therefore be laid-in in small quantities; they either rot, are consumed by insects, or evaporate so as to lose their peculiar taste and flavour, and often become quite insignificant.

In the preparation of medicines, I have generally followed the most approved dispensatories; but have

taken the liberty to differ from them wherever my own observations, or those of other practical writers, on whose judgment I could depend, suggested an improvement.

In several compositions, the ingredient on which the efficacy of the medicine principally depends is increased, while the auxiliaries, which are generally ordered in such trifling quantities as to be of no importance, are left out, or only such of them retained as are necessary to give the medicine a proper consistence, or the like.

The colouring ingredients are likewise for the most part omitted. They increase the bulk and price of the medicines, without adding any thing to its value. It would be well if they were never used at all. Medicines are often adulterated for the sake of a colour. Acrid and even poisonous substances are, for this purpose, sometimes introduced into those medicines which ought to be most bland and emollient. Ointment of elder, for example, is often mixed with verdigris to give it a fine green colour, which entirely frustrates the intention of that mild ointment. Those who wish to obtain genuine medicines should pay no regard to their colour.

Some regard is likewise paid to expence. Such ingredients as greatly increase the price of any composition, without adding considerably to its virtue, are generally either omitted, or somewhat less expensive subtituted in their place. Medicines are by no means powerful in proportion to their price. The cheapest are often the best; besides they are the least apt to be adulterated, and are always most readily obtained.

With regard to the method of compounding medicines, I have generally followed that which seemed to be the most simple and natural, mentioning the different steps of the process in the same order they ought to be taken, without paying an implicit regard to the method of other dispensatories.

For many of the remarks concerning the preparation &c., of medicines, I have been obliged to the author of the New Dispensatory. The other observations are

either such as have occurred to myself in practice, or have been suggested in the course of reading, by authors whose names I am not able distinctly to recollect.

I have followed the alphabetical order, both with regard to the simples and preparations. A more scientific method would have been agreeable to some persons, but less useful to the generality of readers. The different classes of medicine have no great dependence on one another; and, where they have, it is hard to say which should stand first or last; no doubt the simple preparations ought to precede the more compound. But all the advantages arising from this method of arrangement do not appear equal to that single one, of being able, on the first opening of the book, to find out any article, which by the alphabetical order, is rendered quite easy.

The dose of every medicine is mentioned whenever it appeared nccessary. When this is omitted, it is to be understood that the medicine may be used at discretion. The dose mentioned is always for an adult, unless when the contrary is expressed. It is not an easy matter to proportion the doses of medicine exactly to the different ages, constitutions, &c., of the patients; but, happily for mankind, mathematical exactness here is by no means necessary.

Several attempts have been made to ascertain the proportional doses for the different ages and constitutions of patients; but, after all that can be said on this subject, a great deal must be left to the judgment and skill of the person who administers the medicine. The following general proportions may be observed; but they are by no means intended for exact rules. A patient between twenty and fourteen may take two thirds of the dose ordered for an adult; from fourteen to nine, one-half; from nine to six, one-third; from six to four, one-fourth; from four to two, one-sixth; from two to one, a tenth; and below one, a twelfth.

Dispensatories are usually written in the Latin language. Even authors who write in English generally give their prescriptions in Latin; and some of them

shew so great an attachment to that language, as first to write their recipes in it, and afterwards translate them; while others, to compromise the matter, write the one half in Latin and the other in English. What peculiar charm a medical prescription, when written in Latin, may have, I shall not pretend to say; but I have ventured to make use of the plainest English I could, and hope my prescriptions will succeed no worse for it.

N. B. The apothecaries' weights, and the English wine measures, are used throughout the whole book, the different denominations of which will appear fron the following

TABLE:

A pound contains twelve ounces.
An ounce - - - eight drams.
A dram - - - three scruples.
A scruple - - - twenty grains.

A gallon contains eight pints.
A pint - - - sixteen ounces.
An ounce - - - eight drams.

A spoonful is the measure of half an ounce.

A LIST OF SIMPLES,

And of such MEDICAL PREPARATIONS *as ought to be kept in Readiness for Private Practice.*

AGARIC
Alum
Antimony, crude
cinnabar of
sulphur of
Balsam of Capivi
Peru
Tolu
Bark, cascarilla
cinnamon
Mezereon
Peruvian
Winter's or canela alba
Borax
Calamine stone, levigated
Castor, Russia
Caustic, common
lunar
Earth, Fuller's
Japan
Armenian bole
French ditto
Extracts of gentian
guaiacum
hellebore, black
hemlock
jalap
liquorice
Peruvian bark
poppies
wormwood
Flower's of camomile
colt's foot
elder
rosemary
damask roses
red ditto
Fruits, almond
bitter apple
cassia fistularis
Curassoa oranges
figs dried
French prunes
Fruits, Jamaica pepper
juniper berries
nutmegs
tamarinds
Gum, aloes
ammoniac, in tears
arabic
asafœtida
camphor
galbanum
gamboge
guaiacum
kino
myrrh
opium
Hartshorn, calcined
shavings of
Herbs, lesser centaury
peppermint
spearmint
penny-royal
savin
trefoil
uva ursi
wormwood
Lead, Litharge
white
sugar of
Lemon-peel
Mace
Magnesia alba
Manna
Mercury, crude
calcined
Æthiop's mineral
calomel
corrosive sublimate
red precipitate
white ditto
Musk
Oil, essential, of amber
anise
cinnamon

Oil, essential, of juniper
——————— lemon-peel
——————— peppermint
——expressed, of almonds
——————— linseed
—— of olives, or Florence oil
——— palms
——— turpentine
Orange-peel
Oyster-shells prepared
Poppy-heads
Resin, benzoin
——————flowers of
—— Burgundy pitch
——dragon's blood
——frankincense
——liquid storax
——white, or resin
——— scammony
Roots, birthwort
——calamus aromaticus
——contrayerva
——garlic
——gentian
——ginger
——hellebore, black, white
——jalap
——ipecacuanha
——lily, white
——liquorice
——— marshmallow
——mezereon
——rhubarb
——sarsaparella
——seneka
——squills
——tormentil
——turmeric
——Virginian snake
——wild valerian
——zedoary
Saffron
Sal ammoniac, crude
————— volatile
Salt, Epsom
——of Glauber,
——hartshorn
——nitre, purified, or prunel
——polychrest
Salt, Rochelle
—— of tartar
Seeds, anise
——— carraway
——— cardamom
——— coriander
——— cummin
——— mustard
——— sweet fennel
——wild carrot
Senna
Spanish flies
Spermaceti
Spirits, æthereal, or Æther
——— of hartshorn
——————— lavender, compound
——————— nitre
——————— ditto dulcified
——————— sal ammonic
——————— sea salt
——————— vinegar
——————— vitriol
——————— wine rectified
——————— volatile aromatic
Steel, filings of
——— rust of, prepared
——— soluble salt of
Sulphur vivum
——— balsam of
——— flowers of
Tar
—— Barbadoes
Tartar, cream of
——— emetic
——— soluble
——vitriolated
Tin prepared
Tutty levigated
Turpentine, Venice
Verdigris
Vitriol, green
——— blue
——— white
Wax, white, yellow
Woods, guaiacum
——— logwood
——— sassafras
——— saunders, red
Zinc, flowers of

MEDICINAL PREPARATIONS

BALSAMS.

THE subject of this section is not the natural balsams, but certain compositions, which, from their being supposed to possess balsamic qualities, generally go by that name. This class of medicines was formerly very numerous and held in great esteem. Modern practice, however, has justly reduced it to a very narrow compass.

Anodyne Balsam.----Take of white Spanish soap, one ounce; opium unprepared, two drachms; rectified spirit of wine, nine ounces. Digest them together in a gentle heat for three days; then strain off the liquor. and add to it three drachms of camphor.

This balsam, as its title expresses it, is intended to heal pain. It is of service in violent strains and rheumatic complaints, when not attended with inflammation. It must be rubbed with a warm hand on the part affected; or a linen rag moistened with it may be applied to the part, and renewed every third or fourth hour till the pain abates. If the opium is left out, this will be the Saponaceous Balsam.

Locatelli's Balsam.----Take of olive-oil, one pint; Strasburg turpentine and yellow wax, of each half a pound; red saunders, six drachms. Melt the wax with some part of the oil over a gentle fire; then adding the remaining part of the oil of turpentine; afterwards mix in the saunders, previously reduced to a powder, and keep them stirring together till the balsam is cold.

This balsam is recommended in erosions of the intestines, the dysentery, hœmorrhages, internal bruises, and in some complaints of the breast. Outwardly, it is used for healing and cleansing wounds and ulcers. The dose, when taken internally, is from two scruples to two drachms.

The Vulnerary Balsam.---Take of benzoin, powdered, three ounces; balsam of Peru, two ounces; hepatic aloes, in powder, half an ounce; rectified spirit of wine, two pints. Digest them in a gentle heat for three days, and then strain the balsam.

This balsam, or rather tincture, is applied externally to heal recent wounds and bruises. It is likewise employed internally to remove coughs, asthmas, and other complaints of the breast; it is said to ease the colic, cleanse the kidneys, and to heal internal ulcers, &c. The dose is from twenty to sixty drops.

This, though a medicine of some value, does not deserve the extravagant encomiums which have been bestowed on it. It has been celebrated under the different names of the Commander's Balsam, Persian Balsam, Balsam of Borne, Wade's Balsam, Friar's Balsam Jesuit's Drops, Turlington's Drops.

BOLUSES.

As boluses are intended for immediate use, volatile salts, and other ingredients improper for being kept, are admitted into their composition. They are generally composed of powders, with a proper quantity of syrup, conserve, or mucilage. The lighter powders are commonly made up with syrup, and the more ponderous, as mercury, &c., with conserve; but those of the lighter kind would be more conveniently made up with mucilage, as it increases their bulk less than the other additions, and likewise occasions the medicine to pass down more easily.

Astringent Bolus.—Take of alum, in powder, fifteen grains, gum kino, five grains; syrup, a sufficient quantity to make a bolus.

In an excessive flow of the menses, and other violent discharges of blood, proceeding from relaxation, this bolus may be given every four or five hours, till the discharge abates.

Diaphoretic Bolus.—Take of gum guaiacum, in powder, ten grains; flowers of sulphur and cream of tartar, of each one scruple; simple syrup, a sufficient quantity.

In rheumatic complaints, and disorders of the skin, this bolus may be taken twice a day. It will also be of service in the inflammatory quinsey.

Mercurial Bolus.—Take of calomel, six grains; conserve of roses half a drachm. Make a bolus.

Where mercury is necessary, this bolus may be taken twice or thrice a-week. It may be taken over night; and, if it does not operate, a few grains of jalap will be proper next day to carry it off.

Bolus of Rhubarb and Mercury.—Take of the best rhubarb, in powder, from a scruple to half a drachm; of calomel, from four to six grains; simple syrup, a sufficient quantity to make a bolus. This is a proper purge in hypochondriac constitutions; but its principal intention is to expel worms. Where a stronger purge is necessary, jalap may be used instead of the rhubarb.

Pectoral Bolus.—Take of spermaceti, a scruple; gum ammoniac, ten grains; salt of hartshorn, six grains; simple syrup, as much as will make them into a bolus.

This bolus is given in colds and coughs of long standing, asthmas, and beginning consumptions of the lungs. It is generally proper to bleed the patient before he begins to use it.

Purging Bolus.—Take of jalap, in powder, a scruple, cream of tartar, two scruples. Let them be rubbed together, and formed into a bolus, with a simple syrup.

Where a mild purge is wanted, this will answer the purpose very well. If a stronger dose is necessary, the jalap may be increased to half a drachm or upwards.

CATAPLASMS AND SINAPISMS.

Cataplasms possess few or no virtues superior to a poultice, which may be so made as in most cases to supply their place. They are chiefly intended either to act as discutients, or to promote suppuration; and, as they may be of service in some cases, we shall give a specimen of each kind.

Discutient Cataplasm.—Take of barley-meal, six ounces; fresh hemlock-leaves, bruised, two ounces; vinegar, a sufficient quantity. Boil the meal and hemlock in the vinegar for a little time, and then add two drachms of the sugar of lead.

Ripening Cataplasm.—Take of white lily-root four ounces; fat figs and raw onions, bruised, of each one ounce; yellow basilicum ointment, two ounces: gum

galbanum, half an ounce; linseed-meal, as much as necessary. Boil the roots along with the figs in a sufficient quantity of water; then bruise and add to them the other ingredients, so as to form the whole into a soft cataplasm. The galbanum must be previously dissolved with the yolk of an egg.

Where it is necessary to promote suppuration, this cataplasm may be used by those who choose to be at the trouble and expence of making it. For my part, I have never found any application more proper for this purpose than a poultice of bread and milk, with a sufficient quantity of either boiled or raw onion in it, and softened with oil or fresh butter.

Sinapisms.—Sinapisms are employed to recall the blood and spirits to a weak part, as in the palsy or atrophy. They are also of service in deep-seated pains, as the sciatica, &c. When the gout seizes the head or the stomach, they are applied to the feet to bring the disorder to these parts. They are likewise applied to the patient's soles in the low state of fevers. They should not be suffered to lie on, however, till they have raised blisters, but till the parts become red, and will continue so when pressed by the finger.

The sinapism is only a poultice made with vinegar instead of milk, and rendered warm and stimulating by the addition of mustard, horse-radish, or garlic.

The common sinapism is made by taking crumb of bread and mustard-seed, in powder, of each equal quantities; strong vinegar, as much as is sufficient, and mixing them so as to make a poultice.

When sinapisms of a more stimulating nature are wanted, a little bruised garlic may be added to the above.

CLYSTERS.

This class of medicines is of more importance than is generally imagined. Clysters serve not only to evacuate the contents of the belly, but also to convey very active medicines into the system. Opium, for example, may be administered in this way when it will not sit on the stomach, and also in larger doses than in any time it

can be taken by the mouth. The Peruvian bark may likewise be, with good effect, administered in form of clyster to persons who cannot take it by the mouth.

A simple clyster can seldom do hurt, and there are many diseases where it may do good. A clyster even of warm water, by serving as a fomentation to the parts, may be of considerable service in inflammations of the bladder, and the lower intestines, &c.

Some substances, as the smoke of tobacco, may be thrown into the bowels in this way, which cannot be done by any other means whatever. This may be easily effected by means of a pair of hand-bellows, with an apparatus fitted to them for that purpose.

Nor is the use of clysters confined to medicines. Aliments may also be conveyed in this way. Persons, unable to swallow, have been for a considerable time supported by clysters.

Emollient Clyster.—Take of linseed-tea and new milk, each six ounces. Mix them.

If fifty or sixty drops of laudanum be added to this, it will supply the place of the Anodyne Clyster.

Laxative Clyster.—Take of milk and water, each six ounces; sweet oil or fresh butter, and brown sugar, of each two ounces. Mix them. If an ounce of Glauber's salt, or two table-spoonsful of common salt, be added to this, it will be the Purging Clyster.

Carminative Clyster.—Take of camomile-flowers, an ounce; anise-seeds, half an ounce. Boil in a pint and a half of water to one pint.

In hysteric and hypochondriac complaints, this may be administered instead of the Fœtid Clyster, the smell of which is so disagreeable to most patients.

Oily Clyster.—To four ounces of the infusion of camomile-flowers, add an equal quantity of Florence oil.

This clyster is beneficial in bringing off small worms lodged in the lower parts of the alimentary canal. When given to children, the quantity must be proportionably lessened.

Starch Clyster.—Take jelly of starch, four ounces; linseed-oil, half an ounce. Liquefy the jelly over a gen-

the fire, and then mix in the oil. In the dysentery or bloody flux, this clyster may be administered after every loose stool, to heal the ulcerated intestines, and blunt the sharpness of corroding humours. Forty or fifty drops, may be occasionally added; in which case it will generally supply the place of the Astringent Clyster.

Turpentine Clyster.—Take of common decoction ten ounces; Venice turpentine, dissolved with the yolk of an egg, half an ounce; Florence oil, one ounce. Mix them.

This diuretic is proper in obstructions of the urinary passages, and in colicky complaints proceeding from gravel.

Vinegar Clyster.—This clyster is made by mixing three ounces of vinegar with five of water-gruel.

It answers all the purposes of a common clyster, with the peculiar advantage of being proper either in inflammatory or putrid fevers, especially in the latter.

☞ We think it unnecessary to give more examples of this class of medicines, as ingredients adapted to any particular intention may be occasionally added to one or other of the above forms.

COLLYRIA OR EYE-WATER.

Eye-waters have been multiplied without number, almost every person pretending to be possessed of some secret preparation for the cure of sore eyes. I have examined many of them, and find that they were very much alike, the basis of most of them being either alum, vitriol, or lead. Their effects evidently are to brace and restore the tone of the parts; hence they are principally of service in slight inflammations, and in that relaxed state of the parts which is induced by obstinate ones.

Camphor is commonly added to these compositions; but, as it seldom incorporates properly with water, it can be of little use. Bolus and other earthy substances, as they do not dissolve in water, are also unfit for this purpose.

Collyrium of Alum.—Take of alum, half a drachm; agitate it well together with the white of an egg.

This is the collyrium of Riverius. It is used in in-

flammation of the eyes, to allay heat, and restrain the flux of humours. It must be spread upon linen, and applied to the eyes; but should not be kept above two or three hours at a time.

Vitriolic Collyrium.—Take of white vitriol, half a drachm; rose-water, six ounces. Dissolve the vitriol in the water, and filter the liquor.

This, though simple, is perhaps equal in virtue to most of the celebrated collyria. It is an useful application in weak, watery, and inflamed eyes. Though the slighter inflammations will generally yield to it, yet in those of a more obstinate nature, the assistance of bleeding and blistering will be often necessary.

When a strong astringent is judged proper, a double or triple quantity of the vitriol may be used. I have seen a solution of four times the strength of the above used with manifest advantage.

Collyrium of Lead.—Take sugar of lead and crude sal ammoniac, of each four grains. Dissolve them in eight ounces of common water.

Forty or fifty drops of laudanum may occasionally be added to this collyrium.

Those who choose may substitute instead of this the collyria of lead recommended by Goulard, which is made by putting twenty-five drops of his Extract of Lead to eight ounces of water, and adding a tea-spoonful of brandy.

Indeed, common water and brandy, without any other addition, will, in many cases, answer very well as a collyrium. An ounce of the latter may be added to five or six ounces of the former; and the eyes, if weak, bathed with it night and morning.

CONFECTIONS.

CONFECTIONS, containing above sixty ingredients, are still to be found in some of the most reformed dispensatories. As most of their intentions, however, may be more certainly, and as effectually, answered by a few glasses of wine, or grains of opium, we shall pass over this class of medicines very slightly.

Japonic Confection.—Take Japan earth, three ounces, tormentil-root, nutmeg, olibanum, two ounces; opium, dissolved in a sufficient quantity of Lisbon wine, a drachm and a half; simple syrup and conserve of roses, of each fourteen ounces. Mix and make them into an electuary.

This supplies the place of the Diascordium.

The dose of this electuary is from a scruple to a drachm.

CONSERVES AND PRESERVES.

EVERY apothecary's shop was formerly so full of these preparations, that it might have passed for a confectioner's warehouse. They possess very few medicinal properties, and may rather be classed among sweetmeats than medicines. They are sometimes, however, of use for reducing into boluses or pills some of the more ponderous powders, as the preparations of iron, mercury, and tin.

Conserves are compositions of fresh vegetables and sugar, beaten together into an uniform mass. In making these preparations, the leaves of vegetables must be freed from their stalks, the flowers from their cups, and the yellow part of orange-peel taken off with a rasp. They are then to be pounded in a marble mortar, with a wooden pestle, into a smooth mass; after which, thrice their weight of fine sugar is commonly added by degrees, and the beating continued till they are uniformly mixed; but the conserve will be better if only twice its weight of sugar be added.

Those who prepare large quantities of conserve, generally reduce the vegetables to a pulp by the means of a mill, and afterwards beat them up with sugar.

Conserve of Red Roses.—Take a pound of red rose-buds, cleared of their heels; beat them well in a mortar, and adding by degrees two pounds of double-refined sugar, in powder, make a conserve.

After the same manner are prepared the conserves of orange-peel, rosemary-flowers, sea-wormwood, the leaves of wood-sorrel, &c.

The conserve of roses is one of the most agreeable and useful preparations belonging to this class. A drachm or two of it, dissolved in warm milk, is ordered to be given as a gentle astringent in weakness of the stomach, and likewise in phthisical coughs, and spitting of blood. To have any considerable effect, however, it must be taken in larger quantities.

Conserve of Sloes.—This may be made by boiling the sloes gently in water, being careful to take them out before they burst; afterwards expressing the juice, and beating it up with three times its weight of fine sugar.

In relaxations of the *uvula* and glands of the throat, this makes an excellent gargle, and may be used at discretion.

Preserves are made by steeping or boiling fresh vegetables first in water, and afterwards in syrup, or a solution of sugar. The subject is either preserved moist in the syrup, or taken out and dried, that the sugar may candy upon it. The last is the most usual method.

Candied Orange-peel.—Soak Seville orange-peel in several waters, till it loses its bitterness; then boil it in a solution of double-refined sugar in water, till it becomes tender and transparent. Candied lemon-peel is prepared in the same manner.

It is needless to add more of these preparations, as they belong rather to the art of the confectioner than that of the apothecary.

DECOCTIONS.

WATER readily extracts the gummy and saline parts of vegetables; and though its action is chiefly confined to these, yet the resinous and oily being intimately blended with the gummy and saline, are in part taken up along with them. Hence watery decoctions and infusions of vegetables constitute a large, and not unuseful, class of medicines. Although most vegetables yield their virtues to water, as well by infusion as decoction, yet the latter is often necessary, as it saves time, and does in a few minutes what the other would equire hours, and sometimes days, to effect.

The medicines of this class are all intended for immediate use.

Decoction of Althea.—Take of the roots of marshmallows, moderately dried, three ounces; raisins of the sun, one ounce; water, three pints.

Boil the ingredients in the water till one third of it is consumed; afterwards strain the decoction, and let it stand for some time to settle. If the roots be thoroughly dried they must be boiled till one half the water be consumed. In coughs, and sharp defluxions from the lungs, this decoction may be used for ordinary drink.

The Common Decoction.—Take of camomile flowers, an ounce; elder flowers and sweet fennel seeds, of each half an ounce; water, two quarts. Boil them for a little time, and then strain the decoction.

A medicine equally good may be prepared by infusing the ingredients for some hours in boiling water.

This decoction is chiefly intended as the basis of clysters, to which other ingredients may be occasionally added. It will likewise serve as a common fomentation, spirit of wine, or other things, being added in such quantity as the case may require.

Decoction of Logwood.—Boil three ounces of the shavings, or chips of logwood in four pints of water, till one-half the liquor is wasted. Two or three ounces of simple cinnamon-water may be added to this decoction.

In fluxes of the belly, where the stonger astringents are improper, a tea-cupful of this decoction may be taken with advantage three or four times a-day.

Decoction of the Bark.—Boil an ounce of the Peruvian bark, grossly powdered, in a pint and a half of water to one pint; then strain the decoction. If a teaspoonful of the weak spirit of vitriol be added to this medicine, it will render it both more agreeable and efficacious.

Compound Decoction of the Bark.—Take of Peruvian bark and Virginian snake-root, grossly powdered, each three drachms. Boil them in a pint of water to one half. To the strained liquor add an ounce and a half of aromatic water.

Sir John Pringle recommends this as a proper medicine towards the decline of malignant fevers, when the pulse is low, the voice weak, and the head affected with a stupor, but with little delirium. The dose is four spoonsful every fourth or sixth hour.

Decoction of Sarsaparella.—Take of fresh sarsaparella root, sliced and bruised, two ounces; shavings of guaiacum-wood, one ounce. Boil over a slow fire in three quarts of water to one, adding, towards the end, half an ounce of sassafras-wood, and three drachms of liquorice. Strain the decoction.

This may either be employed as an assistant to a course of mercurial alteratives, or taken after the mercury has been used for some time. It strengthens the stomach, and restores fresh vigour to habits emaciated by the venereal disease. It may also be taken in the rheumatism, and cutaneous disorders proceeding from foulness of the blood and juices. For all these intentions it is greatly preferable to the *Decoction of Woods*. This decoction may be taken from a pint and a half to two quarts in a day.

The following decoction is said to be similar to that used by *Kennedy*, in the cure of the venereal disease, and may supply the place of the Lisbon diet-drink.

Take of sarsaparella, three ounces; liquorice and mezereon root, of each half an ounce; shavings of guiacum and sassafras-wood, of each one ounce; crude antimony powdered, an ounce and a half. Infuse these ingredients in eight pints of boiling water for twenty-four hours, then boil them till one half of the water is consumed; afterwards strain the decoction. This decoction may be used in the same manner as the preceding.

Decoction of Seneka.—Take of seneka rattle-snake root, one ounce; water, a pint and a half. Boil to one pint, and strain. This decoction is recommended in the pleurisy, dropsy, rheumatism, and some obstinate disorders of the skin. The dose is two ounces, three or four times a-day, or oftener, if the stomach will bear it.

White Decoction.—Take of the purest chalk, in powder, two ounces; gum arabic, half an ounce; water

three pints. Boil to one quart, and strain the decoction. This is a proper drink in acute diseases, attended with or inclining to a looseness, and where acidities abound in the stomach or bowels. It is peculiarly proper for children when afflicted with sourness of the stomach, and for persons who are subject to the heartburn. It may be sweetened with sugar, as it is used, and two or three ounces of simple cinnamon-water added to it.

An ounce of powdered chalk, mixed with two pints of water, will occasionally supply the place of this decoction, and also of the chalk julap.

DRAUGHTS.

This is a proper form for exhibiting such medicines as are intended to operate immediately, and which do not need to be frequently repeated, as purges, vomits, and a few others, which are to be taken at one dose. Where a medicine requires to be used for any length of time, it is better to make up a larger quantity of it at once, which saves both trouble and expence.

Anodyne Draught.—Take of liquid laudanum, twenty-five drops; simple cinnamon-water, an ounce; common syrup, two drachms. Mix them.

In excessive pain, where bleeding is not necessary, and in great restleness, this composing draught may be taken and repeated occasionally.

Diuretic Draught.—Take of the diuretic salt, two scruples; syrup of poppies, two drachms; simple cinnamon-water, and common water, of each an ounce.

This draught is of service is an obstruction or deficiency of urine.

Purging Draught.—Take of manna, an ounce; soluble tartar, or Rochelle salt, from three to four drachms. Dissolve in three ounces of boiling water; to which add Jamaica pepper-water, half an ounce.

As manna sometimes will not sit upon the stomach, an ounce or ten drachms of the bitter purging salts, dissolved in four ounces of water, may be taken instead of the above. Those who cannot take salts, may use the following draught:

Take of jalap, in powder, a scruple; common water, an ounce; aromatic tincture, six drachms. Rub the jalap with twice its weight of sugar, and add to it other ingredients.

Sweating Draught.—Take spirit of Mindererus, two ounces; salt of hartshorn, five grains; simple cinnamon-water, and syrup of poppies, of each half an ounce. Mix them into a draught. In recent colds and rheumatic complaints, this draught is of service. To promote its effects, however, the patient ought to drink freely of warm water-gruel, or of some other weak diluting liquor.

Vomiting Draughts.—Take of ipecacuanha, in powder, a scruple; water, an ounce; simple syrup, a drachm. Mix them.

Persons who require a stronger vomit may add to the above half a grain, or a grain, of emetic tartar.

Those who do not choose the powder, may take ten drachms of the ipecacuanha-wine; or half an ounce of the wine, and an equal quantity of the syrup of squills.

ELECTUARIES.

Electuaries are generally composed of the lighter powders, mixed with syrup, honey, conserve of mucilage, into such a consistence, that the powders may neither separate by keeping, nor the mass prove too stiff for swallowing. They receive chiefly the milder alterative medicines, and such as are not ungrateful to the palate.

Astringent electuaries, and such as have pulps of fruit in them, should be prepared only in small quantities; as astringent medicines lose their virtue by being kept in this form, and the pulps of fruits are apt to ferment.

For the extraction of pulps, it will be necessary to boil unripe fruits, and ripe ones, if they are dried, in a small quantity of water till they become soft. The pulp is then to be pressed out through a strong hair sieve, or thin cloth, and afterwards boiled to due consistence, in an earthen vessel, over a gentle fire, taking care to prevent the matter from burning by continually stirring it. The pulps of fruit that are both ripe and fresh may be pressed out without any previous boiling.

Lenitive Electuary.—Take of senna, in fine powder, eight ounces; coriander-seed, also in powder, four ounces; pulp of tamarinds and of French prunes, each a pound; mix the pulps and powders together, and, with a sufficient quantity of simple syrup, reduce the whole into an electuary.

A tea-spoonful of this electuary, taken two or three times a-day, generally proves an agreeable laxative. It likewise serves as a convenient vehicle for exhibiting more active medicines, as jalap, scammony, and such like. This may supply the place of the electuary of *Cassia.*

Electuary for the Dysentery.—Take of the Japonic confection, two ounces; Locatelli's balsam, one ounce; rhubarb, in powder, half an ounce; syrup of marshmallows, enough to make an electuary.

It is often dangerous in dysenteries to give opiates and astringents, without interposing purgatives. The purgative is here joined with these ingredients, which renders this a very safe and useful medicine for the purposes expressed in the title. About the bulk of a nutmeg should be taken twice or thrice a-day, as the symptoms and constitution may require.

Electuary for the Epilepsy.—Take of Peruvian bark in powder, an ounce; of powdered tin, and wild valerian-root, each half an ounce; simple syrup enough to make an electuary.

Dr. Mead directs a drachm of an electuary similar to this to be taken evening and morning, in the epilepsy, for the space of three months. It will be proper, however, to discontinue the use of it for a few days every now and then. I have added the powdered tin, because the epilepsy often proceeds from worms.

Electuary for the Gonorrhœa.—Take of lenitive electuary, three ounces; jalap and rhubarb in powder, of each two drachms; nitre, half an ounce; simple syrup, enough to make an electuary.

During the inflammation and tension of the urinary passages, which accompany a virulent gonorrhœa, this cooling laxative may be used with advantage.

The dose is a drachm, or about the bulk of a nutmeg,

two or three times a-day; more or less, as may be necessary, to keep the body gently open. An electuary made of cream of tartar and simple syrup will occasionally supply the place of this.

After the inflammation is gone off, the following electuary may be used:

Take of lenitive electuary, two ounces; balsam of capivi, one ounce; gum guaiacum and rhubarb in powder, of each two drachms; simple syrup, enough to make an electuary. The dose is the same as of the preceding.

Electuary of the Bark.—Take of Peruvian bark, in powder, three ounces; cascarilla, half an ounce; syrup of ginger, enough to make an electuary.

In the cure of obstinate intermitting fevers, the bark is assisted by the cascarilla. In hectic habits, however, it will be better to leave out the cascarilla, and put three drachms of crude sal ammoniac in its stead.

Electuary for the Piles.—Take flowers of sulphur, one ounce; cream of tartar, half an ounce; treacle, a sufficient quantity to form an electuary. A tea-spoonfulof this may be takenthree or four times a-day.

Electuary for the Palsy.—Take of powdered mustard-seed, and conserve of roses, each an ounce; syrup of ginger, enough to make an electuary. A tea-spoonful of this may be taken three or four times a-day.

Electuary for the Rheumatism.—Take of conserve of roses, two ounces; cinnabar of antimony, levigated, one ounce and a half, gum guaiacum, in powder, an ounce; syrup of ginger, a sufficient quantity to make an electuary.

In obstinate rheumatisms, which are not accompanied with a fever, a tea-spoonful of the electuary may be taken twice a-day with considerable advantage.

EMULSIONS.

Emulsions, beside their use as medicines, are also proper vehicles for certain substances, which could not otherwise be conveniently taken in a liquid form. Thus, camphor, triturated with almonds, readily unites with

water into an emulsion. Pure oils, balsams, resins, and other similar substances, are likewise rendered miscible with water by the intervention of mucilages.

Common Emulsion.—Take of sweet almonds, an ounce; bitter almonds, a drachm; water, two pints.

Let the almonds be blanched, and beat up in a marble mortar; adding the water by little and little, so as to make an emulsion: afterwards let it be strained.

Arabic Emulsion.—This is made in the same manner as the above, adding to the almonds, while beating, two ounces and a half of the mucilage of gum arabic.

Where cooling liquors are necessary, these emulsions may be used as ordinary drink.

Camphorated Emulsion.—Take of camphor, half a drachm; sweet almonds, half a dozen; white sugar, half an ounce; mint-water, eight ounces. Grind the camphor and almonds well together in a stone mortar, and add, by degrees, the mint-water; then strain the liquor, and dissolve in it the sugar.

In fevers, and other disorders which require the use of camphor, a table-spoonful of this emulsion may be taken every two or three hours.

Emulsion of Gum Ammoniac.—Take of gum ammoniac, two drachms; water, eight ounces. Grind the gum with the water poured upon it by little and little, till it is dissolved.

This emulsion is used for attenuating tough viscid phlegm, and promoting expectoration. In obstinate coughs, two ounces of the syrup of poppies may be added to it. The dose is two table-spoonsful three or four times a-day.

Oily Emulsion.—Take of salt-water, six ounces; volatile aromatic spirit, two drachms; Florence oil, an ounce: shake them well together, and add of simple syrup, half an ounce.

In recent colds and coughs, this emulsion is generally of service; but, if the cough proves obstinate, it will succeed better when made with the paregoric elixir of the Edinburgh Dispensatory, instead of the volatile

aromatic spirit. A table-spoonful of it may be taken every two or three hours.

EXTRACTS.

EXTRACTS are prepared by boiling the subject in water, and evaporating the strained decoction to a due consistence. By this process, some of the more active parts of plants are freed from the useless indissoluble earthy matter, which makes the larger share of their bulk. Water, however, is not the only menstruum used in the preparation of extracts: sometimes rectified spirit alone is employed for that purpose.

Extracts are prepared from a variety of different drugs, as the bark, gentian, jalap, &c.; but, as they require a troublesome and tedious operation, it will be more convenient for a private practitioner to purchase what he needs of them from a professed druggist, than to prepare them himself. Such of them as are generally used, are inserted in our list of such drugs and medicines as are to be kept for private practice.

FOMENTATIONS.

FOMENTATIONS are generally intended either to ease pain, by taking off tension and spasms, or to brace and restore the tone and vigour of those parts to which they are applied. The first of these intentions may generally be answered by warm water, and the second by cold. Certain substances, however, are usually added to water, with a view to heighten its effects, as anodynes, aromatics, astringents, &c. We shall therfore subjoin a few of the most useful medicated fomentations, that people may have it in their power to make use of them as they choose.

Anodyne Fomentation.—Take of white poppy-heads, two ounces; elder-flowers, half an ounce; water, three pints. Boil till one pint is evaporated, and strain out the liquor.

This fomentation, as its title expresses it, is used for relieving acute pain.

Aromatic Fomentation.—Take of Jamaica pepper, half an ounce; red wine, a pint. Boil them for a little, and then strain the liquor.

This is intended, not only as a topical application for external complaints, but also for relieving the internal parts. Pains of the bowels, which accompany dysenteries and diarrhœas, flatulent colics, uneasiness of the stomach, and reaching to vomit, are frequently abated by fomenting the abdomen and region of the stomach with the warm liquor.

Common Fomentation.—Take tops of wormwood, and camomile-flowers, dried, of each two ounces; water, two quarts. After a slight boiling, pour off the liquor.

Brandy or spirit of wine may be added to this fomentation, in such quantity as the particular circumstances of the case shall require; but these are not always necessary.

Emollient Fomentation.—This is the same as the common decoction.

Strengthening Fomentation.—Take of oak-bark, one ounce; granate-peel, half an ounce; alum, two drachms; smiths' forge-water, three pints. Boil the water with the bark and peel to the consumption of one third; then strain the remaining decoction, and dissolve in it the alum.

This astringent liquor is employed as an external fomentation to weak parts. It may also be used internally.

GARGLES.

However trifling this class of medicines may appear, they are by no means without their use. They seldom, indeed, cure diseases, but they alleviate very often disagreeable symptoms; as parchedness of the mouth, foulness of the tongue and fauces, &c. They are peculiarly useful in fevers and sore throats. In the latter, a gargle will sometimes remove the disorder; and in the former, few things are more refreshing or agreeable to the patient, than to have his mouth frequently washed with some soft detergent gargle.

One advantage of these medicines is, that they are easily prepared. A little barley-water and honey may be had any where; and if to these be added as much vinegar as will give them an agreeable sharpness, they will make a very useful gargle for softening and cleansing the mouth.

Gargles have the best effect when injected with a syringe.

Attenuating Gargle.—Take of water, six ounces; honey, one ounce; nitre, a drachm and a half. Mix them.

This cooling gargle may be used either in the inflammatory quinsey, or in fevers for cleansing the tongue and fauces.

Common Gargle.—Take of rose-water, six ounces, syrup of clove, and July flowers, half an ounce; spirit of vitriol, a sufficient quantity to give it an agreeable sharpness. Mix them.

This gargle, besides cleansing the tongue and fauces, acts as a gentle repellent, and will sometimes remove a slight quinsey.

Detergent Gargle.---Take of the emollient gargle a pint; tincture of myrrh, an ounce; honey, two ounces. Mix them.

When exulcerations require to be cleansed, or the excretion of tough viscid saliva promoted, this gargle will be of service.

Emollient Gargles.---Take an ounce of marshmallow-roots, and two or three figs; boil them in a quart of water till near one half of it be consumed; then strain out the liquor.

If an ounce of honey, and half an ounce of spirit of sal ammoniac, be added to the above, it will then be an exceeding good *attenuating gargle.*

This gargle is beneficial in fevers, where the tongue and fauces are rough and parched, to soften these parts, and promote the discharge of saliva.

The learned and accurate Sir John Pringle observes, that, in the inflammatory quinsey, or stagnation of the fauces, benefit arises from the common gargles; that

such as are of an acid nature do more harm than good, by contracting the emunctories of the saliva and mucus, and thickening those humours; that a decoction of figs in milk and water has a contrary effect, especially if some sal ammoniac be added; by which the saliva is made thinner, and the glands are brought to secrete more freely; a circumstance always conducive to the cure.

INFUSIONS.

VEGETABLES yield nearly the same properties to water by infusion as by decoction; and though they may require a longer time to give out their virtues in this way, yet it has several advantages over the other; since boiling is found to dissipate the finer parts of many bitter and aromatic substances, without more fully extracting their medicinal principles.

The author of the new Dispensatory observes, that even from those vegetables which are weak in virtue, rich infusions may be obtained, by returning the liquor upon fresh quantities of the subject, the water loading itself more and more with the active parts: and that these loaded infusions are applicable to valuable purposes in medicine; as they contain in a small compass the finer, more subtle, and active, principles of vegetables, in a form readily miscible with the fluids of the human body.

Bitter Infusion.—Take tops of the lesser centaury and camomile-flowers, of each half an ounce; yellow rind of lemon and orange peel, carefully freed from the inner white part, of each two drachms. Cut them in small pieces, and infuse them in a quart of boiling water.

For indigestion, weakness of the stomach, or want of appetite, a tea-cupful of this infusion may be taken twice or thrice a-day.

Infusion of the Bark.—To an ounce of the bark, in powder, add four or five table-spoonsful of brandy, and a pint of boiling water. Let them infuse for two or three days.

This is one of the best preparations of bark for weak stomachs. In disorders where the corroborating virtues of that medicine are required, a tea-cupful of it may be taken two or three times a-day.

Infusion of Carduus.—Infuse an ounce of the dried leaves of carduus benedictus, or blessed thistle, in a pint of common water, for six hours, without heat; then filter the liquor through paper.

This light infusion may be given, with great benefit, in weakness of the stomach, where the common bitters do not agree. It may be flavoured at pleasure with cinnamon, or other aromatic materials.

Infusion of Linseed.—Take of linseed, two spoonsful; liquorice-root, sliced, half an ounce; boiling water, three pints. Let them stand to infuse by the fire for some hours, and then strain off the liquor.

If an ounce of the leaves of coltsfoot be added to these ingredients, it will then be the *Pectoral Infusion.* Both these are emollient mucilaginous liquors, and may be taken with advantage as ordinary drink, in difficulty of making water; and in coughs and other complaints of the breast.

Infusion of Roses.—Take of red roses, dried, half an ounce; boiling water, a quart, vitriolic acid, commonly called oil of vitriol, half a drachm; loaf-sugar, an ounce.

Infuse the water in the roses for four hours, in an unglazed earthen vessel; afterwards, pour in the acid, and, having strained the liquor, add to it the sugar.

In an excessive flow of the *menses*, vomiting of blood, and other hœmorrhages, a tea-cupful of this gently astringent infusion may be taken every three or four hours. It likewise makes an exceeding good gargle.

As the quantity of roses used here can have little or no effect, an equally valuable medicine may be prepared by mixing the acid and water without infusion.

Infusion of Tamarinds and Senna.—Take of tamarinds, one ounce; senna, and crystals of tartar, each two drachms. Let these ingredients be infused four or five hours in a pint of boiling water; afterwards let the

liquor be strained, and an ounce or two of the aromatic tincture added to it. Persons who are easily purged, may leave out either the tamarinds or the crystals of tartar. This is an agreeable cooling purge. A tea-cupful may be given every half hour till it operates.

This supplies the place of the *Decoction of Tamarinds and Senna.*

Spanish Infusion.---Take of Spanish juice, cut into small pieces, an ounce; salt of tartar, three drachms. Infuse in a quart of boiling water for a night. To the strained liquor, add an ounce and a half of the syrup of poppies.

In recent colds, coughs, and obstructions of the breast, a tea-cupful of this infusion may be taken with advantage three or four times a-day:

Infusion for the Palsy.---Take of horse-radish root, shaved, mustard-seed, bruised, each four ounces; outer rind of orange-peel, one ounce. Infuse them in two quarts of boiling water, in a close vessel, for twenty-four hours·

In paralytic complaints, a tea-cupful of this warm stimulating medicine may be taken three or four times a-day. It excites the action of the solids, proves diuretic, and, if the patient be kept warm, promotes the perspiration.

If two or three ounces of the dried leaves of marsh-trefoil be used instead of the mustard, it will make the *Antiscorbutic Infusion.*

JULAPS.

THE basis of julaps is generally common water, or some simple distilled water, one-third or one fourth its quantity of distilled spirituous water, and as much sugar or syrup as is sufficient to render the mixture agreeable. This is sharpened with vegetable or mineral acids, or impregnated with other medicines.

Camphorated Julap.–Take of camphor, one drachm, gum arabic, half an ounce; double-refined sugar, an ounce; vinegar a pint. Grind the camphor with a few

drops of rectified spirit of wine, till it grows soft; then add the gum, previously reduced to a mucilage with equal its quantity of water, and rub them till they are perfectly united. To this mixture add, by little and little, the vinegar with the sugar dissolved in it, still continuing the trituration.

In hysterical and other complaints, where camphor is proper, this julap may be taken in the dose of a spoonful or two, as often as the stomach will bear it.

Cordial Julap.—Take of simple cinnamon-water, four ounces; Jamaica pepper-water, two ounces; volatile aromatic spirit, and compound spirit of lavender, of each two drachms; syrup of orange-peel, an ounce. Mix them.

This is given in the dose of two spoonsful three or four times a-day, in disorders accompanied with great weakness and depression of spirits.

Expectorating Julap.---Take of the emulsion of gum ammoniac, six ounces; syrup of squills, two ounces. Mix them.

In coughs, asthmas, and obstructions of the breast, two table-spoonsful of this julap may be taken every three or four hours.

Musk Julap.--Rub half a drachm of musk well together with half an ounce of sugar, and add to it, gradually, of simple cinnamon and peppermint-water, each two ounces; of the volatile aromatic spirit, two drachms.

In the low state of nervous fevers, hiccuping, convulsions, and other spasmodic affections, two table-spoonsful of this julap may be taken every two or three hours.

Saline Julap.—Dissolve two drachms of salt of tartar in three ounces of fresh lemon juice, strained: when the effervescence is over, add of mint-water and common water, each two ounces; of simple syrup, one ounce.

This removes sickness at the stomach, relieves vomiting, promotes perspiration, and may be of some service in fevers, especially of the inflammatory kind.

Vomiting Julap.—Dissolve four grains of emetic tartar in eight ounces of water, and add to it half an ounce of the syrup of clove July-flowers.

In the beginning of fevers, where there is no topical inflammation, this julap may be given in the dose of one table-spoonful every quarter of an hour till it operates. Antimonial vomits serve not only to evacuate the contents of the stomach, but likewise to promote the different excretions. Hence they are found in fevers to have nearly the same effect as Dr. *James's Powder*.

MIXTURES.

A mixture differs from a julap in this respect, that it receives into its composition not only salts, extracts, and other substances dissoluble in water, but also earths, powders, and such substances as cannot be dissolved. A mixture is seldom either an elegant or agreeable medicine. It is nevertheless necessary. Many persons can take a mixture, who are not able to swallow a bolus or an electuary: besides, there are medicines which act better in this than in any other form.

Astringent Mixture.—Take simple cinnamon-water and common water, of each three ounces; spirituous cinnamon-water, an ounce and a half; Japonic confection, half an ounce. Mix them.

In dysenteries, which are not of long standing, after the necessary evacuations, a spoonful or two of this mixture may be taken every four hours, interposing every second or third day a dose of rhubarb.

Diuretic Mixture.—Take of mint-water, five ounces; vinegar of squills, six drachms; sweet spirit of nitre, half an ounce; syrup of ginger, an ounce and a half. Mix them.

In obstructions of the urinary passage, two spoonsful of this mixture may be taken twice or thrice a-day.

Laxative Absorbent Mixture.—Rub one drachm of magnesia alba in a mortar with ten or twelve grains of

the best Turkey rhubarb, and add to them three ounces of common water; simple cinnamon-water, and syrup of sugar, of each one ounce.

As most diseases of infants are accompanied with acidities, this mixture may either be given with a view to correct these, or to open the body. A table-spoonful may be taken for a dose, and repeated three times a-day. To a very young child, half a spoonful will be sufficient.

When the mixture is intended to purge, the dose may either be increased, or the quantity of rhubarb doubled.

This is one of the most generally useful medicines for children with which I am acquainted.

Saline Mixture.—Dissolve a drachm of the salt of tartar in four ounces of boiling water; and, when cold, drop into it spirit of vitriol till the effervescence ceases; then add, of peppermint-water, two ounces; simple syrup, one ounce.

When fresh lemons cannot be had, this mixture may occasionally supply the place of the saline julap.

Squill Mixture.—Take of simple cinnamon-water, five ounces; vinegar of squills, one ounce; syrup of marsh-mallows, an ounce and a half. Mix them.

This mixture, by promoting expectoration, and the secretion of urine, proves serviceable in asthmatic and dropsical habits. A table-spoonful of it may be taken frequently.

OINTMENTS, LINIMENTS, AND CERATES.

NOTWITHSTANDING the extravagant encomiums which have been bestowed on different preparations of this kind, with regard to their efficacy in the cure of wounds, sores, &c. it is beyond a doubt, that the most proper application to a green wound is dry lint. But though ointments do not heal wounds and sores, yet they serve to defend them from the external air, and to retain such substances as may be necessary for drying, deterging, destroying proud flesh, and such

like. For these purposes, however, it will be sufficient to insert only a few of the most simple forms, as ingredients of a more active nature can occasionally be added to them.

Yellow Basilicum Ointment.—Take of yellow wax, white resin, and frankincense, each a quarter of a pound; melt them together over a gentle fire; then add, of hog's lard, prepared, one pound. Strain the ointment while warm.

This ointment is employed for cleansing and healing wounds and ulcers.

Ointment of Calamine.—Take of olive-oil, a pint and a half; white wax, and calamine-stone levigated, of each half a pound. Let the calamine-stone, reduced into a fine powder, be rubbed with some part of the oil, and afterwards added to the rest of the oil and wax, previously melted together, continually stirring them till quite cold.

This ointment, which is commonly known by the name of Turner's Cerate, is an exceeding good application in burns and excoriations, from whatever cause.

Emollient Ointment.—Take of palm-oil, two pounds; olive-oil, a pint and a half; yellow wax, half a pound; Venice turpentine, a quarter of a pound. Melt the wax in the oils over a gentle fire; then mix in the turpentine, and strain the ointment.

This supplies the place of *Althæa Ointment.* It may be used for anointing inflamed parts, &c.

Eye-Ointment.—Take of hog's lard, prepared, four ounces; white wax, two drachms; tutty prepared, one ounce; melt the wax with the lard over a gentle fire, and then sprinkle in the tutty, continually stirring them till the ointment is cold.

This ointment will be more efficacious, and of a better consistence, if two or three drachms of camphor be rubbed up with a little oil, and intimately mixed with it.

Another.—Take of camphor, and calamine-stone levigated, each six drachms; verdigris, well prepared, two drachms; hog's lard, and mutton-suet, prepared, of each two ounces. Rub the camphor well with the

powder; afterwards mix in the lard and suet, continuing the triture till they be perfectly united.

This ointment has been long in esteem for diseases of the eyes. It ought, however, to be used with caution, when the eyes are much inflamed or very tender.

Issue-Ointment.—Mix half an ounce of Spanish flies, finely powdered, in six ounces of yellow basilicum ointment. This ointment is chiefly intended for dressing blisters, in order to keep them open during pleasure.

Ointment of Lead.—Take of olive-oil, half a pint; white wax, two ounces; sugar of lead, three drachms. Let the sugar of lead, reduced into a fine powder, be rubbed up with some part of the oil, and afterwards added to the other ingredients, previously melted together, continually stirring them till quite cold.

This cooling and gentle astringent ointment may be used in all cases where the intention is to dry and skin over the part, as in scalding, &c.

Mercurial Ointment.—Take of quicksilver, two ounces; hog's lard, three ounces; mutton-suet, one ounce. Rub the quicksilver with an ounce of the hog's lard in a warm mortar, till the globules be perfectly extinguished; then rub it up with the rest of the lard and suet, previously melted together.

The principal intention of this ointment is, to convey mercury into the body, by being rubbed upon the skin.

Ointment of Sulphur.—Take of hog's lard prepared, four ounces; flour of sulphur, an ounce and a half; crude sal ammoniac, two drachms; essence of lemon, ten or twelve drops. Make them into an ointment.

This ointment, rubbed upon the parts affected, will generally cure the itch. It is both the safest and best application for that purpose, and, when made in this way, has no disagreeable smell.

White Ointment.—Take of olive-oil, one pint; white wax and spermaceti, of each three ounces. Melt them with a gentle heat, and keep them constantly and briskly stirring together, till quite cold.

If two drachms of camphor, previously rubbed with a small quantity of oil, be added to the above, it will make the *White Camphorated Ointment.*

Liniment for Burns.—Take equal parts of Florence oil, or of fresh drawn linseed-oil, and lime-water; shake them well together in a wide bottle, so as to form a liniment.

This is found to be an exceeding proper application for recent scalds or burns. It may either be spread upon a cloth, or the parts affected may be anointed with it twice or thrice a-day.

White Liniment.—This is made in the same manner as the white ointment, two-thirds of the wax being left out.

This liniment may be applied in cases of excoriation, where, on account of the largeness of the surface, the ointments with lead or calamine might be improper.

Liniment for the Piles.—Take of emollient ointment, two ounces; liquid laudanum, half an ounce. Mix those ingredients with the yolk of an egg, and work them well together.

Volatile Liniment.—Take of Florence oil, an ounce; spirit of hartshorn, half an ounce. Shake them together.

This liniment, made with equal parts of spirit and oil, will be more efficacious, where the patient's skin is able to bear it.

Sir John Pringle observes that, in the inflammatory quinsey, a piece of flannel, moistened with this liniment, and applied to the throat, to be renewed every four or five hours, is one of the most efficacious remedies; and that it seldom fails, after bleeding, either to lessen or carry off the complaint. The truth of this observation I have often experienced.

Camphorated Oil.—Rub an ounce of camphor, with two ounces of Florence oil, in a mortar, till the camphor be entirely dissolved.

This antispasmodic liniment may be used in obstinate rheumatisms, and in some other cases accompanied with extreme pain and tension of the parts.

PILLS.

MEDICINES which operate in a small dose, and whose disagreeable taste or smell makes it necessary that they should be concealed from the palate, are most commonly exhibited in this form. No medicine, however, that is intended to operate quickly, ought to be made into pills, as they often lie for a considerable time on the stomach before they are dissolved so as to produce any effect.

As the ingredients which enter the composition of pills are generally so contrived, that one pill of an ordinary size may contain about five grains of the compound, in mentioning the dose we shall only specify the number of pills to be taken; as one, two, three, &c.

Composing Pill.—Take of purified opium, ten grains; Castile soap, half a drachm. Beat them together, and form the whole into twenty pills.

When a quieting draught will not sit on the stomach, one, two, or three, of these pills may be taken, as occasion requires.

Fœtid Pill.—Take of asafœtida, half an ounce; simple syrup, as much as is necessary to form it into pills.

In hysteric complaints, four or five pills, of an ordinary size, may be taken twice or thrice a-day. They may likewise be of service to persons afflicted with the asthma.

When it is necessary to keep the body open, a proper quantity of rhubarb, aloes, or jalap, may occasionally be added to the above mass.

Hemlock Pill.—Take any quantity of the extract of hemlock, and adding to it about a fifth part of its weight of the powder of the dried leaves, form it into pills of the ordinary size.

The extract of hemlock may be taken from one grain to several drams in the day. The best method, however, of using these pills is, to begin with one or two, and to increase the dose gradually, as far as the patient can bear them, without any remarkable degree of stupor or giddiness.

Mercurial Pill.—Take of purified quicksilver and honey, each half an ounce. Rub them together in a mortar, till the globules of mercury are perfectly extinguished; then add, of Castile soap, two drachms; powdered liquorice, or crumb of bread, a sufficient quantity to give the mass a proper consistence for pills.

When stronger mercurial pills are wanted, the quantity of quicksilver may be doubled.

The dose of these pills are different, according to the intention with which they are given. As an alterant, two or three may be daily taken. To raise a salivation, four or five will be necessary.

Equal parts of the above pill and powdered rhubarb, made in a mass, with a sufficient quantity of simple syrup, will make a *Mecurial Purging Pill.*

Mercurial Sublimate Pill.—Dissolve fifteen grains of the corrosive sublimate of mercury in two drachms of the saturated solution of crude sal ammoniac, and make it into a paste, in a glass mortar, with a sufficient quantity of the crumb of bread. This mass must be formed into one hundred and twenty pills.

This pill, which is the most agreeable form of exhibiting sublimate, has been found efficacious, not only in curing the venereal disease, but also in killing and expelling worms, after other powerful medicines had failed. For the venereal disease, four of these pills may be taken twice a-day; as an alterant, three; and for worms, two.

Plummer's Pills.—Take of calomel, or sweet mercury, and precipitated sulphur of antimony, each three drachms; extract of liquorice, two drachms. Rub the sulphur and mercury well together; afterwards add the extract, and, with a sufficient quantity of the mucilage of gum arabic, make them into pills.

This pill has been found a powerful, yet safe, alterative, in obstinate cutaneous disorders; and has completed a cure after salivation had failed. In venereal cases, it has likewise produced excellent effects. Two or three pills of an ordinary size may be taken night and morning, the patient keeping moderately warm, and drinking after each dose a draught of decoction of the woods, or of sarsaparella.

Purging Pills.—Take of succotrine aloes, and Castile soap, each two drachms; of simple syrup, a sufficient quantity to make them into pills.

Four or five of these pills will generally prove a sufficient purge. For keeping the body gently open, one may be taken night and morning. They are reckoned both deobstruent and stomachic, and will be found to answer all the purposes of Dr. Anderson's pills, the principal ingredient of which is aloes.

Where aloetic purges are improper, the following pills may be used:

Take extract of jalap, and vitriolated tartar, of each two drachms; syrup of ginger, as much as will make them of a proper consistence for pills.

Those pills may be taken in the same quantity as the above.

Pills for the Jaundice.—Take of Castile soap, succotrine aloes, and rhubarb, of each one drachm. Make them into pills, with a sufficient quantity of syrup mucilage.

These pills, as their title expresses, are chiefly intended for the jaundice, which, with the assistance of proper diet, they will often cure. Five or six of them may be taken twice a-day, more or less, as may be necessary to keep the body open. It will be proper, however, during the use, to interpose now and then a vomit of ipecacuanha, or tartar emetic.

Stomachic Pills.—Take the extract of gentian, two drachms; powdered rhubarb, and vitriolated tartar, of each one drachm; oil of mint, thirty drops; simple syrup, a sufficient quantity.

Three or four of these pills may be taken twice a-day, for invigorating the stomach, and keeping the body gently open.

Squill Pills.—Take powder of dried squills, a drachm and a half; gum ammoniac, and cardamom-seeds, in powder, of each three drachms; simple syrup, a sufficient quantity.

In dropsical and asthmatic complaints, two or three of these pills may be taken twice a-day, or oftener, if the stomach will bear it.

Strengthening Pill.—Take soft extract of the bark, and salt of steel, each a drachm. Make into pills.

In disorders arising from excessive debility, or relaxation of the solids, as the *chlorosis*, or green-sickness, two of these pills may be taken three times a-day.

PLASTERS.

PLASTERS ought to be of a different consistence, according to the purposes for which they are intended. Such as are to be applied to the breasts or stomach, ought to be soft and yielding; while those designed for the limbs should be firm and adhesive.

It has been supposed, that plasters might be impregnated with the virtues of different vegetables, by boiling the recent vegetables with the oil employed for the compositions of the plaster; but this treatment does not communicate to the oils any valuable quality.

The *calces* of lead, boiled with oils, unite with them into a plaster of a proper consistence, which make the basis of several other plasters. In boiling these compositions, a quantity of hot water must be added from time to time, to prevent the plaster from burning or growing black. This, however, should be done with care, lest it cause the matter to explode.

Common Plaster.—Take of common olive-oil, six pints; litharge, reduced to a fine powder, two pounds and a half. Boil the litharge and oil together over a gentle fire, continually stirring them, and keeping always about half a gallon of water in the vessel: after they

have boiled about three hours, a little of the plaster may be taken out, and put into cold water, to try if it be of a proper consistence: when that is the case, the whole may be suffered to cool, and the water well pressed out of it with the hands.

This plaster is generally applied in slight wounds and excoriations of the skin. It keeps the part soft and warm, and defends it from the air, which is all that is necessary in such cases. Its principal use, however, is to serve as a basis for other plasters.

Adhesive Plaster.—Take of common plaster, half a pound; of Burgundy pitch, a quarter of a pound. Melt them together.

This plaster is principally used for keeping on other dressings.

Anodyne Plaster.—Melt an ounce of adhesive plaster, and, when it is cooling mix it with a drachm of powdered opium, and the same quantity of camphor, previously rubbed up with a little oil.

This plaster generally gives ease in acute pains, especially of the nervous kind.

Blistering Plaster.—Take of Venice turpentine, six ounces; yellow wax, two ounces; Spanish flies, in fine powder, three ounces; powdered mustard, one ounce. Melt the wax, and, while it is warm, add to it the turpentine, taking care not to evaporate it by too much heat. After the turpentine and wax are sufficiently incorporated, sprinkle in the powders, continually stirring the mass till it be cold.

Though this plaster is made in a variety of ways, one seldom meets with it of a proper consistence, When compounded with oils and other greasy substances, its effects are blunted, and is apt to run; while pitch and resin render it too hard, and very inconvenient.

When the blistering plaster is not at hand, its place may be supplied by mixing with any soft ointment a sufficient quantity of powdered flies; or by forming them into a paste with flour and vinegar.

Gum Plaster.—Take of the common plaster, four pounds; gum ammoniac and galbanum, strained, of each half a pound. Melt them together, and add, of Venice turpentine, six ounces.

This plaster is used as a digestive, and likewise for discussing indolent tumours.

Mercurial Plaster.—Take of common plaster, one pound; of gum ammoniac, strained, half a pound. Melt them together, and, when cooling, add eight ounces of quicksilver, previously extinguished by triture, with three ounces of hog's lard.

This plaster is recommended in pains of the limbs arising from a venereal cause. Indurations of the glands, and other violent tumours, are likewise found sometimes to yield to it.

Stomach Plaster.—Take of gum plaster, half a pound; camphorated oil, an ounce and a half; black pepper, or capsicum, where it can be had, one ounce. Melt the plaster, and mix with it the oil; then sprinkle in the pepper, previously reduced to a fine powder.

An ounce or two of this plaster spread upon soft leather, and applied to the region of the stomach, will be of service in flatulencies arising from hysteric and hypochondriac affections. A little of the expressed oil of mace, or a few drops of the essential oil of mint, may be rubbed upon it before it is applied.

This may supply the place of the *Antihysteric Plaster.*

Warm Plaster.—Take of gum plaster, one ounce; blistering plaster, two drachms. Melt them over a gentle fire.

This plaster is useful in the sciatica, and other fixed pains of the rheumatic kind: it ought, however, to be worn for some time, and to be renewed, at least, once a-week. If this is found to blister the part, which is sometimes the case, it must be made with a smaller proportion of the blistering plaster.

Wax-Powder.—Take of yellow wax, one pound: white resin, half a pound; mutton-suet, three quarters of a pound. Melt them together.

This is generally used instead of the *Melilot Plaster*. It is a proper application after blisters, and in other cases where a gentle digestive is necessary.

POWDERS

This is one of the most simple forms in which medicine can be administered. Many medicinal substances, however, cannot be reduced into powder, and others, are too disagreeable to be taken in this form.

The lighter powders may be mixed in any agreeable thin liquor, as tea or water gruel. The more ponderous will require a more consistent vehicle, as syrup, conserve, jelly, or honey.

Gums and other substances, which are difficult to powder, should be pounded along with the drier ones; but those which are too dry, especially aromatics, ought to be sprinkled, during their pulverization, with a few drops of any water.

Aromatic powders are to be prepared only in small quantities at a time, and kept in glass vessels closely stopped. Indeed, no powders ought to be exposed to the air, or kept too long, otherwise their virtues will be, in a great measure, destroyed.

Astringent Powder.—Take of alum, and Japan earth, each two drachms. Pound them together, and divide the whole into ten or twelve doses.

In an immoderate flow of the *menses*, and other hœmorrhages, one of these powders may be taken every hour, or every half hour, if the discharge be violent.

Powder of Bole.—Take of bole armenic, or French bole, two ounces; cinnamon, one ounce; tormentil-root and gum arabic, of each six drachms; long pepper, one drachm. Let all these ingredients be reduced into a powder.

This warm glutinous astringent powder is given in fluxes, and in other disorders where medicines of that class are necessary, in the dose of a scruple, or half a drachm.

If a drachm of opium be added, it will make the *Powder of Bole with Opium*, which is a medicine of considerable efficacy. It may be taken in the same quantity as the former, but not above twice or thrice a-day.

Carminative Powder.—Take of coriander-seed, half an ounce; ginger, one drachm; nutmegs, half a drachm; fine sugar, a drachm and a half. Reduce them into powder for twelve doses.

This powder is employed for expelling flatulencies arising from indigestion, particularly those to which hysteric and hypochondriac persons are so liable. It may likewise be given in small quantities to children in their food, when troubled with gripes.

Diuretic Powder.—Take of gum arabic, four ounce; purified nitre, one ounce. Pound them together, and divide the whole into twenty-four doses.

During the first stages of the venereal disease, one of these cooling powders may be taken three times a-day, with considerable advantage.

Aromatic Opening Powder.—Take of the best Turkey rhubarb, cinnamon, and fine sugar, of each two drachms. Let the ingredients be pounded, and afterwards mixed well together.

When flatulence is accompanied with costiveness, a tea-spoonful of this powder may be taken once or twice a-day, according to circumstances.

Saline Laxative Powder.—Take of soluble tartar, and cream of tartar, of each one drachm; purified nitre, half a drachm. Make them into a powder.

In fevers, and other inflammatory disorders, where it is necessary to keep the body gently open, one of these cooling laxative powders may be taken in a little gruel, and repeated occasionally.

Steel-Powder.—Take filings of steel, and loaf-sugar, of each two ounces; ginger, two drachms. Pound them together.

In obstructions of the *menses*, and other cases where steel is proper, a tea-spoonful of this powder may be taken twice a-day, and washed down with a little wine or water.

Sudorific Powder.—Take purified nitre and vitriolated tartar, of each half an ounce; opium, and ipecacuanha, of each one drachm. Mix the ingredients, and reduce them to a fine powder.

This is generally known by the name of *Dover's Powder*. It is a powerful sudorific. In obstinate rheumatisms, and other cases where it is necessary to excite a copious sweat, this powder may be administered in the dose of a scruple or half a drachm. Some patients will require two scruples. It ought to be accompanied with the plentiful use of some warm diluting liquor.

Worm Powder.—Take of tin, reduced into a fine powder, an ounce; Ethiop's mineral, two drachms. Mix them well together, and divide the whole into six doses.

One of these powders may be taken in a little syrup, honey, or treacle, twice a-day. After they have been all used, the following anthelmintic purge may be proper.

Purging Worm-Powder.—Take of powdered rhubarb, a scruple; scammony and calomel, of each five grains. Rub them together in a mortar for one dose.

For children, the above doses must be lessened according to their age.

If the power of tin be given alone, its dose may be considerably increased. The late Dr. Alston gave it to the amount of two ounces in three days, and says, when thus administered, that it proved an egregious anthelmintic. He purges his patients both before they took the powder, and afterwards.

Powder for the Tape-Worm.—Early in the morning, the patient is to take, in any liquid, two or three drachms, according to his age or constitution, of the root of the male fern reduced into a fine powder. About two hours afterward, he is to take of calomel, and resin of scammony, each ten grains; gum gamboge, six grains. These ingredients must be finely powdered, and given in a little syrup, honey, treacle, or any thing that is most agreeable to the patient. He is then to walk gently

about, now and then drinking a dish of green-tea, till the worm is passed. If the powder of the fern produces nausea or sickness, it might be removed by sucking the juice of an orange or lemon.

This medicine, which had long been kept a secret abroad for the cure of the tape-worm, was, some time ago, purchased by the French king, and made public for the benefit of mankind. Not having had an opportunity of trying, I can say nothing from experience concerning its efficacy. It seems, however, from its ingredients, to be an active medicine, and ought to be taken with care. The dose here prescribed is sufficient for the strongest patient; it must, therefore, be reduced according to the age and constitution.

SYRUPS.

Syrups were, some time ago, looked on as medicines of considerable value. They are at present, however, regarded chiefly as vehicles for medicines of greater efficacy, and are used for sweating draughts, julaps, or mixtures; and for reducing the lighter powders into boluses, pills, and electuaries. As all these purposes may be answered by the simple syrup alone, there is little occasion for any other; especially as they are seldom found but in a state of fermentation; and as the dose of any medicine given in this form is very uncertain, persons who serve the public must keep what their customers call for; but to the private practitioner, nine-tenths of the syrups usually kept in the shops are unnecessary.

Simple Syrup.—Is made by dissolving in water, either with or without heat, about double its weight of fine sugar.

If twenty-five drops of laudanum be added to an ounce of the simple syrup, it will answer and supply the place of diascodium, or the syrup of poppies, and will be found a more safe and certain medicine.

The lubricating virtues of syrup of marshmallows may likewise be supplied, by adding to the common

syrup, a sufficient quantity of the mucilage of gum arabic.

Those who choose to preserve the juice of lemons in form of syrup, may dissolve in it, by the heat of a warm-bath, nearly double its weight of fine sugar. The juice ought to be previously strained, and suffered to stand till it settles.

The syrup of ginger is sometimes of use as a warm vehicle for giving medicines to persons afflicted with flatulency. It may be made by infusing two ounces of bruised ginger in two pints of boiling water for twenty-four hours. After the liquor has been strained, and has stood to settle for some time, it may be poured off, and a little more than double its weight of fine powdered sugar dissolved in it.

TINCTURES, ELIXIRS, &c.

RECTIFIED spirit is the direct menstruum of the resins and essential oils of vegetables, and totally extracts these active principles from sundry substances, which yield them to water, either not at all, or only in part.

It dissolves likewise those parts of animal substances in which their peculiar smells and taste reside. Hence the tinctures prepared with rectified spirits form an useful and elegant class of medicines, possessing many of the most essential virtues of simples, without being clogged with their inert or useless parts.

Water, however, being the proper menstruum of the gummy, saline, and saccharine, parts of medical substances, it will be necessary, in the preparation of several tinctures, to make use of a weak spirit, or a composition of rectified spirit and water.

Aromatic Tincture.—Infuse two ounces of Jamaica pepper in two pints of brandy without heat, for a few days; then strain off the tincture.

This simple tincture will sufficiently answer all the intentions of more costly preparations of this kind. It is rather too hot to be taken by itself; but is very pro-

per for mixing with such medicines as might otherwise prove too cold for the stomach.

Compound Tincture of the Bark.--Take of Peruvian bark, two ounces; Seville orange-peel and cinnamon, of each half an ounce. Let the bark be powdered, and the other ingredients bruised; then infuse the whole in a pint and a half of brandy, for five or six days, in a close vessel; afterwards strain off the tincture.

This tincture is not only beneficial in intermitting fevers, but also in the slow, nervous, and putrid kinds, especially towards their decline.

The dose is from one drachm to three or four, every fifth or sixth hour. It may be given in any suitable liquor, and occasionally sharpened with a few drops of the spirit of vitriol.

Volatile Fœtid Tincture.—Infuse two ounces of asafœtida in one pint of volatile aromatic spirit, for eight days, in a close bottle, frequently shaking it; then strain the tincture.

This medicine is beneficial in hysteric disorders, especially when attended with lowness of spirits, and faintings. A tea-spoonful of it may be taken in a glass of wine, or a cup of penny-royal tea.

Volatile Tincture of Gum Guaiacum.--Take of gum guaiacum, four ounces; volatile aromatic spirit, a pint. Infuse without heat, in a vessel well stopped for a few days; then strain off the tincture.*

In rheumatic complaints, a tea-spoonful of this tincture may be taken in a cup of the infusion of water-trefoil, twice or thrice a-day.

Tincture of Black Hellebore.—Infuse two ounces of the roots of black hellebore, bruised, in a pint of proof spirit, for seven or eight days; then filter the tincture through paper. A scruple of cochineal may likewise be infused along with the roots, to give the tincture a colour.

* A very good tincture of guaiacum, for domestic use, may be made by infusing two or three ounces of the gum in a bottle of rum or brandy

In obstructions of the *menses*, a tea-spoonful of this tincture may be taken in a cup of camomile or penny-royal tea twice a-day.

Astringent Tincture.—Digest two ounces of gum kino, in a pint and a half of brandy, for eight days; afterwards strain it for use.

This tincture, though not generally known, is a good astringent medicine. With this view, an ounce, or more, of it may be taken three or four times a-day.

Tincture of Myrrh and Aloes.—Take of gum myrrh an ounce and a half; hepatic aloes, one ounce. Let them be reduced to a powder, and infused in two pints of rectified spirits, for six days, in a gentle heat; then strain the tincture.

This is principally used by surgeons for cleansing foul ulcers, and restraining the progress of gangrenes. It is also, by some, recommended as a proper application in green wounds.

Tincture of Opium, or Liquid Laudanum.—Take of crude opium, two ounces; spirituous aromatic water, and mountain-wine, of each ten ounces. Dissolve the opium, sliced, in the wine, with a gentle heat, frequently stirring it; afterwards add the spirit, and strain off the tincture.

Sacred Tincture, or Tincture of Hiera Picra.—Take of succotrine aloes, in powder, one ounce; Virginian snake-root and ginger, of each two drachms. Infuse in a pint of mountain-wine, and half a pint of brandy, for a week, frequently shaking the bottle; then strain off the tincture.

This is a safe and useful purge for persons of languid and phlegmatic habits; but it is thought to have better effects taken in small doses as a laxative.

The dose, as a purge, is from one to two ounces.

Cmpound Tincture of Senna.—Take of senna, one ounce; jalap, coriander-seeds, and cream of tartar, of each half an ounce. Infuse them in a pint and a half of French brandy for a week; then strain the tincture, and add to it four ounces of fine sugar.

This is an agreeable purge, and answers all the purposes of the Elixir Salutis, and of Daffy's Elixir.

The dose is from one to two or three ounces.

Tincture of Spanish flies.— Take of Spanish flies, reduced to a fine powder, two ounces; spirit of wine, one pint. Infuse for two or three days; then strain off the tincture.

This is intended as an acrid stimulant for external use. Parts affected with the palsy or chronic rheumatism may be frequently rubbed with it.

Tincture of the Balsam of Tolu.—Take of the balsam of Tolu, an ounce and a half; rectified spirit of wine, a pint. Infuse in a gentle heat until the balsam is dissolved; then strain the tincture.

This tincture possesses all the virtues of the balsam. In coughs, and other complaints of the breast, a teaspoonful or two of it may be taken in a bit of loaf-sugar. But the best way of using it is in syrup. An ounce of the tincture, properly mixed with two pounds of simple syrup, will make what is commonly called the Balsamic Syrup.

Tincture of Rhubarb.--Take of rhubarb, two ounces and a half; lesser cardamom-seeds, half an ounce; brandy, two pints. Digest for a week, and strain the tincture.

Those who choose to have a vinous tincture of rhubarb, may infuse the above ingredients in a bottle of Lisbon wine, adding to it about two ounces of proof spirits.

If half an ounce of gentian root, and a drachm of Virginian snake-root be added to the above ingredients, it will make the bitter tincture of rhubarb.

All these tinctures are designed as stomachics and corroborants, as well as purgatives. In weakness of the stomach, indigestion, laxity of the intestines, fluxes, colicy, and such like complaints, they are frequently of great service. The dose is from half a spoonful to three or four spoonsful, or more, according to the circumstances of the patient, and the purposes it is intended to answer

Paregoric Elixir.—Take of flowers of benzoin, half an ounce; opium, two drachms. Infuse in one pound of the volatile aromatic spirit, four or five days, frequently shaking the bottle; afterwards strain the elixir.

This is an agreeable and safe way of administering opium. It eases pain, allays tickling coughs, relieves difficult breathing, and is useful in many disorders of children, particularly the hooping-cough.

The dose to an adult is from fifty to an hundred drops.

Sacred Elixir.—Take of rhubarb, cut small, ten drachms; succotrine aloes, in powder, six drachms; lesser cardamom-seeds, half an ounce; French brandy, two pints. Infuse for two or three days, and then strain the elixir.

This useful stomachic purge may be taken from one ounce to an ounce and a half.

Stomachic Elixir.—Take of gentian-root, two ounces; Curacoa oranges, one ounce; Virginian snake-root, half an ounce. Let the ingredients be bruised, and infused for two or three days in two pints of French brandy; afterwards strain out the elixir.

This is an elegant stomachic bitter. In flatulencies, indigestion, want of appetite, and such like complaints, a small glass of it may be taken twice a-day. It likewise relieves the gout in the stomach, when taken in a large dose.

Acid Elixir of Vitriol.—Take of the aromatic tincture, one pint; oil of vitriol, three ounces. Mix them gradually, and, after the fœces have subsided, filter the elixir through paper, in a glass funnel.

This is one of the best medicines that I know for hysteric and hypochondriac patients, afflicted with flatulencies, arising from relaxation or debility of the stomach and intestines.

It will succeed where the most celebrated stomachic bitters have no effect. The dose is from ten to forty drops, in a glass of wine and water, or a cup of any bitter infusion, twice or thrice a-day. It should be taken when the stomach is most empty.

Camphorated Spirit of Wine.—Dissolve an ounce of camphor in a pint of rectified spirits.

This solution is chiefly employed as an embrocation in bruises, palsies, the chronic rheumatism, and for preventing gangrenes.

The above quantity of camphor, dissolved in half a pound of the volatile aromatic spirit, makes Ward's Essence.

Spirit of Mindererus.—Take of volatile sal ammoniac, any quantity. Pour on it, gradually, distilled vinegar, till the effervescence ceases.

This medicine is useful in promoting a discharge both by the skin and urinary passages. It is also a good external application in strains and bruises.

When intended to raise a sweat, half an ounce of it, in a cup of warm gruel, may be given to the patient in bed every hour till it has the desired effect.

VINEGARS.

VINEGAR is an acid produced from various liquors by a second fermentation. It is an useful medicine both in inflammatory and putrid disorders. Its effects are to cool the blood, quench thirst, counteract a tendency to putrefaction, and allay inordinate motions of the system. It likewise promotes the natural secretions, and, in some cases, excites a copious sweat, while the warm medicines, called alexipharmic, tend rather to prevent that salutary evacuation.

Weakness, faintings, vomitings, and other hysteric affections, are often relieved by vinegar applied to the mouth and nose, or received into the stomach. It is of excellent use also in correcting many poisonous substances, when taken into the stomach; and in promoting their expulsion, by the different emunctories, when received into the blood.

Vinegar is not only an useful medicine, but serves likewise to extract, in tolerable perfection, the virtues of several other medicinal substances. Most of the odoriferous flowers impart to it their fragrance, together

with a beautiful purplish or red colour. It also assists or coincides with the intention of squills, garlic, gum ammoniac, and several other valuable medicines.

The effects, however, are not to be expected from every thing that is sold under the name of vinegar, but from such as is sound and well prepared.

The best vinegars are those prepared from French wines.

It is necessary, for some purposes, that the vinegar be distilled; but as this operation requires a particular chemical apparatus, we shall not insert it.

Vinegar of Litharge.—Take of litharge, half a pound; strong vinegar, two pints. Infuse them together in a moderate heat for three days, frequently shaking the vessel; then filter the liquor for use.

This medicine is little used, from a general notion of its being dangerous. There is reason, however, to believe that the preparations of lead with vinegar are possessed of some valuable properties, and that they may be used in many cases with safety and success.

A preparation, of a similar nature with the above, has of late been extolled by Goulard, a French surgeon as a safe and extensively useful medicine, which he calls the Extract of Saturn, and orders it to be made in the following manner.

Take of litharge, one pound; vinegar made of French wine, two pints. Put them together into a glazed earthen pipkin, and let them boil, or rather simmer, for an hour, or an hour and a quarter, taking care to stir them all the while with a wooden spatula. After the whole has stood to settle, pour off the liquor which is upon the top into bottles for use.

With this extract Goulard makes his Vegeto-mineral water,* which he recommends in a great variety of external disorders, as inflammations, burns, bruises, sprains, ulcers, &c.

He likewise prepares with it a number of other forms of medicine, as poultices, plasters, ointments, powders, &c.

* See Collyrium of Lead.

Vinegar of Roses.---Take of red roses, half a pound; strong vinegar, half a gallon. Infuse in a close vessel for several weeks, in a gentle heat, and then strain off the liquor.

This is principally used as an embrocation for headachs, &c.

Vinegar of Squills.---Take of dried squills, two ounces; distilled vinegar two pints. Infuse for ten days or a fortnight in a gentle degree of heat, afterwards strain off the liquor, and add to it about a twelfth part of its quantity of proof spirit.

This medicine has good effects in disorders of the breast, occasioned by a load of viscid phlegm. It is also of use in hydropic cases, for promoting a discharge of urine.

The dose is from two drachms to two ounces, according to the intention for which it is given. When intended to act as a vomit, the dose ought to be large. In other cases, it must not only be exhibited in small doses, but also mixed with cinnamon-water, or some other agreeable aromatic liquor, to prevent the nausea it might otherwise occasion.

WATERS BY INFUSION, &c.

Lime-water.—Pour two gallons of water gradually upon a pound of fresh burnt quick lime, and when the ebullition ceases, stir them well together; then suffer the whole to stand at rest, that the lime may settle, and afterwards filter the liquor through paper, which is to be kept in vessels closely stopped.

The lime-water from calcined oyster-shells is prepared in the same manner.

Lime-water is principally used for the gravel; in which case, from a pint to two or more of it may be drank daily. Externally it is used for washing foul ulcers, and likewise for removing the itch, and other diseases of the skin.

Compound Lime-water.—Take shavings of guaiacum-wood, half a pound; liquorice-root, one ounce;

sassafras-bark, half an ounce; coriander-seeds, three drachms; simple lime-water, six pints.

Infuse without heat for two days, and then strain off the liquor.

In the same manner may lime-water be impregnated with the virtues of other vegetable substances. Such impregnation not only renders the water more agreeable to the palate, but also a more efficacious medicine, especially in cutaneous disorders, and foulness of the blood and juices.

It may be taken in the same quantity as the simple water.

Sublimate-Water.—Dissolve eight grains of the corrosive sublimate in a pint of cinnamon-water.

If a stronger solution is wanted, a double or treble quantity of sublimate may be used.

The principal intention of this is to cleanse foul ulcers, and consume proud flesh.

Styptic-Water.—Take of blue vitriol and alum, each an ounce and a half; water, one pint. Boil them until the salts are dissolved; then filter the liquor, and add to it a drachm of the oil of vitriol.

This water is used for stopping a bleeding at the nose, and other hœmorrhages; for which purpose cloths or dossils dipt in it must be applied to the part.

Tar-Water.—Pour a gallon of water on two pounds of Norway tar, and stir them strongly together on a wooden rod; after they have stood to settle for two days, pour off the water for use.

Though tar-water falls greatly short of the character which has been given of it, yet it possesses some medicinal virtues. It sensibly raises the pulse, increases the secretions, and sometimes opens the body, or occasions vomiting.

A pint of it may be drank daily, or more, if the stomach can bear it. It is generally ordered to be taken on an empty stomach, viz. four ounces morning and evening, and the same quantity about two hours after breakfast and dinner.

SIMPLE DISTILLED WATERS.

A GREAT number of distilled waters were formerly kept in the shops, and are still retained in some dispensatories. But we consider them chiefly in the light of grateful diluents, and suitable vehicles for medicines of greater efficacy, or for rendering the disgustful ones more agreeable to the palate. We shall, therefore, only insert a few of those which are best adapted to these intentions.

The management of a still being now generally understood, it is needless to spend time in giving directions for that purpose.

Cinnamon-Water.—Steep one pound of cinnamon-bark, bruised, in a gallon and a half of water, and one pint of brandy, for two days; and then distil off one gallon.

This is an agreeable aromatic water, possessing in a high degree the fragrance and cordial virtues of the spice.

Pennyroyal-water.—Take of pennyroyal-leaves, dried, a pound and a half; water, from a gallon and a half, to two gallons. Draw off, by a distillation, one gallon.

This water possesses, in a considerable degree, the smell, taste, and virtues, of the plant. It is given in mixtures and julaps to hysteric patients.

An infusion of the herb in boiling water answers nearly the same purposes.

Peppermint-Water.—This is made in the same manner as the preceding.

Spearmint-Water.—This may also be prepared in the same way as the pennyroyal-water.

Both these are useful stomachic waters, and will sometimes relieve vomiting, especially when it proceeds from indigestion, or cold viscid phlegm. They are likewise useful in some colicky complaints, the gout in the stomach, &c. particularly the peppermint-water.

An infusion of the fresh plant is frequently found to have the same effects as the distilled water.

Rose Water.—Take of roses, fresh gathered, six pounds; water, two gallons. Distil off one gallon.

This water is principally valued on account of its fine flavour.

Jamaica Pepper Water.—Take of Jamaica pepper, half a pound; water, a gallon and a half. Distil off one gallon.

This is a very elegant distilled water, and may, in most cases, supply the place of the more costly spice-waters.

SPIRITUOUS DISTILLED WATERS.

Spirituous Cinnamon-Water.—Take of cinnamon-bark, one pound; proof spirit, and common water, of each one gallon. Steep the cinnamon in the liquor for two days; then distil off one gallon.

Spirituous Jamaica Pepper Water.—Take of Jamaica pepper, half a pound; proof spirit, three gallons; water, two gallons. Distil off three gallons.

This is a sufficiently agreeable cordial, and may supply the place of the *Aromatic Water*.

WHEYS.

Alum-Whey.—Boil two drachms of powdered alum, in a pint of milk, till it is curdled; then strain out the whey.

This whey is beneficial in an immoderate flow of the menses, and in a diabetes, or excessive discharge of urine.

The dose is two, three, or four, ounces, according as the stomach will bear it, three times a-day. If it should occasion vomiting, it may be diluted.

Mustard-Whey.—Take milk and water, of each a pint; bruised mustard-seed, an ounce and a half. Boil

them together till the curd is perfectly separated; afterwards strain the whey through a cloth.

This is the most elegant, and by no means the least efficacious, method of exhibiting mustard. It warms and invigorates the habit, and promotes the different secretions. Hence, in the low state of nervous fevours, it will often supply the place of wine. It is also of use in the chronic rheumatism, palsy, dropsy, &c. The addition of a little sugar will render it more agreeable.

The dose is an ordinary tea-cupful four or five times a-day.

Scorbutic-Whey.—This whey is made by boiling half a pint of the scorbutic juices in a quart of cow's milk. More benefit, however, is to be expected from eating the plants, than from their expressed juices.

The scorbutic plants are, bitter oranges, brook-lime, garden scurvy-grass, and water-cresses.

A number of other wheys may be prepared nearly in the same manner, as orange-whey, cream of tar-tar-whey, &c. These are cooling pleasant drinks in fevers, and may be rendered cordial, when necessary, by the addition of wine.

WINES.

THE effects of wine are, to raise the pulse, promote perspiration, warm the habit, and exhilarate the spirits. The red wines, besides these effects, have an astringent quality, by which they strengthen the tone of the stomach and intestines, and by this means prove serviceable in restraining immoderate secretions.

The thin sharp wines have a different tendency. They pass off freely by the different emunctories, and gently open the body. The effects of the full-bodied wines are, however, much more durable than those of the thinner.

All sweet wines contain a glutinous substance, and do not pass off freely. Hence they will heat the body more than an equal quantity of any other wine, though it should contain fully as much spirit.

From the obvious qualities of wine, it must appear to be an excellent cordial medicine. Indeed, to say the truth, it is worth all the rest put together.

But to answer this character, it must be sound and good. No benefit is to be expected from the common trash that is often sold by the name of wine, without possessing one drop of the juice of the grape. Perhaps no medicine is more rarely obtained genuine than wine.

Wine is not only used as a medicine, but is also employed as a menstruum for extracting the virtues of other medicinal substances; for which it is not ill adapted, being a compound of water, inflammable spirit, and acid; by which means it is enabled to act upon vegetable and animal substances, and also to dissolve some bodies of the metallic kind, so as to impregnate itself with their virtues, as steel, antimony, &c.

Anthelmintic Wine.—Take of rhubarb, half an ounce; worm-seed, an ounce. Bruise them, and infuse without heat, in two pints of red port wine for a few days; then strain off the wine.

As the stomach of persons afflicted with worms are always debilitated, red wine alone will often prove serviceable: it must, however, have still better effects when joined with bitter and purgative ingredients, as in the above form.

A glass of this wine may be taken twice or thrice a-day.

Antimonial Wine.—Take glass of antimony, reduced to a fine powder, half an ounce; Lisbon wine, eight ounce. Digest, without heat, for three or four days, now and then shaking the bottle; afterwards filter the wine through paper.

The dose of this wine varies according to the intention. As an alterative and diaphoretic, it may be taken from ten to fifty or sixty drops. In a larger dose it generally proves cathartic, or excites vomiting.

Bitter Wine.—Take of gentian-root, yellow rind of lemon-peel, fresh, each one ounce; long pepper, two

drachms; mountain wine, two pints. Infuse without heat for a week, and strain out the wine for use.

In complaints arising from weakness of the stomach or indigestion, a glass of this wine may be taken an hour before dinner and supper.

Ipecacuanha Wine.—Take of ipecacuanha, in powder, one ounce; mountain wine, a pint. Infuse for three or four days; then filter the tincture.

This is a safe vomit, and answers extremely well for such persons as cannot swallow the powder, or whose stomachs are too irritable to bear it.

The dose is from one ounce to an ounce and a half.

Chalybeate or Steel Wine.—Take filings of iron, two ounces; cinnamon and mace, of each two drachms; Rhenish wine, two pints. Infuse for three or four weeks, frequently shaking the bottle; then pass the wine through a filter.

In obstructions of the menses, this preparation of iron may be taken in the dose of half a wine-glass twice or thrice a-day.

The medicine would probably be as good if made with Lisbon wine, sharpened with half an ounce of the cream of tartar, or a small quantity of vitriolic acid.

Stomach Wine.—Take of Peruvian bark, grossly powdered, an ounce; cardamom-seeds, and orange-peel, bruised, of each two drachms.

Infuse in a bottle of white port, or Lisbon wine, for five or six days; then strain off the wine.

This wine is not only of service in debility of the stomach and intestines, but may also be taken as a preventative, by persons liable to the intermittent fever, or who reside in places where this disease prevails. It will be of use likewise to those who recover slowly, after fevers of any kind, as it assists digestion, and helps to restore the tone and vigour of the system.

A glass of it may be taken two or three times a-day.

GENERAL CATALOGUE OF MEDICINES

IN COMMON USE,

According to their English Names; with their Doses.

N. B. The doses here set down are the smallest and the largest usually given to adults, or full grown persons; for younger persons and infants, the dose must be reduced in the proportions mentioned in the Appendix, page 6, but must always be regulated by the strength as well as the age of the patient.

☞ The New Names of the Drugs are in *Italics*.

A

ACID, the acetous	from 1 scruple	to	1 drachm
——— *muriatic* (spirit of salt)	10 drops	..	40 drops
——— *nitrous diluted* (aquafortis)	10 drops	..	40 drops
——— vitriolic diluted	15 drops	..	40 drops
Æther vitriolic	30 drops	..	2 drachms
Æthiop's mineral. See *Quicksilver with sulphur.*			
Aloes	5 grains	..	30 grains
Alum	6 grains	..	20 grains
—— burned	3 grains	..	12 grains
Amber prepared	½ drachm	..	1½ drachm
Ammonia prepared (volatile salt of ammoniac)	10 grains	..	1 scruple
Ammoniac gum	5 grains	..	30 grains
——— milk of	½ oz.	..	1 oz.
Angelica powdered	½ drachm	..	1½ drachm
Anise, the seeds	10 grains	..	1 drachm
Antimony	10 grains	..	1 drachm
——— *calcined* (calx of antimony)	10 grains	..	40 grains
——— glass of	¼ grain	..	1½ grain
——— powder of, a succedaneum for Dr. James's fever powder. It often produces nausea or vomiting.	4 grains	..	15 grains
——— *tartarised* (tartar emetic)	½ grain	..	4 gr. emet.
	⅛ grain	..	½ gr. alter.
Asafœtida	6 grains	..	½ drachm

Asafœtida, milk of -	from ½ oz.	to	1 oz.
Asarum, powder of, to provoke sneezing - - - - -	3 grains	..	5 grains

B

Balsam of capivi - - -	20 drops	..	60 drops
——— canadian - - -	1 scruple	..	1 drachm
——— of Peru - - -	6 grains	..	30 grains
——— of Tolu - - -	6 grains	..	30 grains
Bark, Peruvian. See *Cinchona.*	2 scruples	..	2 drachms
Bear's foot powder - -	10 grains	..	20 grains
Benzoin, resin of - - -	4 grains	..	20 grains
——— flowers of - -	5 grains	..	15 grains
Bistort, powder of - - -	1 scruple	..	1 drachm
Bole armenian - - -	10 grains	..	2 drachms
——, French - - -	1 drachm	..	2 drachms
Borax - - - - -	10 grains	..	40 grains
Broom, ashes of the tops -	1 scruple	..	1 drachm
Burdock, powder of the root -	10 grains	..	1 drachm

C

Calomel - - - -	1 grain	..	3 gr. alter.
	3 grains	.	10 gr. purg.
Camomile, in powder - -	15 grains	..	2 scruples
Camphor - - - -	2 grains	..	½ drachm
Canella alba - - - -	1 scruple	.	2 drachms
Cantharides - - - -	½ grain	..	3 grains
Caraway-seeds - - -	5 grains	..	20 grains
Cardamoms - - - -	5 grains	..	20 grains
Cascarilla bark powder - -	10 grains	..	40 grains
Cassia, the pulp - - -	2 drachms	..	1 oz.
Castor - - - - -	3 grains	..	1 scruple
Catechu (Japan Earth) - -	20 grains	..	1 drachm
Ceruse acetated (sugar of lead)	½ grain	..	2 grains
Chalk - - - - -	20 grains	..	2 scruples
Cinchona, powder (Peruvian bark) - - - - -	2 scruples	..	2 drachms
Cinnamon - - - -	5 grains	..	1 drachm
Columbo powder - - -	10 grains	..	1 drachm
Confection aromatic (cardiac confection) - - -	15 grains	..	1 drachm
——— *opiate* (London Philonium) - - - -	10 grains	..	½ drachm
Conserve of arum - - -	1 scruple	..	1 drachm
——— hips - - -	as much as you please		
——— oranges - -			
——— roses - - -			

Conserve of squills - -	from 1 scruple	to	1 drachm
——— wood-sorrel - -	½ oz.	..	1 oz.
Contrayerva - - - -	10 grains	..	½ drachm
Coriander-seed - -	1 scruple	..	1 drachm
Cowhage, the spiculæ contained in one pod, mixed with honey or molasses; or	5 grains	..	10 grains
Crabs' claws, prepared - -	10 grains	..	1 drachm

D

Dandelion, expersed juice -	1 oz.	..	2 oz.
Decoction of hartshorn (white decoction) - - -	1 oz.	..	6 oz.
Decoction of broom-tops: one ounce slightly boiled in a pint and a half of water to a pint; strain the liquor. To be taken by teacupsful at a time.			
——— *cinchona* (decoction of Peruvian bark) -	1 oz.	..	4 oz.
——— the inner bark of elm - - - - - -	4 oz.	..	16 oz. daily
——— sarsaparella -	4 oz.	..	16 oz. daily
——— guaiacum, three drachms to a pint of water -	1 pint or more daily.		

E.

Electuary of cassia - -	1 drachm	..	1 oz.
——— scammony -	20 grains	..	1 drachm
——— *senna* (lenitive electuary) - - -	½ drachm	..	1 oz.
Elecampane, powder of the root - - - - -	20 grains	..	1 drachm
Extract of *cinchona* (extract of Peruvian bark) - - -	10 grains	.	½ drachm
——— cascarilla - -	10 grains	..	½ drachm
——— broom-tops - -	½ drachm	..	1 drachm
——— camomile - -	1 scruple	..	1 drachm
——— *colocynth compound* (cathartic extract) - -	5 grains	..	25 grains
——— gentian - - -	10 grains	..	½ drachm
——— guaiacum - -	10 grains	..	1 scruple
——— black hellebore -	2 grains	..	10 grains
——— jalap - - -	10 grains	..	1 scruple
——— liquorice - - -	1 drachm	..	3 drachms
——— logwood - - -	10 grains	..	½ drachm
——— white poppies - -	1 grain	..	5 grains

Extract of rue - -	from 10 grains	to	1 scruple
——— savin - - -	10 grains	..	½ drachm
——— senna - - -	10 grains	..	½ drachm

F

Fennel-seed - - - -	1 scruple	..	1 drachm
Fern, powder of the root -	½ drachm	..	½ oz.
Fox glove, powder of the leaves, or a drachm infused in a pint of boiling water, of which the dose is an ounce, once, twice, or thrice a-day. This should be used with great care and circumspection.	½ grain	..	3 grains

G

Galbanum - - - -	10 grains	..	30 grains
Galls - - - - -	10 grains	..	20 grains
Garlic, cloves of, stripped of the exterior skin - -	No. I.	..	No. V.
Gentian - - - -	10 grains	..	2 scruples
Germander - - - -	15 grains	..	1 drachm
Ginger - - - - -	5 grains	..	20 grains
Ginseng - - - -	20 grains	..	30 grains
Guaiacum gum-resin - -	10 grains	..	30 grains
Gum arabic - - - -	15 grains	..	1 drachm
—— gamboge - - -	2 grains	..	10 grains

H

Hartshorn, prepared - -	1 scruple	..	1 drachm
———, *liquor volatile of*, (spirits of hartshorn) - -	½ drachm	..	2 drachms
———, salt of - - -	10 grains	..	20 grains
Hellebore, black - - -	5 grains	..	10 grains
Hemlock, powdered leaves of -	2 grains	..	15 grains
——— inpissated juice of -	1 grain	..	5 grains
Begin these in small doses, and gradually increase as the constitution will bear.			
Honey of roses - - -	1 drachm	..	2 drachms
——— squills - - -	10 grains	..	2 scruples

I and J

Jalap powder - - -	10 grain	..	30 grains
Infusion of gentian compound, (bitter infusion) - -	2 oz.	..	4 oz.
Infusion of roses (tincture of roses) - - - -	2 oz.	..	8 oz.
——— senna, - -	2 oz.	..	4 oz.

Ipecacuanha - -	from 10 grains	to	30 grains
Iron, rust of, prepared - -	6 grains	..	25 grains
—— *ammoniated*, (martial flowers) - - - - - -	4 grains	..	1 scruple
—— tartarized - - -	2 grains	..	10 grains
—— *vitriolated* (salt of mars)	½ grain	..	5 grains

K

Kino, gum - - - -	10 grains	..	½ drachm
Kermes, juice of - - -	1 drachm	..	3 drachms

L

Lichen, ash coloured, ground -	3 grains	..	40 grains
—— Icelandic, a strong decoction of - - - - -	1 oz.	..	4 oz.
Linseed, an infusion of one once to a quart of boiling water may be drank in cupsful at pleasure.			

M

Mace - - - - -	10 grains	..	1 scruple
Madder, powder of - -	½ drachm	..	1 drachm
Magnesia white - - -	½ drachm	..	2 drachms
—— calcined - - -	1 scruple	..	1 drachm
—— *vitriolated* (bitter purging salt, or Epsom salt) -	2 drachms	..	1 oz.
Manna - - - -	½ oz.	..	2 oz.
Mastich, gum - - -	½ scruple	..	½ drachm
Milk of almonds (common emulsion) - - - - -	1 oz.	..	4 oz.
Millipedes - - - -	1 drachm	..	½ drachm
Mixture camphorated) camphor julap) - - - - -	½ oz.	..	2 oz.
Musk - - - - -	2 grains	..	1 scruple
—— *mixture* (musk julap) -	½ oz.	..	1½ oz.
Mustard-seed - - -	1 drachm	..	1 oz.
Myrrh-gum - - - -	10 grains	..	1 drachm

N

Natron prepared (soda salt) -	10 grains	..	½ drachm
Natron tartarized (Rochel salt)	½ oz.	..	1 oz.
Natron vitriolated (Glauber's salt) - - - - - -	½ oz.	..	1 oz.
Nitre purified - - -	10 grains	..	½ drachm
Nutmeg - - - -	5 grains	..	1 scruple

O

Oil of almonds - - -	½ oz.	..	1 oz.
—— castor - - - -	2 drachms	..	1 oz.
—— linseed - - -	¼ oz.	..	1 oz.

Olibanum - - -	from 10 grains	to	½ drachm
Opium purified (thebaic extract) In hydrophobia, phrensy, and some other desperate diseases, the dose may be augmented.	¼ grain,	1 grain,	3 grains
Opoponax - - - -	10 grains	..	½ drachm
Oxymel of colchicum - -	½ drachm	..	1 drachm

P

Petroleum - - - -	10 drops	..	30 drops
Pills, aloetic compound - -	10 grains	..	25 grains
—— of the gums - - -	10 grains	..	½ drachm
—— *quicksilver* (mercurial pills)	10 grains	..	1 scruple
Pomegranate-rind, powder of -	1 scruple	..	1 drachm
Powder of aloes with canella (hiera picra) - - - -	½ scruple	..	2 scruples
—— with guaiacum	½ scruple	..	1 scruple
—— contrayerva compound - - - -	15 grains	..	½ drachm
—— chalk compound -	½ drachm	..	1 drachm
—— with opium -	1 scruple	..	2 scruples
—— crab's claws compound - - - -	1 drachm	..	1 drachm
—— *ipecacuanha compound* (Dover's powder) -	½ scruple	..	½ drachm

Q

Quassia - - - - -	5 grains	..	30 grains
Two drachms to a pint of boiling water, and of cloves one drachm, for an infusion: dose - - - - -	1 oz.	..	2 oz.
Quicksilver crude (mercury) -	½ oz	..	4 oz.
—— *calcined* (calcined mercury) - - - -	½ grain	..	1½ grain
—— with chalk - -	10 grains	..	½ drachm
—— cinnabar of - -	6 grains	..	30 grains
—— *muriated* (corrosive sublimate) - - -	⅛ grain	..	½ grain
—— *with sulphur* (Ethiop's mineral) - - -	1 scruple	..	1 drachm
—— *vitriolated* (yellow emetic mercury) - - -	½ grain	..	2 gr. alter
—— *vitriolated* an sternutatory - - - -	1 grain	..	3 grains
—— as emetic	2 grains	..	8 grains
Quince-seeds, mucilage of, and pleasure; to obtund acrimony.			

R

Rhubarb, powder of	from 10 grains	to	2 scruples
Resin yellow	3 grains	..	1 scruple
Rue powder	1 scruple	..	2 scruples

S

St. John's wort	20 grains	..	1 drachm
Saffron	5 grains	..	20 grains
Sagapenum	10 grains	..	30 grains
Sal ammoniac	8 grains	..	1 scruple
Salt of tartar	10 grains	..	½ drachm
Sarsaparella, powder of	1 scruple	..	1 drachm
Scammony	5 grains	..	1 scruple
Seneka	1 scruple	..	2 scruples
Soap	½ drachm	..	½ oz.
Spirit of *ammonia* (sweet spirit of sal ammonia)	½ drachm	..	2 drachms
——— *ammonia compound* (volatile aromatic spirit)	½ drachm	..	1 drachm
——— *ammonia fœtid* (volatile fœtid spirit)	½ drachm	..	1 drachm
——— *nitrous æther* (dulcified spirit of nitre)	½ drachm	..	2 drachms
——— *vitriolic æther* (dulcified spirit of vitriol	½ drachm	..	2 drachms
Sponge burnt	1 scruple	..	1 drachm
Squill fresh	5 grains	..	12 grains
Sulphur, flowers of	20 grains	..	1 drachm
——— *precipitated* (milk of sulphur)	1 drachm	..	2 drachms
———, of antimony	1 grain	..	5 grains
Syrup of buckthorn	1 drachm	..	2 drachms
——— ginger	1 drachm	..	2 drachms
——— poppies	1 drachm	..	2 drachms
Syrups in general	the same		

T

Tartar, cream of	2 drachms	..	1 oz.
Tar-water, a pint daily			
Tin, powder of	1 scruple	..	1 drachm
Turmeric	½ scruple	..	1 drachm
Turpentine, spirit of	10 drops	..	15 drops
Tincture of aloes	½ oz.	..	1 oz.
——— *compound* (elixir of aloes	½ drachm	..	2 drachms
——— *asafœtida* (fœtid tincture)	½ drachm	..	2 drachms
——— *benzoin compound* (traumatic balsam)	10 drops	..	40 drops
——— cantharides	1 scruple	..	1 drachm

Tincture of *cardamoms compound* (stomachic tincture)	1 drachm	to	3 drachms
——— castor	½ drachm	..	1½ drachm
——— *catechu* (Japan earth)	1 drachm	..	2 drachms
——— *cinchona* (tincture of Peruvian bark)	1 drachm	..	½ oz.
——— colomba	1 drachm	..	3 drachms
——— *gentian compound* (bitter tincture)	1 drachm	..	3 drachms
——— *guaiacum ammoniated* (tincture guaiacum volatile)	1 drachm	..	½ oz.
——— black hellebore	1 scruple	..	1 drachm
——— jalap	1 drachm	..	½ oz.
——— myrrh	30 drops	..	2 drachms
——— *opium* (thebaic tincture)	10 drops	..	40 drops
——— *camphorated* (paregoric elixir)	1 drachm	..	½ oz.
——— rhubarb	½ oz.	..	2 oz.
——— senna	2 drachms	..	1 oz.
——— snake-root	1 drachm	..	2 drachms
——— valerian	1 drachm	..	3 drachms

V and U

Valerian, powder of	1 scruple	..	2 drachms
Vinegar distilled	1 drachm	..	½ oz.
——— of squills	½ drachm	..	1½ drachm
——— as an emetic	½ oz.	..	1 oz.
Vitriol, blue (vitriolated copper)	¼ grain	..	2 grains
——— violently emetic	5 grains	..	1 scruple
Uva ursi, in powder	15 grains	..	1 drachm

W

Water, the simple distilled waters may generally be given	½ oz.	..	2 oz.
Wine of aloes (sacred tincture)	½ oz.	..	1 oz.
——— antimony	20 drops	..	2 drachms
——— ipecacuanha	1 drachm	..	1½ oz.
——— *rhubarb* (vinous tincture of rhubarb)	½ oz.	..	2 oz.
Winter's bark or canella alba	1 scruple	..	2 drachms
Worm-seed	½ drachm	..	1 drachm

Z

Zinc calcined (flowers of zinc)	1 grain	..	5 grains
—— *vitriolated* (white vitriol or salt of vitriol) as a tonic	1 grain	..	5 grains
——— as a quickly operating emetic in cases of poison or the like being swallowed	10 grains	..	½ drachm

A

GLOSSARY.

ALTHOUGH terms of art have been sedulously avoided in the composition of this treatise, it is impossible entirely to banish technical phrases when writing on medicine; a science that has been less generally attended to by mankind, and continues therefore to be more infected with the jargon of the schools, than perhaps any other. Several persons having expressed their opinion that a Glossary would make this work more generally intelligible, the following concise explanation of the few terms of art that occur, has been added, in compliance with their sentiments, and to fulfil the original intention of this treatise, by rendering it intelligible and useful to all ranks and classes of mankind.

A

Abdomen. The belly.

Absorbents. Vessels that convey the nourishment from the intestines, and the secreted fluids, from the various cavities into the mass of blood.

Acrimony. Corrosive sharpness.

Acute. A disease, the symptoms of which are violent, and tend to a speedy termination, is called acute.

Adult. Of mature age.

Adust. Dry, warm.

Antispasmodic. Whatever tends to prevent or remove spasm.

Aphthæ. Small whitish ulcers appearing in the mouth.

Astriction. A tightening, or lessening.

Atrabilarian. An epithet commonly applied to people of a certain temperament, marked by a dark complexion, black hair, spare habit, &c. which the ancients supposed to arise from the *atra bilis*, or the black bile.

B

Bile or *Gall.* A fluid which is secreted by the liver into the gall-bladder, and from thence passes into the intestines, in order to promote indigestion.

C

Cachochymie. An unhealthy state of the body.

Caries. A rottenness of a bone.

Chyle. A milky fluid separated from the aliment in the intestines, and conveyed by the absorbents into the blood to supply the waste of the animal body.

Chronic. A disease whose progress is slow, in opposition to acute.

Circulation. The motion of the blood, which is driven by the heart through the arteries, and returns by the veins.

Comatose. Sleepy.

Conglobate Gland. A simple gland.

Conglomerate. A compound gland.

Contagion. Infectious matter.

Cutis. The skin.

Cutaneous. Of or belonging to the skin.

Crisis. A certain period in the progress of a disease, from whence a decided alteration either for the better or the worse takes place.

Critical Days. The fourth, fifth, seventh, ninth, eleventh, thirteenth, fourteenth, seventeenth, and twenty-first, are by some authors denominated critical days, because febrile complaints have been observed to take a decisive change at these periods

D.

Debility. Weakness.

Delirium. A temporary disorder of the mental faculties.

Detergent. Scouring, cleansing.

Diaphragm. A membrane separating the cavity of the chest from that of the belly.

Diuretic. A medicine that promotes the secretion of urine.

Drastic. Is applied to such purgative medicines as are violent or harsh in their operation.

E.

Empyema. A collection of purulent matter in the cavity of the breast.

Endemic. A disease peculiar to a certain district of country.

Epidemic. A disease generally infectious

Exacerbation. The increase of any disease.

F.

Fæces. Excrements.

Flatulent. Producing wind.

Fœtid. Emitting an offensive smell.

Fœtus. The child before birth, or when born before the proper period, is thus termed.

Fungus. Proud flesh

G.

Gangrene. Mortification.

Ganglia. } Venereal excrescences.
Gummata. }

Gymnastic. Exercise taken with a view to preserve or restore health.—The ancient physicians reckoned this an important branch of medicine.

H.

Hæmorrhage. Discharge of blood.

Hæmorrhoids. The piles.

Hectic Fever. A slow consuming fever, generally attending a bad habit of body, or some incurable and deep-rooted disease.

Hypochondriaeism. Low spirits.

Hypochondriac viscera. The liver, spleen, &c. so termed from their situation in the hypochondriac or upper and lateral parts of the belly.

I.

Ichor. Thin bad matter.

Imposthume. A collection of purulent matter.

Inflammation. A surcharge of blood, and an increased action of the vessels in any particular part of the body.

L.

Ligature. Bandage.

Lixivium. Ley.

M.

Milliary Eruption. Eruption of small pustules resembling the seeds of millet.

Morbific. Causing disease, or diseased.

Mucus. The matter discharged from the nose, lungs, &c.

Mysentery. A double membrane, which connects the intestines to the back bone.

N.

Nausea. An inclination to vomit.

Nervous. Irritable.

Nodes. Enlargement of the bones produced by the venereal disease.

P.

Pectoral. Medicines adapted to cure diseases of the breast.

Pelvis. The bones situated at the lower part of the trunk; thus named from their resembling, in some measure, a bason.

Pericardium. A membrane lining the cavity of the heart.
Peritoneum. A membrane lining the cavity of the belly, and covering the intestines.
Perspiration. The matter discharged from the pores of the skin in form of vapour or sweat.
Phlegmatic. Watery, relaxed.
Phlogiston. Is here used to signify somewhat rendering the air unfit for the purposes of respiration.
Plethoric. Replete with blood.
Polypus. A diseased excrescence, or a substance formed of coagulable lymph, frequently found in the large blood-vessels.
Pus. Matter contained in a bile.

R.

Rectum. The straight gut in which the fœces are contained
Regimen. Regulation of diet.
Respiration. The act of breathing.

S.

Saliva. The fluid secreted by the glands of the mouth.
Sanies. A thin bad matter, discharged from an ill-conditioned sore.
Schirrous. A state of diseased hardness.
Slough. A part separated and thrown off by suppuration.
Spasm. A diseased contraction.
Spine. The back-bone.
Styptic. A medicine for stopping the discharge of blood.
Syncope. A fainting fit, attended with a complete abolition of sensation and thought.

T

Tabes. A species of consumption.
Temperament. A peculiar habit of body, of which there are generally reckoned four, viz. the sanguine, the bilious, the melancholic, and the phlegmatic.

U.

Vertigo. Giddiness.
Ulcer. An ill-conditioned sore.
Ureters. Two long and small canals, which convey the urine from the kidneys to the bladder.
Urethra. The canal which conveys the urine from the bladder.

INDEX.

ABLUTIONS, Jewish and Mahometan, well calculated for the preservation of health, 94.

Abortion, causes and symptoms of, 477. Means of prevention, 478. Proper treatment in the case of, 479.

Abscesses, how to be treated, 279, 515.

Accidents. See *Casualties*.

Acids, of peculiar service in consumptions, 167. In putrid fevers, 182. Not suitable to the measles, 221.

Acidities in the bowels of infants, the origin of, 495. Method of cure, 496.

Ackworth, foundling hospital at, cause of the children there being afflicted with scabbed heads, and fatal consequences of their ill-treatment, 498, *note*.

Addison, his remarks on the luxury of the table, 87.

Æther, very serviceable in removing fits of the asthma, 370.

Æthiops mineral, strongly recommended by Dr. Cheyne in inflammations of the eyes, 240.

Africans, their treatment of children, 10, *note*.

Agaric of the oak, its merit as a styptic, 517. Method of gathering, preparing, and applying it, ibid. *note*.

Agriculture, a healthful, constant, and profitable employment, 43. Is too much neglected in favour of manufactures, 44. Gardening the most wholesome amusement for sedentary persons, 48.

Ague, a species of fever no person can mistake, and the proper medicine for, generally known, 135. Causes of, ibid. Symptoms, ibid. Regimen for, 136. Under a proper regimen will often go off without medicine, 137. Medical treatment of, ibid. Often degenerates into obstinate chronical diseases, if not radically cured, 138. Peruvian bark, the only medicine to be relied on in, ibid. Children how to be treated in, ibid. Preventive medicine for those who live in marshy countries, 140.

Air, confined, poisonous to children, 28. A free open air will sometimes cure the most obstinate disorders in children, 30. Occupations which injure the health by unwholesome air, 34, 35. The qualities of, act more sensibly on the body than is gerally imagined, 67. The several noxious qualities of, specified, ibid. In large cities, polluted by various circumstances, 68. The air in churches, how rendered unwholesome, ibid. Houses ought to be ventilated daily, 69. The danger attending small apartments, 70. Persons, whose business confines them to town, ought to sleep in the country, ibid. High walls obstruct the free current of air, 71. Trees should not be planted too near to houses, ibid. Fresh air peculiarly necessary for the sick, ibid. The sick in hospitals in more danger from the want of fresh air than from their disorders, ibid. Whole-

someness of the morning air, 76. The changeableness of, one great cause of catching cold, 115. Those who keep most within doors, the most sensible of these changes, ibid. Of the night to be carefully guarded against, 116. Fresh air often of more efficacy in diseases than medicine, 132. Its importance in fevers, ibid, 146. States of, liable to produce putrid fevers, 178. Must be kept cool and fresh in sick chambers under this disorder, 181. Change of, one of the most effectual remedies for the hooping-cough, 259. The qualities of, a material consideration for asthmatic patients, 369. The various ways by which it may be rendered noxious, 542. Confined, how to try and purify, ibid. Method of recovering persons poisoned by foul air, 543. Fresh, of the greatest importance in fainting fits, 549.

Aitkin, Mr., his treatise on the nature and cure of fractures recommended, 532, *note*.

Alcali, caustic, recommended in the stone, 296. How to prepare it, 297.

Aliment is capable of changing the whole constitution of the body, 55. Will in many cases answer every intention in the cure of diseases, 56 The calls of hunger and thirst sufficient for regulating the due quantity of, ib. The quantity of, how injured, ibid. A due mixture of vegetables necessary with our animal food, ibid. Water, good and bad, distinguished, 60. Inquiry into the qualities of fermented liquors, with instructions for the due making of them, 61. The qualities of good bread, and why adulterated by bakers, 62. General rules for the choice of food, 63. Ought not to be too uniform, 64. Meals ought to be taken at regular times, ibid. Long fasting injurious both to old and young, 65. Breakfasts and suppers, ibid. Changes of diet ought to be gradually made, 66.

Amaurosis. See *Gutta Serena*.

American Indians, their method of curing the venereal disease, 462.

Amusements, sedentary, improper for sedentary persons, 47. Ought always to be of an active kind, 77.

Anasarca. See *Dropsy*.

Anger, violent fits of, injurious to the constitution, 103. Tranquillity of mind essential to health, ibid.

Animal food, cautions in giving it to children, 17. Animals that die of themselves unfit for food, 57. Over-driven cattle rendered unwholesome, 58. The artifices of butchers exposed, ibid. Too great a quantity of, generates the scurvy. ibid.

Animals and plants, the analogy in the nourishment of, stated, 86.

Anthony's fire, St. See *Erysipelas*.

Aphthæ. See *Thrush*.

Apoplexy, who most liable to this disorder, 371. Causes, 372. Symptoms and method of cure, ibid. Cautions to persons of an apoplectic make, ibid.

Apparel. See *Clothing.*
Appetite, want of, causes and remedies for, 377.
Arbuthnot, Dr., his advice in the inflammation of the lungs, 157. His advice to persons troubled with costiveness, 376, note.
Arsenic, the effects of, on the stomach, 428. Medical treatment when the symptoms appear, ibid.
Arts. See *Manufactures.*
Ascites. See *Dropsy.*
Asses' milk, why it seldom does any good, 163. Instructions for taking it, ibid.
Asthma, the different kinds of this disorder distinguished, with its causes, 368. Symptoms, ibid. Regimen, 369. Medical treatment, ibid. Remedies proper in the moist asthma, 370.
Atmosphere. See *Air.*

B

Ball's purging vermifuge powder, preparation of 334.
Bandages, tight, produce most of the bad consequences attending fractured bones, 533.
Bark, Peruvian, the best antidote for sailors against disorders on a foreign coast, 43. How to be administered in the ague, 138. Distinction between the red bark and quill bark, ibid. note. A decoction or infusion of, may be taken by those who cannot swallow it in substance, 139. It is often adulterated, ibid. note. Is the only medicine to be depended on in agues, 141. How it may be rendered more palatable, ibid. May be administered by clyster, 142. Coldwater the best menstruum for extracting the virtues of this drug, 168. How to be administered in the putrid fever, 184; and in the erysipelas, 230. In an inflammation of the eyes, 240. Its efficacy in a malignant quinsey, 250. In the hooping-cough, 262. A good medicine in vomiting, when it proceeds from weakness of the stomach, 287. Its efficacy in a diabetes, and how to take it, 291. Is good against the piles, 304, and worms, 333. Its use dangerous for preventing a fit of the gout, 348. A good remedy in the king's evil, 362, and in the fluor albus, 476.
Barley-water, how made, 151.
Barrenness in women, the general causes of, 487. Course of relief, ibid. Dr. Cheyne's observations on, 488, note.
Bath waters good in the gout, 349.
——, cold, the good effects of on children, 27. Recommended to the studious, 55. Is peculiarly excellent for strengthening the nervous system, 384. Therefore should never be omitted in gleets, 451. Is good for rickety children, 506. Apoplexies frequently occasioned by the improper use of, 558. Absurd prejudices against it, ibid. Nothing tends more to permanent health, 559. A single plunge or dip sufficient; continuing too long in it dangerous, ibid. Morning the properest time for bathing, ibid. Sea-water preferable to river-water, 560. Rules to to be observed in the use of. ibid. Swellings of the glands re-

solved by sea-bathing, ibid. Is peculiarly salutary in scrophulous complaints, ibid. Warm bath better adapted for cutaneous disorders, 561. Cautions on the improper use of, ibid. Good effects of the shower-bath, 562. Cold bath dangerous in the gout, 563.

Bath, warm, of great service in an inflammation of the stomach, 265.

Bathing, a religious duty under the Judaic and Mahometan laws, 94. Is conducive to health, ibid.

Bear's foot, recommended as a powerful remedy against worms, 334.

Beds, instead of being made up again as soon as persons rise from them, ought to be turned down and exposed to the air, 69. Bad effects of too great indulgence in bed, 76. Damp and danger of, 117. Soft are injurious to the kidneys, 290, 293.

Beer, the ill consequences of making it too weak, 62. Pernicious artifices of the dealers in, 63.

Bell, parish, the tolling them for the dead a dangerous custom, 104.

Biles, 516.

Bilious colic, symptoms and treatment of, 271.

Bilious fever. See *Fever*.

Bite of a mad dog. See *Dog*.

Bitters, warm and astringent, antidote to agues, 133. Are serviceable in vomiting, when it proceeds from weakness in the stomach, 288.

Bladder, inflammation of, its general causes, 277. Medical treatment of, ibid.

Bladder, stone in. See *Stone*.

Blast. See *Erysipelas*.

Bleeding, cautions for the operation of, in fevers, 133. In the ague, 137. Its importance in the acute continual fever, 147. In the pleurisy, 150. When necessary in an inflammation of the lungs, 158. Cautions against, in a nervous fever, 175. In the putrid fever, 186. In the miliary fever, 191. When necessary in the small-pox, 201. When useful in the measles, 221. When necessary in the bilious fever, 226. Under what circumstances proper in the erysipelas, 229. Mode of, proper in an inflammation of the brain, 235. Is always necessary in an inflammation of the eyes, 238. When proper and improper, in a cough, 255. When proper in the hooping-cough, 260. Is almost the only thing to be depended on in an inflammation of the stomach, 264. And in an inflammation of the intestines, 266. Is necessary in an inflammation of the kidneys, 275. Its use in a suppression of urine, 292. Is proper in an asthma, 370. Is dangerous in fainting fits, without due caution, 400. Cautions proper in the puerperal fever, 484. Is an operation generally performed by persons who do not understand when it is proper, 511. In what case it ought to be had recourse to, 512. The quantity taken away, how it ought to be regulated, ibid. General rules for the operation, ibid. Objections to bleeding by leeches, 513. Prevailing prejudices relating to bleeding, ibid. The arm the most commodious part to take blood from, 514.

Bleeding at the nose, spontaneous, is of more service, where bleeding is necessary, than the operation with the lancet, 300. Ought not to be stopped without due consideration, 301. How to stop it when necessary, ibid. Cautions to prevent frequent returns of, 302.

Blind persons, when born so, might be educated to employments suited to their capacity, 412, note.

Blisters, peculiarly advantageous in the nervous fever, 175. When only to be applied in the putrid fever, 183. When proper in the miliary fever, 190. Seldom fail to remove the most obstinate inflammation of the eyes, 239. A good remedy in the quinsey, 245. Proper for a violent hooping-cough, 262. Is one of the best remedies for an inflammation of the stomach, 265. Are efficacious in the tooth-ach, 325.

Blood, involuntary discharges of, often salutary, and ought not to be rashly stopped, 298. The several kinds of these discharges, with their usual causes, 299. Methods of cure, 300.

——, spitting of, who most subject to, and at what seasons, 307. Its causes, ibid. Symptoms, 308. Proper regimen, 309. Medical treatment, ibid. Cautions for persons subject to it, 310.

——, vomiting of, its causes and symptoms, 310. Medical treatment, ibid.

—— shot eye, how to cure, 415.

Bloody-flux. See *Dysentery*.

Boerhaave, his observations on dress, 85, note. His mechanical expedients to relieve an inflammation of the brain, 234.

Bones, the exfoliation of, a very slow operation, 522. Bones broken, often successfully undertaken by ignorant operators, 531. Regimen to be adopted after the accident, ibid. Hints of conduct if the patient be confined to his bed, 532. Cleanliness to be regarded during this confinement, ibid. The limbs not to be kept continually on the stretch, ibid. Cautions to be observed in setting a bone, ibid. Tight bandages condemned, 533. How to keep the limbs steady by an easy method, ibid. Fractures of the ribs, 534.

Bowels, inflammation of. See *Stomach*.

Boys, the military exercise proper for them, 24.

Braidwood, Mr. his skill in teaching the dumb to speak, 416, note.

Brain, inflammation of, who most liable to it, with its causes and symptoms, 232. Regimen, 234. Medical treatment, 235.

Bread, proper food for children, as soon as they can chew it, 16. A crust of, the best gum-stick, ibid. The best modes of preparing it in food for children, ibid. Good, the qualities of, and for what purpose adulterated by the bakers, 62. Toasted, a decoction of, good to check the vomiting in a cholera morbus, 282.

Brimstone. See *Sulphur*.

Bruises, why of worse consequences than wounds, 521. Proper treatment of, ibid. The exfoliation of injured bones a very slow operation, 522. How to cure sores occasioned by, ibid.

Buboes, two kinds of, distinguished, with their proper treatment, 454.
Burdens, heavy, injurious to the lungs, 37.
Burgundy pitch, a plaster of, between the shoulders, an excellent remedy in a cough, 256. In a hooping-cough, 262. And for children in teething, 503.
Burials, the dangers attending their being allowed in the midst of populous towns, 68.
Burns, slight, how to cure, 520. Treatment of, when violent, 521, Extraordinary case of, ibid.
Butchers, their professional artifices explained and condemned, 58.
Butter, ought to be very sparingly given to children, 19.

C.

Cabbage-leaves, topical application of, in a pleurisy, 153.
Camps, the greatest necessity of consulting cleanliness in, 94.
Cancer, its different stages described, with the producing causes, 421. Symptoms, 422. Regimen and medical treatment, ibid. Dr. Storck's method of treating this disorder, 424. Cautions for avoiding it, 425.
——— *scroti*, a disorder peculiar to chimney-sweepers, owing to want of cleanliness, 92, note.
Carriages, the indulgence of a sacrifice of health to vanity, 74.
Carrot, wild, recommended in the stone, 297.
——— poultice for cancers, how to prepare, 425.
Casualties, which apparently put an end to life, necessary cautions respecting, 535.
——— substances stopped in the gullet, 537.
——— noxious vapours, 542.
——— extremity of cold, 544.
——— extreme heat, 546.
Cataract, the disorder and its proper treatment described, 414.
Cattle, stall-fed, are unwholesome food, 57. Over-driven, are killed in a high fever, ibid. The artifices of butchers exposed, 58.
Cellars, long shut, ought to be cautiously opened, 70. And sunk stories of houses unhealthy to live in, 119. Of liquors in a state of fermentation, dangerous to enter, 542. How to purify the air in, 543.
Celsus, his rules for the preservation of health, 122.
Chancres, described, 455. Primary, how to treat, 456. Symptomatic, ibid.
Charcoal-fire, the danger of sleeping in the fume of, 542.
Charity, the proper exercise of, 40.
Cheyne, Dr., his persuasive to the use of exercise, 76. His judgment on the due quantity of urine, not to be relied on, 113. Strongly recommends Æthiops mineral in inflammations of the eyes, 240. His observations on barrenness, 488, note.
Chilblains, cause of, 499. How to cure, ibid.
Child-bed women, how to be treated under a miliary fever, 191.

Child-bed fever. See *Fever*.

Child-birth, the season of, requires due care after the labour-pains are over, 480. Medical advice to women in labour, 481. Ill effects of collecting a number of women on such occasions, ibid, note. How to guard against the miliary fever, 483 Symptoms of the puerperal fever, ibid. Proper treatment of this fever, 484. General cautions for women at this season, 486. Instructions respecting, 589. Women much better calculated than men to assist in deliveries, ibid. The use of instruments too often fatal, ibid. British ladies' institution for the instruction of female midwives, 590, note. Instructions to nurses during labour, 591—593.

Children, their diseases generally acute, and delay dangerous, 5. Their disorders less complicated and easier cured than those of adults, 6. Are often the heirs of the diseases of their parents, ib. Those born of diseased parents require peculiar care in the nursing, 8. Are often killed or deformed by injudicious clothing, 9. How treated in Africa, 10, note. The usual causes of deformity in, explained, ibid. Their clothes ought to be fastened on with strings, 12. General rule for clothing them, 13. Cleanliness an important article in their dress, 14. The milk of the mother the most natural food for, ib. Absurdity of giving them drugs as their first food, 15. The best method of expelling the meconium, ibid. How they ought to be weaned from the breast, 16. A crust of bread the best gum-stick for them, ibid. How to prepare bread in their food, ibid. Cautions as to giving them animal-food, 17. Cautions as to the quantity of their food, ibid. Errors in the quality of their food more frequent than in the quantity, 18. The food of adults improper for children, ibid. Strong liquors expose them to inflammatory disorders, ibid. Ill effects of unripe fruit, ibid. Butter, 19. Honey, a wholesome article of food for them, ibid. The importance of exercise to promote their growth and strength, 20. Rules for their exercise, 21. Poverty of parents occasions their neglect of children, 22. The utility of exercise demonstrated from the organical structure of children, ibid. Philosophical arguments, shewing the necessity of exercise, 23. Ought not to be sent to school too soon, ibid. Nor be put too soon to labour, 26. Dancing an excellent exercise for them, 27. The cold bath, ibid. Want of wholesome air destructive to children, 28. To wrap them up close in cradles pernicious, 29. Are treated like plants in a hot-house, 30. The usual faulty conduct of nurses pointed out, 31. Are crammed with cordials by indolent nurses, ibid. Loose stools, the proper treatment of, 33. Every method ought to be taken to make them strong and hardy, ibid. Indications of the small-pox in, 196.

Chin-cough. See *Cough*.

Cholera morbus, the disorder defined, with its causes and symptoms, 281. Medical treatment, 283.

Churches, the several circumstances that render the air in, unwholesome, 68.

Churching of women after lying-in, a dangerous custom, 487.
Church-yards, the bad consequences of having them in large towns, 68.
Cities, large, the air in, contaminated by various means, 68. The bad effects of burying the dead in, ib. Houses ought to be ventilated daily, 69. The danger attending small apartments, 70. All who can ought to sleep in the country, ib. Disorders that large towns are peculiarly hurtful to, ib. Cleanliness not sufficiently attended to in, 91. Should be supplied with plenty of water, 93, note. The best means to guard against infection in, 94.
Clare, Mr., his method of applying saline preparations of mercury in venereal cases, 460.
Cleanliness, an important article of attention in the dress of children, 14; and to sedentary artists, 47. Finery in dress often covers dirt, 84. Is necessary to health, 92. Disorders originating from the want of, ib. Is not sufficiently attended to in large towns, 93. Nor by country peasants, ib. Great attention paid to by the ancient Romans, ib. note. Necessity of consulting cleanliness in camps, 94. Was the principal object of the whole system of the Jewish laws, ib. Is a great part of the religion of the eastern countries, ib. Bathing and washing greatly conducive to health, 95. Cleanliness peculiarly necessary on board of ships, ib.; and to the sick, ib. General remarks on, 96. Many disorders may be cured by cleanliness alone, 127. The want of, a very general cause of putrid fevers, 179. Is a great preservative against venereal infection, 465; and against galling in infants, 494.
Clergy exhorted to remove popular prejudices against inoculation, 210. Might do great good by undertaking the practice of it themselves, 215.
Clothing, the only natural use of, 9. That of children has become a secret art, ib. Ought to be fastened on infants with strings instead of pins, 12. Pernicious consequences of stays, 13. Importance of cleanliness to children, 14. The due quantity of, dictated by the climate, 81. Should be increased in the decline of life, 82; and adapted to the seasons, ib. Is often hurtful by being made subservient to the purposes of vanity, ib. Pernicious consequences of attempting to mend the shape by dress, 83. Stays, ib. Shoes, ib. Garters, buckles, and other bandages, 84. The perfection of, to be easy and clean, ibid. General remarks on, 85. Wet, the danger of, and how to guard against it, 116.
Clysters, a proper form of, for an inflammation of the stomach, 265. And for an inflammation of the intestines, ib. Of tobacco-smoke, its efficacy in procuring a stool, 272. Of chicken-broth, salutary in the cholera morbus, 282. Their use in suppression of urine, 293. Ought to be frequently administered in the puerperal fever, 485. Of tobacco, to excite a vomit, 540.
Cœliac passion, proper treatment for, 319.
Coffee-berries recommended in the stone, 297.

Cold, extreme, its effects on the human frame, 544. The sudden application of heat dangerous in such cases, ib. How to recover frozen or benumbed limbs, 545.

Cold bath. See *Bath.*

—— bathing, remarks on the cases in which the warm bath is more adviseable, 558. Remaining too long in the water dangerous, 559. The morning the best time for bathing, ib. Of the greatest service in scrophula, 560. Should be used with caution in cutaneous diseases, ib. Persons of a plethoric habit not to use the cold bath, 561. Of service to nervous persons, ib. Not to be used after immoderate hard drinking, 562.

Colds frequently occasioned by imprudent changes of clothes at the first approaches of summer, 82, note. Various causes of, specified, 115. Their general causes, 252. Proper regimen on the symptoms of appearing, ibid. Danger of neglecting the disorder, 253. The chief secret for avoiding, 255.

Colic, different species of, 269. Medical treatment of, according to their species and causes, 270. Bilious colic, 271. Hysteric colic, ib. Nervous colic, 272. Cautions necessary to guard against the nervous colic, 273. General advice in colics, ibid.

Collyria. See *Eye-Waters.*

Commerce often imports infectious disorders, 99. Means suggested to guard against this danger, ibid. note.

Constitution, good or bad, the foundation of, generally laid during infancy, 1.

Consumptions, the increase of this disorder may be attributed to hard drinking, 89. Who most liable to it, and its causes, 159. Symptoms, 161. Regimen, ib. Riding, 162. Much benefit to be expected from going a long voyage, ib. Travelling, 163. Diet, ib. Great efficacy of milk in, ib, Medical treatment, 166.

———— nervous, defined, and the persons most liable to, 170. Proper treatment of, ibid.

———— symptomatic, the treatment of, must be directed to the producing cause, 170.

Convulsions, why new-born infants are so liable to, 12. Those preceding the eruptions in the small-pox favourable symptoms, 198. The general causes of, 507. Proper treatment of, ib. Extraordinary recovery of an infant seemingly killed by, 556. Further instructions in like cases, 557.

Cook, Capt., the circumnavigator, his means of preserving the health of his men, 42, note.

Cookery, art of, renders many things unwholesome, 59.

Cordials ought not to be given to infants, 15. Are the common refuge of nurses who neglect their duty to children, 32. Are often fatal in an inflammation of the stomach, 264. When good in the colic, 270. Ought not to be given to pregnant women during labour, 480.

Corn, damaged, will produce the putrid fever, 178.

Corns in the feet are occasioned by wearing tight shoes, 83.

Cortex. See *Bark.*

Costiveness, a frequent recourse to medicines for the prevention of, injurious to the constitution, 112. Is rather to be removed by diet than by drugs, ibid. Its general causes and ill effects, 375. Regimen, ibid. Remedies for, 376.

Cough, the proper remedies for, 255. A plaster of burgundy pitch laid between the shoulders, an excellent remedy for, 256. The stomach cough, and cough of the lungs, distinguished, 258. Treatment for the nervous cough, ibid.

——— hooping, who most liable to, with its disposing causes, 259. Remedies, ibid. Is infectious, 260. Vomits, their use, and how to administer them to children, 261. Garlic-ointment a good remedy for, 262.

——— phthisical, incedent to sedentary artificers, from their breathing confined air, 45.

Cow-pox, 571. Remarks on, 572. Report of the committee of the House of Commons on, 573. Description of, 574. Objections to, refuted, ibid. Mode of inoculation, ibid. Treatment, 574. Comparative view of the effects of the small-pox and cow-pox, ibid.

Cradles, on many accounts hurtful to children, 29.

Cramp, proper remedies for, 407.

——— of the stomach, who most liable to it, 396. Medical treatment, ibid.

Crotchets, how to use, for extracting substances detained in the gullet, 538.

Croup in children described, 500. Its symptoms and proper treatment, ibid.

Cyder, the ill-consequences of making it too weak, 62.

D.

Dancing, an excellent exercise for young persons, 27.

Deafness, when a favourable symptom in the putrid fever, 180, note. Methods of cure, according to its causes, 416.

Death, the evidences of, sometimes fallacious, and ought not to be too soon credited, 535. The means to be used for the recovery of persons from, nearly the same in all cases, 535.

Deformity, often occasioned by the injudicious method of dressing children, 9. Is seldom found amongst savage nations, 10. The usual causes explained, ibid.

Dews, night, dangerous to health, 117.

Diabetes, who most liable to this disorder, 289. Its causes and symptoms, ibid. Regimen and medical treatment, 290. Distinguished from incontinency of urine, 292.

Diarrhœa. See *Looseness*.

Diet will often answer all the indications of cure in diseases, 127. Illustrations, ibid. A cheap and nutricious regimen, recommended to the common people, 594. Animal food more nutricious than vegetable, 595. Consumptions owing to too free a use of animal food, ibid. People of England too fond of solids, 596. Economy recommended in cooking, ibid. Manner of

living in Scotland recommended, ibid. Roasting and broiling meat, wasteful modes of cookery, 597. Broths and soups recommended, ibid. Too great use of bread injurious to health, 598. Principal use of, 599. The most expensive mode of using grain, ib. Too free use of bread improper for children, 600. Tea prejudicial to the constitution, ibid. Boiled grain recommended, 601. Peas and beans nourishing food, ibid. Oatmeal recommended, ibid. Indian corn a good substitute for bread, 602. Buck-wheat the principal food of the common people in Russia, ibid. Butter too much used, ibid. Occasions indigestion, ibid. Cheese unwholesome as a diet, 603. Roots, a good substitute for bread, ibid. Potatoes not sufficiently used in place of bread, ibid. Various roots and vegetables recommended, 604—606.

Digestion, the powers of, equally impaired by repletion or inanition, 64.

Diseases, hereditary, cautions to persons afflicted with, 8. Peculiar disorders attending particular occupations, 36. Many of them infectious, 97. The knowledge of, depends more upon experience and observation than upon scientific principles, 123. Are to be distinguished by the most obvious and permanent symptoms, ibid. The difference of sex, age, and constitution, to be considered, 124. Of the mind, to be distinguished from those of the body, ibid. Climate, situation, and occupation, to be attended to, ibid. Other collateral circumstances, 125. Many indications of cure, to be answered by diet alone, ibid. Cures often effected by fresh air, by exercise, or by cleanliness, 127. Nervous diseases of a complicated nature, and difficult to cure, 380.

Dislocations, should be reduced before the swelling and inflammation come on, and how, 526. Of the jaw, ibid. Of the neck, 527. Of the ribs, 528. Of the shoulder, 529. Of the elbow ibid. Of the thigh, 530. Of the knees, ankles, and toes, ibid.

Diuretic infusion for the dropsy, how to prepare, 342.

Dog, symptoms of madness in, 431. Ought to be carefully preserved after biting any person, to ascertain whether he is mad or not, ibid. Is often reputed mad when he is not so, ibid. Symptoms of the bite of a mad dog, 432. The poison cannot lie many years dormant in the body, as is supposed, 433. Dr. Mead's receipt for the bite, ibid. The famous East-Indian specific for, ibid. Other recipes, 434. Vinegar of considerable service in this disorder, ibid. Medical course of treatment recommended, ibid. Regimen, 436. Dipping in the sea not to be relied on, ibid. Dr. Tissot's medical course for the cure of the hydrophobia, 437. Remarks on the Ormskirk medicine, ibid. note.

Drams ought to be avoided by persons afflicted with nervous disorders, 383.

Dress. See *Clothing.*

Drinking, persons who are seldom intoxicated may nevertheless injure their constitutions by, 89. The habit of drinking frequently originates from misfortunes, 90. Frequently destroys the

powers of the mind, ibid. Persons often forced to it by mistaken hospitality, ibid, note. Leads to other vices, 91.
Dropsy, the several distinctions of, with its causes, 339. Symptoms, 340. Regimen, 341. Medical treatment, ibid. Tapping, a safe and simple operation, 344. Extraordinary efficacy of nitre in the cure of, ibid.
Dropsy of the brain. See *Water in the head.*
Drowned persons, recovery of, 577. Method of treating a body taken out of the water, apparently dead, ibid. Cautions recommended by the Royal Humane Society 579.
Drunkenness. See *Intoxication.*
Dumb persons may be taught to read, write, and discourse, 416, note.
Dysentery, where and when most prevalent, 313. Its causes and symptoms, ibid. Regimen, 314. Fruit one of the best remedies for, 316. Proper drink for, 317. Medical treatment, ibid. Cautions to prevent a relapse, 318.

E.

Ear, the several injuries it is liable to, 415. Deafness, medical treatment of, according to its causes, 416. Ought not to be tampered with, 417.
Ear-ach, its causes, and proper treatment for, 326. How to drive insects out of, 327.
Education of children should be begun at home by the parents, 23, note. That of girls hurtful to their constitution, 25.
Effluvia, putrid, will occasion the spotted fever, 178.
Electricity, beneficial in the palsy, 390.
Engleman, Dr., his account of the German method of recovering persons from fainting fits, 549.
Entrails. See *Intestines.*
Epilepsy, the disorder defined, 391. Its causes and symptoms, ibid. Due regimen, 392. Medical treatment, 393.
Eruptions in children often free them from bad humours, but are mistaken and ill-treated by nurses, 32. Ought never to be stopped without proper advice, 33. In fevers, how to be treated, 176, 184, 192. In the small-pox, 200. In children, the causes of, 497. How to cure, 499.
Erysipelas, a disorder incident to the laborious, 38. Its causes explained, and who most subject to it, 227. Its symptoms, ibid. Regimen, 229. Medical treatment, ibid. The scorbutic erysipelas, 231. Instructions for those who are subject to this disorder, ibid.
Evacuations of the human body, the principal, specified, 111. By stool, ibid. Urine, 113. Perspiration, 114.
Exercise, the importance of, to promote the growth and strength of children, 20. All young animals exert their organs of motion as soon as they are able, ibid. The utility of, proved from anatomical considerations, 22. And from philosophical deductions, 23. Military exercise recommended for boys, 24. Be-

nefits of dancing, 27. Is better for sedentary persons under lowness of spirits than the tavern, 47. Gardening the best exercise for the sedentary, 48. Violent, ought not to be taken immediately after a full meal, 55. Is as necessary as food for the preservation of health, 73. Our love of activity, an evidence of its utility, 74. Indolence relaxes the solids, ibid. The indulgence of carriages as absurd as pernicious, ibid. Is almost the only cure for glandular obstructions, 75. Will prevent and remove those disorders that medicine cannot cure, ibid. Is the best cure for complaints in the stomach, ibid. How to be taken within doors, when not to be done in the open air, 77. Active sports better than sedentary amusements, ibid. The golff, a better exercise than cricket, ibid. note. Exércise should not be extended to fatigue, 78. Is often of more efficacy than any medicine whatever, 127. The best mode of taking it in a consumption, 162. Is of the greatest importance in a dropsy, 341. Muscular, for the gout, 349. Is necessary for the asthmatic, 369. Is superior to all medicine in nervous disorders, 383. And in the palsy, 391. Is proper for pregnant women, unless they are of a very delicate texture, 479. Want of, the occasion of the rickets in children, 505.

Eyes, inflammation of, its general causes, 236. Symptoms, 237. Medical treatment, 238. How to be treated when it proceeds from a scrophulous habit, 239. Advice to those who are subject to this complaint, ibid. Are subject to many diseases which are difficult to cure, 412. The means by which they are frequently injured, ibid. General means of prevention, 413. The several disorders of, with their medical treatment, ibid.

F.

Fainting fits, how to cure, 399, 546. Cautions to persons subject to them, 550.

Falling sickness. See *Epilepsy.*

Fasting, long, injurious to those who labour hard, 39. Is hurtful both to old and young, 65.

Fathers, culpably inattentive to the management of their children, 5. Their irregular lives often injure the constitution of their children, 7.

Fear, the influence of, very great, in occasioning and aggravating diseases, 108. Its various operations, 104.

Feet, injured by wearing tight shoes, 83. The washing of, an agreeable article of cleanliness, 95. Wet, the danger of, 116. Bathing them in warm water, a good remedy in a cold, 254. And in the hooping cough, 262.

Fermentation, the vapour of liquors in a state of, noxious, 542.

Fevers, of a bad kind, often occasioned among labourers by poor living, 39. Frequently attack sedentary persons after hard drinking, 47. Nervous, often the consequence of intense study, 52. Putrid and malignant, often occasioned by want of cleanliness, 92. The most general causes of, enumerated 128. The

distinguishing symptoms of, 129. The several species of, ibid. Is an effort of nature, which ought to be assisted, 130. How this is to be done, ibid. Cordials and sweatmeats improper in, 132. Fresh air of great importance in, ibid. The mind of the patient ought not to be alarmed with religious terrors, ibid. Cautions as to bleeding and sweating in, 133. Longings, the calls of nature, and deserve attention, ibid. Cautions to prevent a relapse, 134.

Fever, acute, continual, who most liable to, 144. Causes, ibid. Symptoms, ibid. Regimen, 145. Medical treatment, 147. Symptoms, favourable and unfavourable, 148. Regimen to be observed during recovery, ibid.

—— bilious, general time of its appearance, 225. Proper treatment of, according to its symptoms, 226.

—— intermitting. See *Ague*.

—— miliary, from what the name derived, and its general appearances, 187. Who most liable to it, ibid. Causes, ibid. Symptoms, 188. Regimen, 189. Account of a miliary fever at Strasburg, 190, note. Proper medical treatment, 191. Cautions for avoiding this disorder, 192. How to prevent in child-bed women, 483.

—— milk, how occasioned, 482. How to prevent, 483.

—— nervous, why more common now than formerly, and who most liable to it, 172. Its causes, ibid. Symptoms, ibid. Proper regimen, 173. Medical treatment, 174.

—— puerperal or child-bed, the time of its attack and symptoms, 484. Medical treatment of, ibid. Cautions for the prevention of this fever, 486.

—— putrid, is of a pestilential nature, and who most liable to it, 178. Its general causes, ibid. Symptoms of, 179. Other fevers may be converted to this by improper treatment, 180. Favourable and unfavourable symptoms of, ibid. Regimen, 181. Medical treatment, 183. Cautions for the prevention of this disorder, 185. Very prevalent in the narrow lanes of London, or in the marshy grounds in its environs, 186.

—— remitting, derivation of its name, 192. Its causes and symptoms, ibid. Proper regimen, 193. Medical treatment, 194. Cautions for avoiding this fever, ibid.

—— scarlet, its usual mode of attack, 224. Proper treatment of, ibid. Is sometimes attended with putrid and malignant symptoms, ibid. Medicines adapted to this stage of the malady, 225. History of a fever of this kind at Edinburgh, ibid. note.

—— secondary, in the small-pox, treatment of, 204.

Flatulencies in the stomach, remedies against, 400. The several causes of, ibid. Medical treatment of, 401.

Flatulent colic, its causes and seat of the disorder, 269. Remedies for, ibid.

Flower de luce, the yellow water; the root of, recommended for the tooth-ach, 324.

Fluor albus described, with its proper treatment, 475.

Food. See *Aliment.*
Forgiveness of injuries, ought to be practised from a regard to our own health, 103.
Fractures. See *Bones, broken.*
Frozen limbs, how to recover, 545.
Fruit, unripe, very hurtful to children, 18. One of the best medicines both for the prevention and cure of a dysentery, 316.
Funerals, the great number of visitors attending them, dangerous to health, 98.

G.

Galling, in infants, the cause and cure of, 494.
Gangrene, proper treatment of, 515.
Gardening, a wholesome amusement for sedentary persons, 48.
Gargles for the throat, how to make, 244, 247, 250.
Garlic-ointment, a North British remedy for the hooping-cough, how to apply it, 262.
Generals of armies, how they ought to consult the health of the men they command, 40.
Gilders. See *Miners.*
Girls, the common mode of education prejudicial to their constitution, 25. Means of rectifying it recommended, ibid.
Gleet, how occasioned, and its symptoms, 450. Method of cure, ibid. Regimen, 451. Obstinate gleets cured by mercurial inunctions, 452. How to apply bougies, ibid.
Glover, Mr., his course of treatment for the recovery of a hanged man, 555.
Gonnorrhœa virulent, the nature of, and its symptoms, 442. Regimen, 444. Medical treatment, ibid. Is often cured by astringent injections, 445. Cooling purges always proper in, ibid. Mercury seldom necessary in a gonnorrhœa, 447. How to administer it when needful, ibid.
Gout, the general causes of, 50. How to treat a looseness occasioned by expelling it from the extremities, 285. The sources of this disorder, and its symptoms, 345, 346. Regimen for, 346. Wool, the best external application in, 347. Why there are so many nostrums for, 348. Proper medicines after the fit, 349. Proper regimen in the intervals between fits to keep off their returns, ibid. How to remove it from the nobler parts to the extremities, 350. General cautions to prevent danger by mistaking it for other disorders, ibid.
Gravel, how formed in the bladder, 114. How distinguished from the stone, 293. Causes and symptoms, 294. Regimen, ibid. Medical treatment, 295.
Green-sickness originates in indolence, 471.
Grief, its effects permanent, and often fatal, 106. Danger of the mind dwelling long on one subject, especially if of a disagreeable nature, 107. The mind requires exercise as well as the body, ibid. Innocent amusements not to be neglected, 108. Is productive of nervous diseases, 381.

Gripes in infants, proper treatment of, 493.
Guaiacum, gum, a good remedy for the quinsy, 245; and rheumatism, 353.
Gullet, how to remove substances detained in, 537. Cautions for the use of crotchets, with this intention, 538. Treatment if the obstruction cannot be removed, 539.
Gums of children, application to, during teething, and how to cut them, 503.
Gutta serena, proper treatment of, 413.

H.

Hæmoptoe, spitting of blood. See *Blood*.
Hæmorrhages. See *Blood*.
Harrowgate water, an excellent medicine for expelling worms, 333. And for the jaundice, 338. In the scurvy, 358.
Head-ach, the species of, distinguished, 319. Causes of, 320. Regimen, 322. Medical treatment, 323.
Health, of the people in general, ought to be attended to in matrimonial contracts, 8. Is often laboured for after it is destroyed, 54. Rules given by Celsus for the preservation of, 122.
Heartburn, the nature of this disorder, with its causes, and remedies for, 378.
Heat, extreme, how to recover persons overcome by, 546.
Hemlock, a good remedy in the king's evil, 363. Is recommended by Dr. Storck, for the cure of cancers, 425.
Hemp-seed, a decoction of, good in the jaundice, how to prepare it, 338.
Hiccup, its causes, and method of treatment, 394.
Hoffman, his rules for guarding child-bed women against the miliary fever, 483.
Honey, a wholesome article of food for children, 19. Is recommended in the stone, 297.
Hooping-cough. See *Cough*.
Horse-radish, the chewing of, will restore sensibility to the organs of taste when injured, 420.
Hospitals, the want of fresh air in, more dangerous to the patients than their disorders, 69. Cleanliness peculiarly necessary in, 72. Often spread infection by being situated in the middle of populous towns, 99. How they might be rendered proper receptacles for the sick, 100. Particularly in infectious disorders, 101.
Houses, instead of contriving to make them close and warm, ought to be regularly ventilated, 69. In marshy situations, unwholesome, 71. Ought to be built in a dry situation, 118. Danger of inhabiting new-built houses before thoroughly dry, 119. Are often rendered damp by unseasonable cleanliness, ibid. Are dangerous when kept too close and hot, 121.
Husbandmen, the peculiar disorders they are exposed to from the vicissitudes of the weather, 39.
Hydrocephalus, See *Dropsy*.

Hydrophobia, Dr. Tissot's method of curing, 437.
Hydrops pectoris. See *Dropsy.*
Hypochondriac affections, frequently produced by intense study, 52. Their causes, and who most subject to them, 407. The general intentions of cure, 408. Regimen, 410.
Hysterics, general causes of, 404. Symptoms, ibid. Proper treatment of, 405. Regimen, ibid. Medicines adapted to, 406.
Hysteric colic, symptoms and treatment of, 271.

I.

Jails, why malignant fevers are often generated in them, 69. Often spread an infection by being situated in the middle of populous towns, 99. Ought to be removed, 101.
Janin, M. his relation of the recovery of an overlaid infant, 554. And of a man who had hanged himself, 555.
Jaundice, the causes of this disorder, 336. Symptoms, ibid. Regimen, 337. Medical treatment, ibid.
Jesuits' bark. See *Bark.*
Jews, the whole system of their laws tending to promote cleanliness, 94, 98.
Iliac passion, a peculiar kind of inflammation in the intestines, 265.
Imposthume in the breast, in consumptions, how to make it break inwardly, when not to be discharged by other means, 169. Imposthumes after the small-pox, proper treatment of, 206.
Incontinency of urine, distinguished from a diabetes, 292. Expedient for the relief, ibid.
Indigestion, is one consequence of intense study, 51. General causes and remedies for, 377.
Indolence, its bad effects on the constitution, 74. Occasions glandular obstructions, 75. Ill consequences of too much indulgence in bed, 76. Is the parent of vice, 78. Is the general cause of most noxious disorders, 411.
Infancy, the foundation of good or bad constitutions, generally laid in this season of life, 1.
Infants, nearly one half of those born in Great Britain die under twelve years of age, 1. Perish mostly by art, 2. Ought not to be suckled by delicate women, 3. Importance of their being nursed by their mothers, ibid. Often lose their lives, or become deformed, by errors in clothing them, 9. How the art of bandaging them became the province of the midwife, ibid. How treated in Africa, 10, note. Philosophical observations on their organical structure, and on the causes of deformity, 11. Why they so frequently die of convulsions, 12. Why exposed to fevers, ibid. And colds, 13. Rules for their dress, ibid. Their food, 14. Reflections on the many evils they are exposed to, 489. Why their first disorders are in their bowels, ibid. How to cleanse their bowels, ibid. The meconium, 490. Thrush, 491. Acidities, 492. Gripes, ibid. Galling and excoriations, 494. Stoppage of the nose, ibid. Vomiting, 495. Looseness,

496. Eruptions, 497. Scabbed heads, 498. Chilblains, 499. The croup, 500. Teething, 502. Rickets, 504, Convulsions, 507. Water in the head, 508. How to recover infants seemingly dead, 549. Ought never to sleep in the same beds with mothers or nurses, 553, note. Case of the recovery of an overlaid infant, 554. Case of an infant being seemingly killed by a convulsion fit, and recovered, 556. See *Children.*

Infection, the danger of, incurred by injudicious or unnecessary attendance on the sick, 97. And on funerals, 98. Is frequently imported, 99. Is spread by hospitals and jails being situated in the middle of populous towns, ibid. How to prevent infection in sick chambers, 100. Physicians liable to spread infection, ibid, note. Bleeding and purging increase the danger of, by debilitating the body, 186. Small-pox, 195. Of the small-pox may be received again, 199, note.

Inflammations, how the laborious part of mankind expose themselves to, 39. Proper treatment of, 515.

Inflammation of the bladder. See *Bladder*

———— brain. See *Brain.*

———— eyes. See *Eyes.*

———— intestines. See *Intestines.*

———— kidneys. See *Kidneys.*

———— liver. See *Liver.*

———— lungs. See *Peripneumony.*

———— stomach. See *Stomach.*

———— throat. See *Quinsey.*

———— womb. See *Womb.*

Inns, the great danger of meeting with damp beds in them, 118 The sheets in, how treated to save washing, ibid.

Inoculation of the small-pox, more favourably received here than in neighbouring countries, 207. No mystery in the process, ibid. May safely be performed by parents or nurses, 208. Various methods of doing it, ibid. The clergy exhorted to remove the prejudices against the operation, 210. Arguments cited from Dr. Mackenzie in favour of inoculation, ibid. note. Ought to be rendered universal, 212. Means of extending the practice of, ibid. The proper seasons and age for performing it, 216. Will often mend the habit of body, 217. Necessary preparations and regimen for, ibid. Performed by the bramins or priests of India, 218. Their example recommended to the clergy of Europe, ibid. Professional skill not necessary, ibid. Encouragement should be given to mothers to perform the operation themselves, ibid.

Insects, when they creep into the ear, how to force them out, 327. Poisonous, the bites of, how to be treated, 431.

Intemperance, one great cause of the diseases of seamen, 41. The danger of, argued from the construction of the human body, 86. The analogy in the nourishment of plants and animals, ibid. Is the abuse of natural passions, 87. In diet, ibid. In liquor and carnal pleasures, ibid. The bad consequences of it, involve whole

families, 88. Effects of drunkenness on the constitution, ibid Persons who seldom get drunk may, nevertheless, injure their constitutions by drink, 89. The habit of drinking frequently acquired under misfortunes, 90. Is peculiarly hurtful to young persons, 91. Leads to all other vices, ibid.

Intermitting fever. See *Ague.*

Intestines, inflammation of, general causes from whence it proceeds, 265. The symptoms, ibid. Regimen and medical treatment, 266. Cautions to guard against it, 268.

Intoxication produces a fever, 88. Persons who seldom get drunk may, nevertheless, injure their constitution by drinking, 89. Getting drunk a hazardous remedy for a cold, 253. Often produces fatal effects, 251. Proper cautions for treating persons in liquor, ibid. The safest drink after a debauch, ibid. Remarkable case, 552.

Johnson, Dr., extraordinary cure of an infant seemingly killed by a strong convulsion fit, related by, 556.

Issues, how to make them take the best effect, 371.

Itch, the nature and symptoms of this disease described, 365. Sulphur the best remedy against, ibid. Great danger of the injudicious use of mercurial preparations for, 367. Cleanliness the best preservative against, ibid, note.

K.

Kermes mineral recommended by Dr. Duplanil, for the hooping-cough, 261, note.

Kidneys, the inflammation of, its general causes, 274. Its symptoms and proper regimen, ibid. Medical treatment, 275. Where it proceeds from the stone and gravel, ibid. Cautions for those subject to this disorder, 276. See *Gravel.*

King's evil. See *Scrophula.*

L.

Laborious employments, the peculiar disorders incident to, 37. The folly of men emulating each other in trials of strength, ibid. Disadvantages attending their diet, 38. How they expose themselves to inflammations, ibid. Danger of sleeping in the sun, 39. Long fasting hurtful to them, ibid. Injuries arising from poor living, ibid. Many of the diseases of labourers not only occasioned, but aggravated by poverty, 40.

Labour should not be imposed too early upon children, 26.

——— in child-bed, medical advice for, 479. Inconveniences of collecting a number of women at, 481, note.

Laudanum, its efficacy in fits of an ague, 136, note. How to be administered in a cholera morbus, 283. In a looseness, 284. In a diabetes, 291. When proper for the head-ach, 322. How to apply for the tooth-ach, 325. Will ease pain in the gout, 348. How to administer for the cramp in the stomach, 396. Is good for flatulencies, 401. Effects of an overdose, 430. Medical treatment in this case, ibid.

Leading-strings injurious to young children, 21.

Leeches may be successfully applied to inflamed testicles, 453, note; and to disperse buboes, 454, note. Are proper to apply to children where inflammation appears in teething, 503. Objections to bleeding with them, 513.
Leprosy, why less frequently now in this country than formerly, 359. Requires the same treatment as the scurvy, 360.
Lientery, proper treatment for, 319.
Life may frequently be restored, when the appearances of it are suspended by sudden casualities, 535.
Lime-water, recommended to prevent gravel in the kidneys from degenerating to the stone in the bladder, 296. A remedy for worms, 334. Happy effects of, in the cure of ulcers, 524.
Lind, his prescription to abate fits of an ague, 136, note.
Liquors, strong, expose children to inflammatory disorders, 18. Fermented, the qualities of, examined, 61. Why all families ought to prepare their own liquors, 62. Cold, the danger of drinking, when a person is hot, 120.
Liver, schirrous, produced by sedentary employments, 50.
—— inflammation of, its causes and symptoms, 277, 278. Regimen and medical treatment, 279. Abscess in, how to be treated, ibid. Cautions in the event of a schirrous being formed, 280.
Lobelia, an American plant used by the natives in the venereal disease, 462.
Lochia, a suppression of, how to be treated, 482
Longings, in diseases, are the calls of nature, and often point out what may be of real use, 133.
Looseness, habitual, general directions for persons subject to, 112. Its general causes, 284. A periodical looseness ought never to be stopped, ibid. Means of checking it when necessary, 285. In children, proper treatment of, 496.
Love, why perhaps the strongest of all the passions, 108. Is not rapid in its progress, and may therefore be guarded against at its commencement, 109. To pretend to it for amusement, cruelty to the object, ibid. Children often real martyrs between inclination and duty, ibid, note.
Lues confirmed, symptoms of, 459. Mercury the only certain remedy for this disease, 460. Saline preparations of mercury more efficacious than the ointment, ibid. How to administer corrosive sublimate, 461. American method of curing, 462.
Lungs, injured by artists working in bending postures, 50. Studious persons liable to consumptions of, ibid.
Luxury, highly injurious to the organs of taste and smell, 418.

M.

Mackenzie, Dr., his arguments in favour of inoculating in the small-pox, 210, note.
Mad dog, See *Dog*.
Magnesia alba, a remedy for the heart-burn, 379. Is the best medicine in all cases of acidity, 493.

Magnets, artificial, their reputed virtue in the tooth-ach, 326.
Malt-liquors, hurtful in the asthma, 369.
Man, why inferior to brutes in the management of his young, 1. Was never intended to be idle, 78.
Manufactures, the growth of, produced the rickets in children, 20. Some, injurious to the workmen, 36. Compared with agriculture, 44. Are injurious to health from artists being crowded together, 45. And from their working in confined postures, ibid. Cautions offered to sedentary artists, 46.
Matrimony ought not to be contracted without a due attention to health and form, 7.
Mead, Dr., his famous recipe for the bite of a mad dog, 433.
Meals ought to be taken at regular times, 64. Reasons for this uniformity, ibid.
Measles, have great affinity with the small-pox, 219. Cause and symptoms, ibid. Proper regimen and medicine, 221, 222. Inoculation of, might prove very salutary, 223, note.
Mechanics ought to employ their leisure hours in gardening, 48.
Meconium, the best mode of expelling it, 15, 490.
Medical electricity, considerations on, 587. Of service in various disorders, 588.
Medicine, the theory of, can never supply the want of experience and observation, 123.
Medicines have more virtue attributed to them than they deserve, 125. Ought not to be administered by the ignorant, nor without caution, 128. Want of perseverance in the use of, one reason why chronic diseases are so seldom cured, 354.
Melancholy, religious, its effects, 110. Defined, with its causes, 385. Symptoms and regimen, 386. Medical treatment, 387.
Menstrual discharge in women, the commencement and decline of, the most critical period of their lives, 470. Confinement injurious to growing young women, ibid; and tight lacing for a fine shape, 471. Symptoms of the first appearance of this discharge, 472. Objects of attention in regimen at this time, ibid. Ought to be restored, whenever unnaturally obstructed, and how, 473. When an obstruction proceeds from another malady, the first cause is to be removed, ibid. Treatment under a redundancy of the discharge, 475. Regimen and medicine proper at the final decline of the menses, 476.
Mercury may be given in desperate cases of an inflammation of the intestines, 268. Cautions for administering it, ibid, note. Great cautions necessary in using mercurial preparations for the itch, 367. Is seldom necessary in a gonorrhœa, 447. Solution of mercury, how to make, 449, note. Is the only certain remedy known in Europe for the cure of a confirmed lues, 460. Saline preparations of, more efficacious than the mercurial ointment, ibid. How to administer corrosive sublimate in venereal cases, ibid. Necessary cautions in the use of mercury, 463. Proper seasons for entering on a course of, 464. Preparations for, ibid. Regimen under a course of, 465.

Mezereon root, a powerful assistant in venerea cases, 462.
Midwifery, ought not to be allowed to be practised by any woman not properly qualified, 480, note.
Midwives, historical view of the profession, 9. How they became intrusted with the care of bandaging infants, with the ill effects of their attempts at dexterity in this office, 10. Instances of their rashness and officious ignorance, 485, note.
Miliary fever. See *Fever*.
Military exercise recommended for boys to practise, 24.
Milk, that of the mother the most natural food for an infant, 14. Cow's milk better unboiled than boiled, 16. Is a good antidote against the scurvy, 59. Of more value in consumptions than the whole *Materia Medica*, 163. Its great efficacy in the scurvy, 358. A milk diet proper both for men and women, in cases of barrenness, 487.
Milk fever. See *Fever*.
Millipedes, how to administer for the hooping-cough, 261.
Mind, diseases of, to be distinguished from those of the body, 124.
Miners, exposed to injuries from unwholesome air, and mineral particles, 36. Cautions to, ibid.
Mineral Waters, the danger of drinking them in too large quantities, 289. Are of considerable service in weaknesses of the stomach, 378. Tunbridge waters of service in bracing the system, 564. Beneficial in the menses, ibid. And in urinary obstructions, ibid. Are an active purgative, ibid. Pyrmont waters serviceable in the gout, 565. Harrowgate waters of use in eruptions of the skin, 567. Bath waters afford relief in colics, 568. Recommended in green sickness, palsy, gout, hypochondria, jaundice, &c. 569. Bristol waters efficacious in relaxations of the stomach, 570.
Molasses, an intoxicating spirit much used by the common people at Edinburgh, 90, note.
Mothers, preposterous, when they think it below them to nurse their own children, 2. Under what circumstances they may be really unfit to perform this task, ibid. Importance of their suckling their own children, 3, note. Delicate mothers produce unhealthy short-lived children, 7. Their milk, the best food for children, 14. Ought to give their children proper exercise, 22; and air, 28.
Mouth, cautions against putting pins or other dangerous articles into, 537.
Muscular exercise, a cure for the gout, 349.
Mushrooms, a dangerous article of food, as other funguses are often gathered instead of them, 440.
Music, the performance of, recommended as a proper amusement for studious persons, 54.
Musk, extraordinary effects produced by, under particular circumstances, in the nervous fever, 176. Is a good remedy in the epilepsy, 394. And for the hiccup, 395. Deafness cured by, 417.
Mustard, white, a good remedy in the rheumatism, 354.

N.

Nervous diseases, the most complicated and difficult to cure of all others, 380. General causes of, ibid. Symptoms of, 381. Regimen, 382. Medical treatment, 384. A cure only to be expected from regimen, 385. The several symptoms of, though differently named, all modifications of the same disease, 409.

——— colic, its causes and symptoms, 272. Medical treatment of, 273.

——— fever. See *Fever.*

Night-mare, its causes and symptoms described, 397. Proper treatment of, ibid.

Night-shade, an infusion of, recommended in a cancer, 424.

Nitre, purified, its good effects in a quinsey, 245. Is an efficacious remedy for the dropsy, 344. Promotes urine and perspiration, 388.

Nose, ulcer in, how to cure, 419. Stoppage of, in children, how to cure, 494. See *Bleeding at.*

Nurses, their superstitious prejudices in bathing of children, 27. The only certain evidence of a good one, 31. Their usual faults pointed out, ibid. Administer cordials to remedy their neglect of duty towards children, 32. Their mistaken treatment of eruptions, ibid. And loose stools, 33. Are apt to conceal the disorders of children that arise from their own negligence, ibid. Sensible, often able to discover diseases sooner than persons bred to physic, 123. Are liable to catch the small-pox again from those they nurse in that disorder, 199, note.

Nursery, ought to be the largest and the best aired room in a house, 29.

O.

Oil, an antidote to the injuries arising from working in mines or metals, 36.

Ointment for the itch, 365.

Opiates, efficacious in a cholera morbus, 282. In a diabetes, 291. When proper for the head-ach, 322. Recommended for the tooth-ach, 325. Are delusive remedies in nervous diseases, 385. See *Laudanum.*

Opthalmia. See *Eye.*

Ormskirk medicine for the bite of a mad dog, remarks on, 437, note.

Oxycrate, the most proper external application in a fracture, 584.

Oysters, of great service in consumptions, 166, note.

P.

Painters. See *Miners.*

Palsy, the nature of this disorder explained, with its causes, 389. Medical treatment, 390.

Paraphrenitis, its symptoms and treatment, 155.

Parents, their interested views in the disposal of their children in marriage often a source of bitter repentance, 109, note. See *Fathers* and *Mothers.*

Passions, intemperance the abuse of, 87. Have great influence both in the cause and cure of diseases, 102. Anger, ibid. Fear, 103. Grief, 106. Love, 108. Religious melancholy, 109. The best method of counteracting the violence of any of the passions, 110.
Peas, parched, good in cases of flatulency, 329.
Peruvian bark. See *Bark*.
Penis, ulcerated, cured and partly regenerated by a careful attention to cleanliness, 465, note.
Peripneumony, who most subject to, 156. Its causes, ibid. Symptoms and proper treatment, 157.
Perspiration, insensible, the obstruction of, disorders the whole frame, 115. The various causes of its being checked, ibid. Changes in the atmosphere, ib. Wet clothes, 116. Wet feet, ib. Night air, ib. Damp beds, 117. Damp houses, 118. Sudden transitions from heat to cold, 119.
Phrenitis. See *Brain*.
Phymosis described, and how to treat, 458.
Physicians, ill consequence of their inattention to the management of children, 5. Are liable to spread infection, 100, note. Their custom of prognosticating the fate of their patients, a bad practice, 105. Are seldom called in, until medicine can give no relief, 144. Fears, prejudices, and opposite interests, are obstacles to every salutary discovery, 207.
Pickles, provocatives injurious to the stomach, 60.
Piles, bleeding and blind, the distinction between, 303. Who most subject to the disorder, ib. General causes, ib. Medical treatment of, 304. Periodical discharges of, ought not to be stopped, 305. Proper treatment of the blind piles, ib. External ointment of little use, ibid.
Pills, purging, proper form of, for an inflammation of the intestines, 267.
Pins, ought never to be used in the dressing of children, 12. Swallowed, discharged from an ulcer in the side, 537, note.
Pleurisy, the nature of the disorder explained, with its causes, 149. Symptoms, 150. Regimen, 151. Medical treatment, ib. A decoction of seneka root reckoned a specific in, 154. Bastard pleurisy, 155.
Plumbers. See *Miners*.
Poisons, the nature and cure of a general concern, and easily acquired, 427. Mineral poisons, 428. Vegetable poisons, 429. Bites of poisonous animals, 430. Bite of a mad dog, 431. Bite of a viper, 438. The practice of sucking the poison out of wounds recommended, ib. note. Poisonous plants ought to be destroyed in the neighbourhood of towns, 439. Negro remedy to cure the bite of a rattle-snake, 449. General rules for security against poisons, ibid.
Poor living, the dangers of, 40.
Porters subject to disorders of the lungs, 38.
Postures, confined, injurious to the health of sedentary artists, 45.

Poverty occasions parents to neglect giving their children proper exercise, 22. Destroys parental affection, ibid. note. Not only occasions, but aggravates, many of the diseases of labourers, 40. The poor great sufferers by the sale of bad provisions, 57. And by bad air in large cities, 68.

Poultices proper for inflamed wounds, 519.

Pox, small, who most liable to, and at what seasons, 195. Its causes and symptoms, ibid. Regimen, 197. How the patient ought to be treated during the eruptive fever, 198. Children in this disorder ought not to lie together in the same bed, 199. Should be allowed clean linen, ibid. Medical treatment, 200. The secondary fever, 204. When and how to open the pustules, 205. Of inoculation, 206.

Pregnancy, how to treat vomiting when the effects of, 287. Rules of conduct for women under the disorders incident to, 477. Causes and symptoms of abortion, ibid. How to guard against abortion, 478. Childbirth, 479.

Provisions, unsound, the sale of, a public injury, 57.

Puerperal fever. See *Fever*.

Purges, the frequent taking of them renders the habitual use of them necessary, 112. Their efficacy in agues, 137. Proper form of, for an inflammation of the intestines, 267. Cooling purges always proper in a gonorrhœa, 445. Midwives too rash in the giving of purges, 485, note. Form of a gentle purge for infants disordered in the bowels, 490. For the thrush, 491.

Pustules in the small-pox, favourable and unfavourable appearances of, 196, 197. The suppuration of, to be promoted, 201. When and how to open, 205.

Putrid fever. See *Fever*.

Q.

Quacks put out more eyes than they cure, 412.

Quakers, their mode of dressing recommended, 84.

Quinsey, to whom most fatal, 241. Its causes, ibid. Symptoms, 242. Regimen, 243. Medical applications, 244. How to promote suppuration, 245. How to nourish the patient when he cannot swallow, 246. Advice to persons subject to this disorder, ibid.

———, malignant, who most subject to; and its causes, 247. Its symptoms, 248. Regimen and medical treatment, 249.

R.

Rattle-snake, negro remedy for the cure of its bite, 440.

Regimen will often cure diseases without medicine, 127.

Religion, true, calculated to support the mind under every affliction, 110. The instructors in, ought not to dwell too much on gloomy subjects, ibid.

Remitting fever. See *Fever*.

Repletion, impairs the digestive powers, 64. Diseases occasioned by, 65. How to treat a looseness produced by, 283.

Resentment, the indulgence of, injurious to the constitution, 103.

Rheumatism, acute and chronic, distinguished, 351. Causes, ibid. Symptoms, 352. Medical treatment, ibid. Cautions to persons subject to this disorder, ibid.

Rickets, the appearance of, in Britain dated from the growth of manufactures and sedentary employments, 20. The causes of, 504. Symptoms and regimen, 505. Medical treatment, 506.

Rollers, penicious tendency of applying them round the bodies of infants, 10.

Romans, ancient, their great attention to the cleanliness of their towns, 93, note.

Roses, conserve of, its great virtue against hœmorrhages, 304, 310.

Rosemary, the external application of, a popular remedy for the cramp, 407, note.

Ruptures, by what occasioned, 581. Method of treatment, ibid. Cold water of service, 582. Cautions to be used in removing the truss, 583. Irreducible hernia, ibid. Strengthening medicines to be administered, 584. Children subject to navel-ruptures, 585. Watery rupture, ibid. Falling down of the fundament, what, and how occasioned, ibid. Method of treatment, 586.

Rutherford, Dr., his preparation for the cure of a dysentery, 316. note.

S.

Sailors, their health injured by change of climate, hard weather, and bad provisions, 42, 43. Many of their diseases spring from intemperance, ibid. Ought to guard against wet clothes, ibid. Peruvian bark the best antidote for sailors on a foreign coast, ibid. Cleanliness greatly conducive to their health, 95.

Sal prunellæ, its good effects in a quinsey, 245.

Saline draughts, of good use in stopping a vomiting, 288. Preparation of, for this purpose, ibid. Peculiarly good in the puerperal fever, 485.

Salivation not necessary in the cure of the venereal disease, 460.

Sarsaparilla, a powerful assistant in venereal cases, 462.

Scabbed head in children difficult to cure, 498. Medical treatment, 499.

Scarlet fever. See *Fever*.

School, sending children there too young, its bad consequences, 23. Ought to be seated in a dry air, and not crowded, 30.

Schirrus in the liver, proper regimen in the case of, 279. See *Cancer*.

Scrophula, nature of this disease, and its causes and symptoms, 360. Regimen and medical treatment, 361. The most effectual means against, 364; butter and other oily substances, and also gingerbread, plum-cakes, &c., highly injurious in this disease, 365. Cold bathing of service in, 559.

Scurvy, why prevalent among the English, 58. Where most prevalent, and the two distinctions of, 355. Causes of, 356. Symptoms, and cure, ibid. Instructions to sea-faring men, 357. Extraordinary effects of milk, 358. Proper liquors, ibid.

Sea-bathing. See *Bathing.*
Sea-water, a good remedy in the king's evil, 362.
Sedentary life, includes the greater part of the human species, 43. Sedentary and active employments ought to be intermixed for the sake of health, 44. Artists suffer from unwholesome air, by being crowded together, ibid. The postures artists are confined to, injurious to health, 45. Cautions offered to the sedentary, 46. Sedentary amusements improper for sedentary persons, ibid. Hints relating to improper food, 47. Exercise a surer relief for low spirits than drinking, ibid. Gardening a wholesome amusement for the sedentary, 48. Disorders occasioned by intense study, 49. Dietetical advice to the sedentary. 63.
Senses, disorders of, 411. Intemperance destroys the energy of, 413.
Seton, sometimes has extraordinary effects in an inflammation of the eyes, 239. Is of service for preventing apoplexies, 374.
Shoes, tight, the bad consequences resulting from, 83. The high heels of women's shoes, 84.
Sibbons, a venereal disorder so termed in the west of Scotland, how to cure, 466, note.
Sick, the mutual danger incurred by unnecessary visitors to, 97. Persons in health to be kept at a distance from the sick, 98. Instructions for avoiding infection, 100. Physicians too unguarded in their visits to them, ibid. note. Tolling of bells for the dead very dangerous to, 104. Their fears ought not to be alarmed, 105.
Sight injured by studying by candle-light, 51.
Sleep, the due proportion of, not easy to fix, 79. How to make it refreshing, 80. Heavy suppers cause uneasy nights, ib. Anxiety destructive to sleep, ib. That in the fore part of the night most refreshing, 81. Early risers the longest livers, ibid. note.
Sleeping in the sun, the danger of, 39.
Small-pox. See *Pox.*
Smell, injuries to which the sense of, is liable, with the remedies applicable to, 417.
Soap, Alicant, recommended in the stone, 295. Soap-lees, how to take, 296.
Solanum. See *Nightshade.*
Soldiers, exposed to many disorders from the hardships they undergo, 40.
Spine, often bent by artists working in unfavourable postures, 46.
Spirits, lowness of, the general forerunner of a nervous fever, 172. The proper remedies for, 403. Cautions to persons under this complaint, ibid.
Spirituous liquors, when good in the colic, 269. And for gouty complaints in the stomach, 329, Should be avoided by all persons afflicted with nervous disorders, 383. The use of, often fatal, 551.
Spitting of blood. See *Blood.*
Sponge, may supply the want of agaric as a styptic, 518, note. Its use in extracting substances stopped in the gullet, 539.

Sports, active, far more wholesome than sedentary amusements, 77. Golff a better exercise than cricket, ibid. note.
Spots in the eye, how to treat, 414.
Squinting, how to correct the habit of, 414.
Stays, a ridiculous and pernicious article of female dress, 13, 83. The wearing of, tends to produce cancers in the breasts, 422.
Sternutatories, preparations of, recommended for restoring lost smell, 418.
Sticking-plaister is the best application for slight wounds, 518.
Stomach, exercise the best cure for disorders of, 76. Inflammation of, a disorder that calls for speedy assistance, 263. Its causes, ibid. Symptoms, ibid. Regimen, 264. Medical treatment, ibid. Pain in, its causes, 328. Remedies for, ibid.
Stone, the formation of, in the bladder explained, 114. This disorder how distinguished from the gravel, 294. Causes and symptoms, ibid. Regimen, ibid. Medical treatment, 295. Alicant soap and lime-water, how to take for this disorder, 296. The uva ursi, a remedy in present request for, 297.
Stool, loose, the benefit of, to children, 33. Proper treatment of, when excessive, ibid. The discharge by, cannot be regular if the mode of living be irregular, 111. One in a day generally sufficient for an adult, 112. How to produce a regularity of, ib. Frequent recourse to medicines for costiveness, injurious to the constitution, ibid.
Storck, Dr., his method of treating cancers, 424.
Strabismus. See *Squinting.*
Strains, the proper method of treating, 534.
Strangury, from a blistering plaster, how to guard against, 153. In the small-pox, how to relieve, 202. From a venereal cause, described, with its proper treatment, 457.
Strangulation, course of treatment for the recovery of persons from, 553.
Strasburg, successful treatment of a miliary fever there, 190, note.
Strength, the folly of trials of, from emulation, 37, 40.
Study, intense, injurious to health, 52. The disorders occasioned by, 53. Character of a mere student, ibid. Hints of advice to studious persons, 54. Danger of their having recourse to cordials, ibid. Health often neglected while in possession, and laboured for after it is destroyed, ibid. No person ought to study immediately after a full meal, 55. Dietetical advice to the studious, 64. The general effects of, on the constitution, 381.
Sublimate, corrosive, how to administer in venereal cases, 461.
Suffocation by the fumes of charcoal, liable to happen in close chambers, 544. General causes of suffocation, 553. Overlaying of infants, 554.
Sugar, an improper article in the food of children, 17.
Sulphur, a good remedy for expelling worms, 333. And for the itch, 365.
Suppers, ought not to destroy the appetite for breakfast, 65. Heavy suppers sure to occasion uneasy nights, 80.

Surgery, many of the operations of, successfully performed by persons unskilled in anatomy, 511.
Sweating, generally excited in an improper manner in fevers, 133, 146.
Swoonings, the several causes of, described, 398. Proper treatment of this disorder, ibid. Cautions to persons subject to them, 546.
Sydenham, Dr., his method of treating fevers in children from teething, 503.
Symptoms, diseases better distinguished by, than by the systematical arrangement of, 123. The differences of sex, age, and constitution, to be considered, 124. Diseases of the mind to be distinguished from those of the body, ibid.
Syncope, proper treatment in, 547.

T.

Tacitus, his remark on the degeneracy of the Roman ladies, 4, note.
Tallow-chandlers, and others working on putrid animal substances, cautions to, 36.
Tapping for the dropsy, a safe and simple operation, 344.
Tar, Barbadoes, its efficacy in the nervous colic, 273.
Tartar, soluble, a good remedy for the jaundice, 338. Cream of, a good remedy in the dropsy, 342. Rheumatism, 353.
Taste, how to restore the sense of, when injured, 419.
Tailors are exposed to injuries from breathing confined air, 44. Are subject to consumptions, ibid. note. Hints of instruction offered to them in regard to their health, 46.
Tea, the customary use of, injurious to female constitutions, 7. Destroys their digestive powers, and produces hysterics, 59. Green, chewing of, a remedy for the heartburn, 380. Has a powerful effect upon the nerves, 389, note. Is bad for persons troubled with flatulencies, 402.
Teething, the disorders attending, 502. Regimen and medical treatment in, ibid. Applications to the gums, and how to cut them, 503.
Temperance the parent of health, 86.
Testicles, swelled, the cause of, 453. Regimen and medicine in, ibid. Treatment under a cancerous or scrophulous habit, 454.
Thirst, how it may be quenched when a person is hot, without danger, 120.
Thought, intense, destructive of health, 49.
Thrush, in infants, the disorder and its causes described, 491. Medical treatment of, ibid.
Tissot, Dr., his medical course for the cure of the hydrophobia, 437. His directions for gathering, preparing, and applying agaric of the oak, as a styptic, 517, note.
Tobacco, a clyster of the fumes of, will stimulate the intestines, and produce a stool, 272, note. A clyster of a decoction of, useful to excite a vomit, 540.
Toes, the free motion of, destroyed by wearing tight shoes, 83.

Tooth-ach, the general causes of, 323. Medical treatment of, 324. When recourse must be had to extraction, 325. Directions for cleaning the teeth, 326.
Touch, injuries to which the sense of, is liable, with the remedies applicable to, 420.
Towns, great, the air of, destructive to the children of the poor, 28. Children bred in the country ought not to be sent too early into towns, 30. Cleanliness not sufficiently attended to in, 93. The best means to guard against the infection in, 97.
Trades, some injurious to health by making the artist breathe unwholesome air, 35, 44.
Transitions, sudden, from heat to cold, the ill effects of, to the constitution, 115.
Travellers, vinegar recommended to, 42. Ought to be careful not to sleep in damp beds, 117. Fevers, why often fatal to, 131,
Trees should not be planted too near to houses, 71.
Trefoil water, a good remedy in the rheumatism, 354.
Tumours, proper treatment of, 515.
Turnbull, Dr., his method of treating the croup in children, 501, note.

V.

Vapour of fermenting liquors, noxious nature of, 542.
Vegetables, wholesome correctors of the bad qualities of animal food, 59, 60. Their extraordinary effects in the scurvy, 359.
Venereal disease, unfavourable circumstances attending this disorder, 441. The virulent gonorrhœa, 442. Gleets, 450. Swelled testicles, 453. Buboes, 454. Chancres, 455. Strangury, 457. Phymosis, 458. A confirmed lues, ibid. American method of curing this disease, 462. General observations, 463. Cleanliness a great preservative against, 465. The use of medicines ought not to be hastily dropped, 466.
Ventilators, the most useful of all modern medical improvements, 69,
Vertigo often produced by intense study, 51.
Vinegar, a great antidote against diseases, 42. Should be sprinkled in sick chambers, 100, 181. Is of considerable service in the bite of a mad dog, 434; and in any kind of poison, 439.
Viper, the bite of, the sufficiency of the grease for the cure of, doubted, 438. Method of treatment recommended, ibid.
Vitriol, elixir of, an excellent medicine in weaknesses of the stomach, 377. And for windy complaints, 385.
Vitus, St., his dance, method of cure of, 394.
Ulcers, proper treatment of, according to their different natures, 523. Lime-water a good remedy, 524. Dr. White's method of treating them, 525. Fistulous ulcers, ibid.
Vomits, their use in agues, 137; and in the nervous fever, 174. Cautions for administering in the putrid fever, 183. Ought by no means to be administered in an inflammation of the stomach, 264. Are useful in cases of repletion, 283. Are powerful remedies in the jaundice, 337. The first objects to be pursued when poison has been received into the stomach, 428. Use in the

hooping-cough, and how to administer them to children, 261. Midwives too rash in the use of, 485, note. Form of a gentle one for infants disordered in the bowels, 489.

Vomiting, the several causes of, 286. Medical treatment of, 287. Saline draught for stopping of, 288. Causes of, in children, 495, How to be treated, ibid. Of blood. See *Blood*.

Voyage, a long one frequently cures a consumption, 162. Voyages have an excellent effect on persons afflicted with nervous disorders, 383.

Ureters, and their use described, 275, note.

Urine, the appearances and quality of, too uncertain to form any determined judgment from, 113. Dr. Cheyne's judgment as to the due quality of, not to be relied on, ibid. The secretion and discharge of, how obstructed, 114. Bad consequences of retaining it too long, ibid. Too great a quantity of, tends to a consumption, ibid. Stoppage of, its general causes, 277 Caution as to the treatment of, ibid. Diabetes, 289. Incontinency of, 292. Suppression of, medical treatment in, ibid. Cautions to persons subject to this disorder, 293. Bloody, cause of, 811. Medical treatment of, 312. An obstinate deafness cured by warm urine, 417, note.

Urine doctors, their impudence, and great success, from the credulity of the populace, 113, note.

Uva ursi, a remedy in present request for the stone, 297.

W.

Walls, high, unwholesome, by obstructing the free current of air, 71.

Ward's fistula paste, a popular remedy that may deserve trial, 525.

Wars occasion putrid fevers, by tainting the air with the effluvia of dead carcasses, 178.

Wasps, hornets, or bees, how the bite of, ought to be treated, 438.

Water, frequently unwholesome by mineral impregnations, 60. Cautions for the choice of, ibid. Cold, the danger of drinking when a person is hot, 120.

——in the head, is a disorder chiefly incident to children, 508. Its causes, symptoms, and proper treatment, 509. The nature of the disorder seldom discovered in due time for cure, 510, note.

Watery eye, how to cure, 415.

Weaning of children from the breast, the proper mode of, 16, 17.

Weather, states of, which produce the putrid fever, 178.

Wells, caution to persons going down into them, 70, note Deep ought not to be entered till the air in, is purified, 542.

Whey, an excellent drink in a dysentery, 317 ; and in the rheumatism, 353. Orange-whey, how to make, 145. Alum-whey, 291.

Whitloe, 516.

Whyte, Dr., his remedy for flatulencies, 401.

Wind. See *Flatulencies*.

Windows, the danger of throwing them open on account of heat and sitting near them, 121.

Wine, good, almost the only medicine necessary in a nervous fever, 174.
Womb, inflammation of, its symptoms, 482.
Women, errors in their education pointed out, 4. Why subject to hysterics, 59. Are better adapted to follow sedentary occupations than men, 76, *note*. In child-bed, often die from their apprehensions of death, 104. Their disorders rendered epidemical by the force of imagination, ibid. Every thing that can alarm them to be carefully guarded against, ibid. Evil tendency for tolling bells for the dead, ibid. How exposed to a miliary fever during pregnancy, 188. Their constitutions injured by living too much within doors, 469. Those who work in the open air almost as hardy as men, ibid. Advice to, with reference to the menstrual discharge, 470. At the commencement, ibid. *Fluor albus*, with its proper treatment, described, 475. Advice to, at the ceasing of the menses, 476. Rules of conduct during pregnancy, 477. Causes and symptons of abortion, 478. How to guard against abortion, ibid. Treatment in cases of abortion, ibid. Instructions at the time of child-birth, 480. Cause of the milk-fever, 482. How to guard against the miliary fever, 483. The puerperal fever, 484. General cautions for women in child-bed, 486. Causes of barrenness, 487.
Wool, the best external application in the gout, 347.
Workhouses poisonous to infants, 28.
Worms, how to treat a looseness produced by, 285. Three principal kinds of, distinguished, 330. Causes 331. Symptoms of, ibid. Medical treatment for, 332. Remedy for children 334. General cautions for preserving children from them, 335. Danger of taking quack-medicines for them, ibid. *note*. Parents advised not to feed them with meat, two or three times a-day, as the flesh of animals in a state of putrefaction often generates worms, ibid.
Wort, recommended for the scurvy, and proper to drink at sea, 358. Is a powerful remedy in cancerous cases, 425.
Wounds, are not cured by external application, 516. Are cured by nature, ibid. Proper course of treatment, ibid. How to stop the bleeding, 517. Caution against improper styptics, ibid. Method of dressing them, 518. Poultices for inflamed wounds, 519. Regimen, ibid.
Writing, hints of advice to those who are much employed in, 51, 53.

Y.

Yaws, general hint for the cure of, 466, *note*.
Young animals all exert their organs of motion as soon as they are able, 20.

Z.

Zinc, the flowers of, a popular remedy for the epilepsy, 393.

INDEX TO THE APPENDIX.

Apothecaries' weight, table of, 7.
Balsams, how to prepare, 10. Anodyne, ibid. Locatelli's, ibid. The vulnerary, ibid.
Boluses, general rules for the preparing of, 11. Astringent, ibid. Diaphoretic, ibid. Mercurial, ibid. Of rhubarb and mercury 12. Pectoral, ibid. Purging, ibid.
Cataplasms, their general attention, 12. Preparation of the discutient, ibid. Ripening, ibid.
Clysters, their general use, and methods of administering, 13. Of service in inflammations of the bladder, 14. Emollient, ibid. Laxative, ibid. Carminative, ibid. Oily clysters, ibid. Starch, ibid. Turpentine, 15. Vinegar, ibid.
Collyria, general remarks on, and their principal intentions, 15, Collyrium of alum, ibid. Vitriolic, 16. Of lead, ibid.
Confections, 16. The Japonic, 17.
Conserves and *preserves,* general remarks on, and their composition. 17. Of red roses, ibid. Of sloes, 18. Orange-peel, ibid.
Decoctions, general remarks on, 18. Preparation of the decoction of althea, 19. The common, ibid. Of logwood, ibid. Of bark, ibid. Of sarsaparella, 20. Of seneka, ibid. White, ibid.
Draughts, 21. The anodyne, ibid. Diuretic, ibid. Purging, ibid. Sweating, 22. Vomiting, ibid.
Electuaries, rules for making, 22. The lenitive, 23. For the dysentery, ibid. Epilepsy, ibid. Gonorrhœa, ibid. Of the bark, 24. For the piles, ibid. Palsy, ibid. Rheumatism, ibid.
Emulsions, their uses, 24. The common, 25. Arabic, ibid. Camphorated, ibid. Of gum ammoniac, ibid. Oily emulsion, ibid.
Extracts, general rules for making, 26.
Eye-waters. See *Collyria.*
Fomentations, how to make and apply, 26. Anodyne, ibid. Aromatic, 27. The common, ibid. Emollient, ibid. Strengthening, ibid.
Gargles, general intentions of, 27. The attenuating, 28. The common, ibid. Detergent, ibid. Emollient, ibid.
Infusions, the advantage of, over decoctions, 29. The bitter, ibid. Of the bark, ibid. Of carduus, 30. Of linseed, ibid. Of roses, ibid. Tamarinds and senna, ibid. Spanish, 31. For the palsy, ibid.
Introduction, 2.
Julaps, the form of, explained, 31. The camphorated, ibid. Cordial, 32. Expectorating, ibid. Musk, ibid. Saline, ibid Vomiting, 33.
Medicinal preparations, 10.
Mixtures, general remarks on, 33. Astringent, ibid. Diuretic, ibid. Laxative absorbent, ibid. Saline, 34. Squill, ibid.

Ointments, use of, 34. Yellow basilicum, 35. Calamine, ibid. Emollient, ibid. Eye, ibid. Issue, 36. Of lead, ibid. Mercurial, ibid. Of sulphur, ibid. White, ibid. For burns, 37. For the piles, ibid. Volatile, ibid. Camphorated, ibid.
Pills, general intentions of, 38. Composing, ibid. Fœtid, ibid. Hemlock, ibid. Mercurial, 39. Mercurial sublimate, ibid. Plummer's, ibid. Purging, 40. For the jaundice, ibid. Stomachic, ibid. Squills, 41. Strengthening, ibid.
Plasters, uses of, 41. Common, ibid. Adhesive, 42. Anodyne, ibid. Blistering, ibid. Gum, 43. Mercurial, ibid. Stomach, ibid. Warm, ibid. Wax, ibid.
Powders, general instructions for making and administering, 44. Astringent, ibid. Of bole, ibid. Carminative, 45. Diuretic, ibid. Aromatic, ibid. Saline, ibid. Steel, ibid. Sudorific, 46. Worm, ibid. Purging ditto, ibid. For the tape-worm, ibid.
Simples, list of, 8.
Sinapisms, the general intentions of, 12. Directions for making, ib.
Syrups, general intentions of, 47. How to make, ibid.
Tinctures and *elixirs*, the proper medicines to exhibit in the form of, 48. Aromatic, ibid. Compound, of the bark, 49. Volatile, ibid. Volatile, of gum ammoniac, ibid. Of black hellebore, ibid. Astringent, 50. Of myrrh and aloes, ibid. Of opium, ibid. Sacred, ibid. Compound, of senna, ibid. Spanish flies, 51. Of balsam of Tolu, ibid. Of rhubarb, ibid. Paregoric, 52. Sacred, ibid. Stomachic, ibid. Acid of vitriol, ibid. Camphorated spirit of wine, 53. Spirit of Minder, ibid.
Vinegar, its medical properties, 53. Vinegar of litharge, 54. Of roses, 55.
Waters by infusion, how to prepare, 55. Lime-water, ibid. Compound ditto, ibid. Sublimate, 56. Styptic, ibid. Tar, ibid.
———, a simple distilled, their medical uses, 57. Preparation of cinnamon-water, ibid. Pennyroyal, ibid. Pepperment, ibid. Spearment, ibid. Rose, 58. Jamaica pepper, ibid.
———, spirituous distilled, 58. Cinnamon, ibid. Jamaica pepper, ibid.
Whey, alum, 58. Mustard, ibid. Scorbutic, 59.
Wine measure, English, table of, 7.
Wines, medical properties of, 59. Anthelmintic, 60. Antimonial, ibid. Bitter, ibid. Ipecacuanha, 61. Chalybeate, ibid Stomach, ibid.

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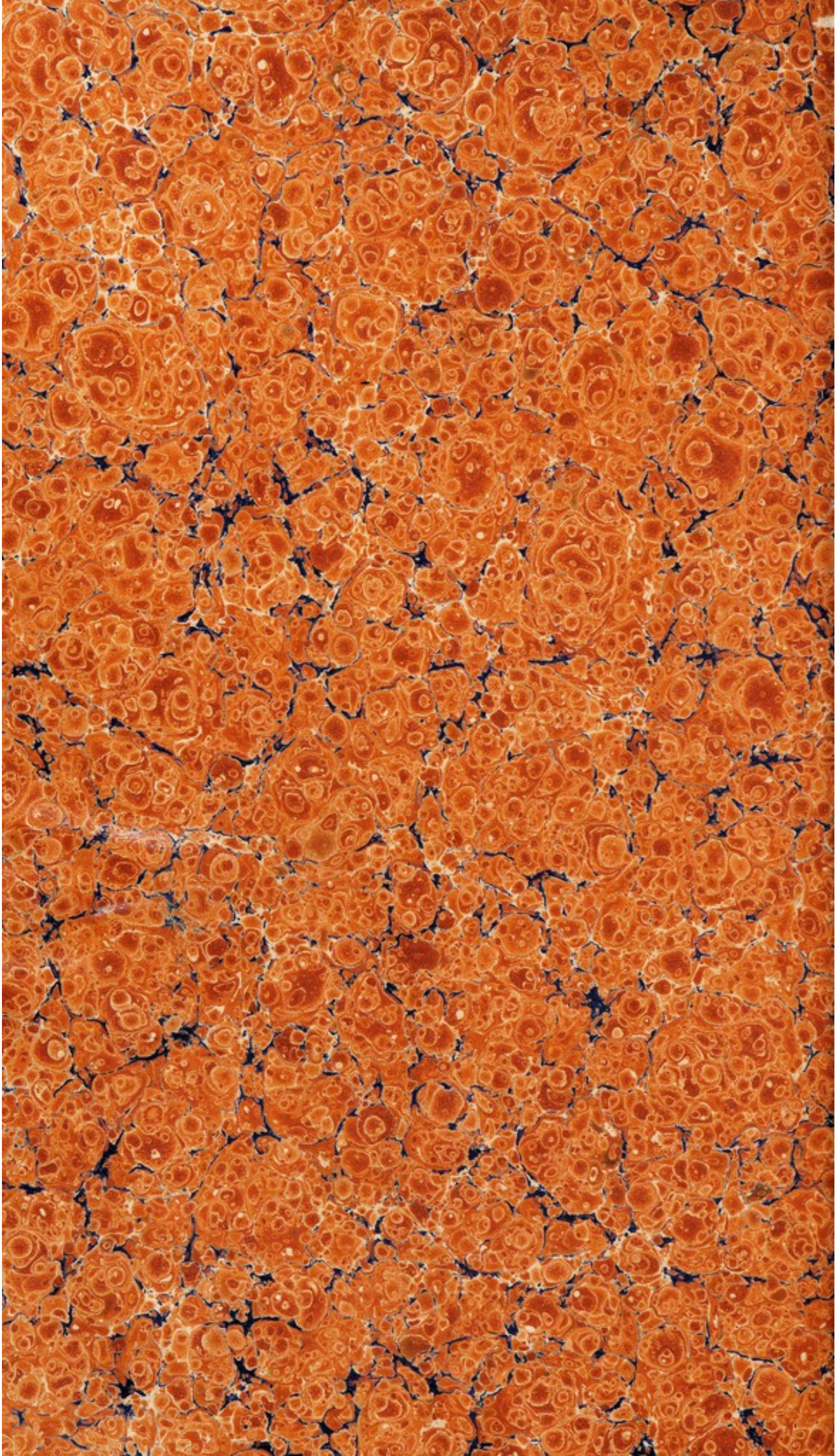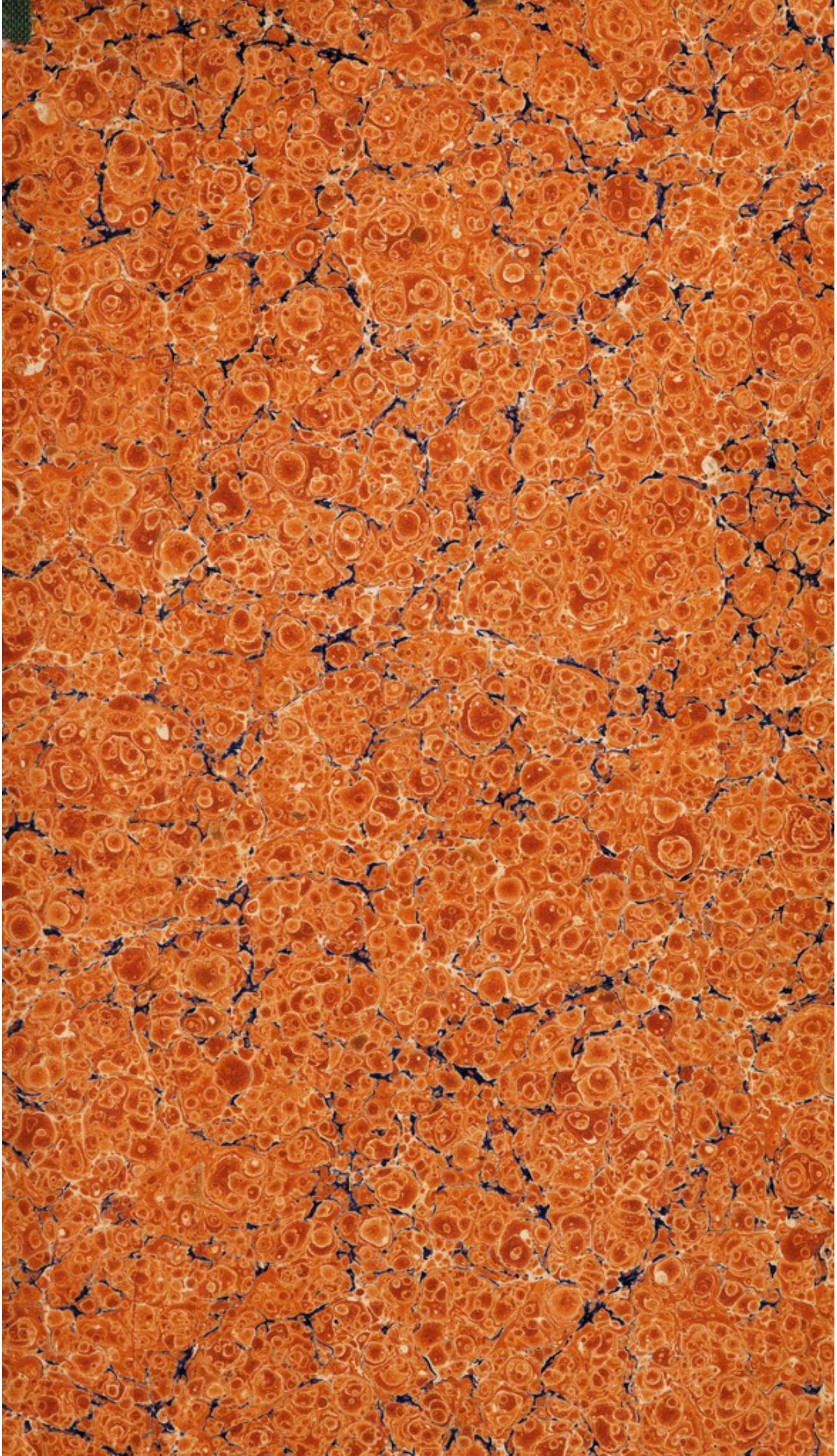
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