



Cure

hold a strong
Bark in
on
with the
over all the
our

\$4.50

\$4.50

Deuces on Bardeloque

A Poultice made of Spanish
cedar themselves boiled & broiled
applied to the throat an infalli-
ble cure for the quinsy or any
swelling of the throat

For a fresh wound
Salt & tallow is highly recommen-
ded as a Salve, melted together:

Salt water with a little lime in
it will cure the Thrush in horses

Whiding at the Nose may be
immediately stopped by using Salt
Beef grated fine & using an snuff
2 or 3 times

DOMESTIC MEDICINE

W. Scott

OR,

A TREATISE

ON THE

PREVENTION AND CURE OF DISEASES

BY

REGIMEN AND SIMPLE MEDICINES.

AN APPENDIX,

CONTAINING

A DISPENSATORY FOR THE USE OF PRIVATE PRACTITIONERS
TO WHICH ARE ADDED,

OBSERVATIONS ON DIET,

A METHOD OF LIVING LESS EXPENSIVE, AND
MORE CONDUCTIVE TO HEALTH
THAN THE PRESENT.

BY WILLIAM BUCHAN, M. D.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, EDINBURGH

NEW-YORK;

PUBLISHED BY RICHARD SCOTT,

276 Pearl-street.

1815

1100 of water being of the
nature of the doctor war's produced
a violent relief by using a strip of
the bark cut to the proper
width made smooth & soaked in water
until it became slender
about 2 feet -

Tartar Emetic used as an emetic
gives more immediate
relief than any thing else
in cases of Cholera -

The cook of the Pennsylvania United
States Army 1 Gill SPT + 3/4 Gt water

boxes of Calomel from both
the given was every 6 hours sometimes
every 2 untill consistent bilious
discharges were produced then
repeated by this mixture first or
Bills equal parts of each Calomel
& lax & Rhubarb, sometimes Scam
mony instead of Rhubarb untill
the discharges ceased to have
bilious

11-9923
 The pills to contain about 2 grs.
 of ca. in ordinary bilious cases
 4 or 5 of these pills are suffi-
 cient - occasionally aided by Senna
 &c.

ADVERTISEMENT.

A LINIMENT.—A recipe for a liniment which I have used for fifteen years. When all patented liniments proved as nostrums, this liniment was applied, and proved highly efficacious in all cases of sprains, bruises, wounds, external or internal, on man or beast. I have used it with great success in severe cases of rheumatism. No farmer should be without it, for there is none as good that I have tried, and I have tried the Arabian, Mustang, and half a dozen others, and to no effect. In cuts, fresh wounds, scrape lint and put on it sugar: then saturate the sugar and the lint with the liniment. After well shaking, apply to the wound, and keep it in that condition for two or three days: then leave off the sugar. In other cases, rub well with the liniment: apply, after rubbing, a thick flannel to the parts. One-half ounce of spirits of hartshorn, two ounces of camphor-gum, one gill of spirits turpentine, one-half pint of sweet-oil, one pint of alcohol, well shaken in all cases before using.—*So. Rec.*

," claims no
 a copy of the
 of this Work,
 rticular deser-
 improvements to
 ne doubt origi-
 iples and prac-
 ntertain for the
 as induced not
 een added to
 ived, whether
 a SECTION,
 e letters, A. E.

NEW-YORK, 1812.

16 gr Pearl Ash mixed into
 a paste with Honey
 divide into 4 portions one
 of which to be taken 3 times
 day. for the use
 To clean the Ovary
 use the oil squeezed out of Eggs
 poured slowly in an oven without
 any grease within them

ADVERTISEMENT

BY DR. BUCHAN.

THE Author, having been in constant practice since the first appearance of this Book, has taken occasion in the later Editions through which it has passed, to improve many articles which were inserted with less accuracy in the more early impressions. To the preceding Edition was added a Chapter on Diet, recommending a method of living less expensive, and more conducive to health, than the present. Several other improvements have been also made in the form of notes to illustrate the text, or put people on their guard in dangerous situations, and prevent fatal mistakes in the practice of medicine, which, it is to be regretted, are but too common.

Although the DOMESTIC MEDICINE was never intended to supersede the use of a Physician, but to supply his place in situations where medical assistance could not easily be obtained; the Author is sorry to observe, that the jealousies and fears of some of the Faculty have prompted them to treat the Work in a manner very unbecoming the Professors of a liberal science: notwithstanding this injurious treatment, convinced of the utility of his plan, he shall spare no pains to make it more useful; determined that neither interest nor prejudice shall ever deter him from exerting his best endeavours to render the MEDICAL ART more extensively beneficial to MANKIND.

New-Store Street, Bedford Square, }
June 4, 1798.

Croup

a dose of Calomel & Spue at
the Commencement of the disease
& a plaster of musk mixed with
lard or ^{Sheep's or Hare's} ~~goose's~~ ^{fat} applied
to the upper part of the neck
as low down as the breast never
fails to cure.

*one infallible cure for the same Take 2 Spoonfulls
 full strong - 2 Dr. of Cow foot oil, and of
 strong vinegar & a piece of salt Petre the size of
 a pea - spin mix until the salt Petre is dissolved
 shake it 1: or
 one half Tea Spoon to be given at For sucking*

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Mr. Hines recd.

1/2 oz. aloes

1/2 - oil anise

2 - R. kumbar

1/2 - Gentiana oval

1 qt. French Brandy

Take a tea spoon full,
for a dose night & morning
if heart heaves take at
night 1 or 2 grs. Carbonate
Soda in sage tea to produce
perspiration.

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 Faculty. As I never could entertain such an unfavourable idea, I was resolved to make the experiment, which indeed came out pretty much as might have been expected. Many whose learning and liberality of sentiments do honour to medicine, received the book in a manner which at once showed 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 and superintend them, scarce any of them lived.

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

The application of medicine to the various occupations of life has been in general the result of observation. An extensive practice for

several years, in one of the largest manufacturing towns in England afforded me sufficient opportunities of observing the injuries which those useful people sustain from their particular employments, and likewise of trying various methods of obviating such injuries. The success which attended these trials was sufficient to encourage this attempt, which I hope will be of use to those who are under the necessity of eating 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 it 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 when 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 importance of a proper medical police is either not understood, or little regarded. Many things highly injurious to the public health are daily practised with impunity, while others, absolutely necessary for its preservation, are entirely neglected.

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

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

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

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

The learned Dr. Arbuthnot asserts, that by a proper attention to those things which are almost within the reach of every body, more good and less mischief will be done in acute diseases, than by medicines improperly and unseasonably administered; and that great cures may be effected in chronic distempers, by a proper regimen of the diet only. So intirely 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 Doctor Huxham, who observes, that we often seek from Art what all-bountiful Nature most readily, and as effectually, offers us, had we diligence and sagacity enough to observe and make use of them; that the *dietetic* part of Medicine is not so much studied as it ought to be; and that though less pompous, yet it is the most natural method of curing diseases.

To render 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 it 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 observations will hold with regard to others some

time hence. Wherever I was convinced that medicine might be used with safety, or where the cure depended chiefly upon it, I have taken care to recommend it; but where it was either highly dangerous, or not very necessary, it is omitted.

I have not troubled the reader with an useless parade of quotations from different authors, but have in general adopted their observations where my own were either defective, or totally wanting. Those to whom I am most obliged are, Ramizini, Arbuthnot, and Tissot; the last of which, in his *Avis du Peuple*, comes the nearest to my views of any author which I have seen. Had the Doctor's plan been as complete as the execution is masterly, we should have had no occasion for any new treatise of this kind soon; but by confining himself to the acute diseases, he has in my opinion omitted the most useful part of his subject. People in acute diseases may sometimes be their own physicians; but in 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 his heart.

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

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

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

gant 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 considerably 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 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 were unequal to this task, have even valued themselves upon conching, at least, their prescriptions, in terms and characters unintelligible to the rest of mankind.

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

Medicine however, has not, as far as I know, in any country, been reckoned a necessary part of the education of a gentleman. But surely no sufficient reason can be assigned for this omission. No science lays open a more extensive field of useful knowledge, or affords 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 a conjectural, but even a suspicious art. This has been long ago removed from the other sciences, which induces many to believe that medicine is a mere trick, and that it will not bear a fair and candid examination. Medicine, however, needs only to be better known, in order to secure the general esteem of mankind. Its precepts are such as every wise man would chuse to observe, and it forbids nothing but what is incompatible with true happiness.

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

* Observations on the Duties and Offices of a Physician.

a man who might ruin his character and family by the smallest deviation from an established rule.

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

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

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

I know it will be said, that diffusing medical knowledge among the people might induce them to tamper with medicine, and to trust to their own skill instead of calling a physician. The reverse of this however is true. Persons who have the most knowledge in these matters, are commonly most ready both to ask and to 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 foundations of Quackery, which is the disgrace of Medicine. No two characters can be more different than that of the honest physician and the quack; yet they have generally been very much confounded. The line between them is not sufficiently apparent; at least is too fine for the general eye. Few persons are able to distinguish sufficiently between the conduct of that man who administers a secret medicine, and him who writes a prescription in mystical characters and an unknown tongue. Thus the conduct of the honest physician, which needs no disguise, gives a sanction to that of the villian, 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 patient, as far as he could understand them, it would enable him to know when the medicine had the desired effect; would inspire him with absolute confidence in the physician; and would make him dread and detest every man who pretended to cram a secret medicine down his throat.

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

cary 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 imaginable.

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

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

We are sorry indeed to observe, that Medicine has hitherto hardly been considered as a popular science, but as a branch of knowledge solely confined to a particular set of men, while all the rest have been taught not only to neglect, but even to dread and despise it. It will however appear, upon a more strict examination, that no science better deserves the 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 inclination to do good. Such people are often deterred from the most noble and praise-worthy actions, by the foolish alarms sounded in their ears by a set of men, who, to raise their own importance, magnify the difficulties of doing good, find fault with what is truly commendable, and flee 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 to 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 of physic, who despises both reason and observation, *that he may be wrong by rule*; and who while he is dosing his patient with medicines, often neglects other things of far greater importance.

Many things are necessary for the sick besides medicine. Nor is the person who takes care to procure these for them, of less importance than a physician. The poor oftener perish in diseases for want of proper nursing than of medicine. They are frequently in want of even the necessaries of life, and still more so of what is proper for a sick-bed. No one can imagine, who has not been a witness of these situations, how much good a well-disposed person may do, by only taking care to have such wants supplied. There certainly cannot be a more necessary, a more noble, or a more 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 things

* Arbuthnot.

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 some just ideas of the importance of proper food, fresh air, cleanliness, and other pieces of regimen necessary in diseases, would be a work of great merit, and productive of many happy consequences. A proper regimen, in most diseases, is at least equal to medicine, and in many of them it is greatly superior.

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

§ “ Before we enter upon the prevention or cure of diseases, it may not be improper to take a cursory view of the human body, respecting the functions immediately connected with life. So wonderful is the structure of our frame, as displayed by anatomy, that atheistical persons, obdurate to every other evidence of the existence of a God, who created the universe, have, on witnessing a dissection, been instantly convinced of their mistake, and have acknowledged with equal astonishment and shame, that nothing less than a Being of infinite wisdom and power could have contrived and executed such a wonderful piece of mechanism as that of the human body.

“ The primary agent in the circulation of the blood is the heart, a large muscle situated in the left side of the breast (thorax, or chest) and endowed with great irritability: In the first rudiments of animal life, even before the brain is formed, the *punctum saliens*, as it is called, points out the embryo heart in miniature, and marks its primæval irritability as a sure presage of its future importance in supporting the vital motions. As this singular organ exhibits irritability the first, so it never relinquishes it till the last; whence it has been called the *primum mobile*, and *ultimum moriens*, that is, “ the first part that moves, and the last that dies,” of the animal machine. It is observable, that the motion of the heart not only survives that of the organs of voluntary motion, but continues a considerable time even after it is separated from the body of many animals. Hence, in drowning, or suffocation, though the pulse be imperceptible, and apparently extinguished, yet the heart still preserves this latent power or susceptibility of motion, and wants only to be gently excited by suitable means to renew its action.

This organ is surrounded by the pericardium, or heart-purse, an

exceeding strong membrane, which covers the heart, even to its basis. Its uses are to keep the heart from having any friction with the lungs, and to contain a fluid to lubricate or moisten its surface.

“ From the right ventricle or cavity of the heart, the irritability of which is excited into action by the circulating fluid, the blood is propelled through the lungs, which are situated on the right and left side of the heart, from which they differ on appearing to be void of irritability. They are divided into two lobes, and these into more divisions, three on the right side, and two on the left. The trachæ, or wind-pipe, descends into the lungs, and forms innumerable cells, which have a communication with each other, and give the whole the appearance of a honey-comb or sponge.

“ The blood, after passing through the lungs, arrives again at the heart, and from the left ventricle is expelled into the *aorta*, or great artery; which dividing into two branches, one upwards, and the other downwards, distributes the blood through the whole body; from the extremities of which it returns, by various veins, through the ascending and descending cava,* and is transmitted again to the heart.

“ The heart is the grand organ which actuates the vital functions, and to this purpose it is admirably fitted by its own irritability; but it is necessarily supported in its action by the powerful influence of the nerves, which are the ultimate instruments both of motion and sensation, and have their origin in the brain.

“ The diaphragm or midriff is a large broad muscle which divides the thorax from the abdomen† or belly. In its natural state, it is concave or vaulted towards the abdomen, and convex towards the thorax.‡ Haller calls it “ the most noble bowel next to the heart;” and, like the latter, it is in constant action. At the time of inspiration it approaches towards a plane. Besides being a muscle of inspiration, it assists in vomiting, and the expulsion of the fæces.§ From the exertion of this muscle likewise proceed sighing, yawning, coughing, and laughing. It is effected by spasms, as in the hickup, &c. It is both a muscle of voluntary and involuntary action. We may observe in this muscle strong characters of admirable contrivance. It separates posteriorly into two slips, between which the descending aorta passes. A little above this, and towards the left side, in the most fleshy part of the midriff, there is a direct opening for the passage of the *œsophagus* or gullet. There is also on the right side a large triangular hole for the passage of the ascending cava.

“ The gullet is composed both of longitudinal and circular fibres, but chiefly circular, much more so than the intestines; because this has no foreign power to assist, and because it is necessary that the food should make a shorter stay in the throat than in the bowels. The inner surface is a smooth membrane, well supplied with mucilage, to sheath the organ, and render the passage of the aliment or food easy.

“ The stomach lies across the upper part of the abdomen, and is covered by the liver; when distended it presses on the spleen. It nearly

* Cava is the large vein which conveys the reflux blood to the heart.

† Abdomen, from *abdo*, to hide, as its contents lie hidden.

‡ Derived from the Greek, signifying the breast.

§ This word with chymists is used to express the ingredients and settling after distillation and infusion: here it means excrement.

resembles in figure the pouch of a bag-pipe, its upper side being concave, and the lower convex. Its left end is the most capacious. On the left side is the entrance from the gullet; on the right is the opening, called *pylorus*, by which the chyle passes into the intestines. Here is a circular valve, or sphincter muscle, which prevents a regurgitation of the aliment. The stomach has circular and longitudinal fibres, and its inner membrane is covered with a strong viscid mucus.

“The liver, the largest gland in the body, is situated immediately under the vaulted cavity of the midriff, chiefly on the right side, and somewhat on the left over the stomach. Exterioſly, or anteriorly, it is convex, inwardly it is concave; very thick in its superior part, and thin in its inferior. The upper side adheres to the midriff; and it is fixed to this, and the *sternum*, or breast-bone, by a broad ligament. It is also tied to the navel by a ligamentous band, which is the umbilical vein of the unborn infant, degenerated into a ligament. Both these bands serve to suspend it, while lying on the back, from bearing too much on the subjacent *cava*; otherwise it might press on this important returning vessel, stop the circulation, and put a period to life. Dogs and cats, and other animals who are designed for leaping, have their liver divided into many distinct lobules, to prevent too great a concussion of the organ. The liver is the viscus or bowel which performs the secretion of the bile.

“The gall-bladder is situated under the great lobe of the liver, a little to the right. In a standing posture it lies forwards and downwards. Its bottom is raised by a fulness, and depressed by the emptying of the stomach. The use of the gall-bladder is to serve as a receptacle for the bile.

“The intestines are destined to receive the food from the stomach, and after exposing the useful part of it to the *lacteals*, a set of extremely small vessels, to convey the remainder out of the body. The intestinal canal is usually five times the length of the individual: it is curiously convoluted in the abdomen, and is extremely irritable. Anatomists have divided this canal, although one continued pipe, into six portions, three of which are termed the *small intestines*,* and the three last, the *great*. In the small intestines there are numerous plaits to detain the food, and allow a larger surface for its absorption. These are larger, and far more numerous near the stomach, where the food is thinner, than they are towards the other extremity. At the entrance of the *ilium* into the *colon*, there are two very large valves, which prevent the regress of the *fæces* into the *ilium*. The *cæcum* and *colon*, two of the intestines towards the lower extremity, besides having stronger muscular coats than the small intestines, are furnished with three ligamentous bands, running lengthwise on their outside, dividing their surfaces into three portions nearly equal. Though appearing extremely like ligaments, they are composed in their inner structure, of true muscular fibres. The ligament-like bands, which in the *cæcum* and *colon* are collected into three portions, are spread equally over the surface of the *rectum*, or lower extremity of the intestines. This is a

* The three smaller are, the *duodenum*, (from its length being about that of the breadth of twelve fingers,) *jejunum*, and *ilium*, from the Greek, signifying to turn about, because it makes many convolutions.

The three larger are, the *cæcum*, or blind gut (so called from its being perforated at one end only;) the *colon*, signifying hollow, a word from the Greek and the *rectum*, or straight gut.

wise precaution of Nature, that no part of it may be weaker than another, lest it should give way in the efforts for expelling the *feces*. The plaits are considerably fewer in the great intestines. They have all an inner membrane, covered with an infinite number of arteries or glands, which discharge a lubricating fluid. They are furnished with muscular fibres, both circular and longitudinal.

“ The spleen, or milt, is situated immediately under the edge of the midriff, above the left kidney, and between the stomach and ribs. In figure, it resembles a depressed oval, near twice as long as broad, and almost twice as broad as thick. Cheselden informs us, that it has been taken from dogs without any observable inconvenience to them. Its use is still problematical.

“ The pancreas, or sweet-bread, is situated transversely under the stomach. Its shape resembles a dog’s tongue. Along the whole length of it there is a duct, which terminates in the upper part of the intestines near the stomach. The pancreatic juice resembles the saliva, but is less viscid or slimy, and contains a larger proportion of the salts of the blood. It is probably intended for the solution of our aliment.

The kidneys are two oval bodies, situated in the loins, contiguous to the two last short ribs; the right under the liver, and the left under the spleen. The structure of the kidneys is curiously fitted for securing the urine, which is carried from each of them by canals termed the ureters, into the bladder, the reservoir of that fluid, situated in the lower part of the belly. They enter the bladder near its neck, running for the space of an inch obliquely between its coats, and forming, as it were, to themselves, two valves; so that, upon the contradiction of the bladder, the urine is directed along the urethra, which is its proper passage out of the body.

Over the upper part of the abdomen is spread the *omentum*, or caul, consisting of two broad, thin, and transparent membranes, joined together by cellular texture, in the cells of which a quantity of fat is deposited. The uses of it are to interpose between the *peritonorum*,* or lining, the intestines, and the stomach, to keep all these parts moist, warm, slippery, and to prevent their adhesion.

Last of all comes the peritonæum, a strong membrane, which confines, as in an inclosure, the intestines and contents of the abdomen.

Sucti, in a general view, are the contents of the cavities of the breast and belly, which perform, respectively, the vital motions, and those natural functions that are subservient to the support of our frame. But there remains to be mentioned another essential cavity, with its dependent system, to the primary influence of which all the other parts of the body are indebted for their action and energy. The cavity to which I allude is the skull, the receptacle of the brain. The brain is divided into two portions; namely, the *cerebrum* and *cerebellum*;† the former situated in the upper part of the skull, and the latter under it, in the hind part. The brain is a soft pulpy substance, surrounded by two membranes; one called *dura*, and the other *pia, matter*. It has also a third, called *arachnoid*,

* Signifying near to, stretching round, or about, as *periosteum*, *pericarpium*; near to the bone, heart, &c.

† *Cerebellum*, the little brain as it were: both are often called thus, when the brain is spoken of in small animals.

from its fineness, as being similar to a spider's web. It contains some *sinuses*, which are nothing more than large veins or receptacles for blood, and four cavities called *ventricles*, moistened, in a healthful state, with a fine vapour, which increasing gives rise to diseases. Like other parts of the body, it has a variety of arterial branches from the heart, which diffuses through its substance, and on the membranes. The brain is the great elaboratory, where the animal spirits, or nervous influences which actuate our frame, are supposed to receive their existence. The nature of this fluid, if really a fluid, has not yet been sufficiently investigated. It is certain, however, that from this source the nerves derive their origin. These are white, firm, solid cords, which arise from the brain and spinal marrow, which is only an elongation of the brain, and are spread over every part of the body endowed with sensibility, by innumerable filaments. Ten pair of nerves issue from the brain itself, and thirty from the spinal marrow. Those that go to the organs of sense are considerably larger than the rest, and are in part divested of their outer covering.

Whether an immaterial and invisible Being can positively be said to exist in any place, it might appear presumptuous to determine; but it is a prevailing opinion in physiology, that the brain is the seat of the soul; and the *pituitary gland*, in the *penetralia* of the brain, has been assigned as the sacred mansion of this immortal inhabitant. Human vision can discover no signs to confirm this opinion; but the man would be blind, and utterly void of understanding, who could not trace through the whole of the animal system the most evident marks of divine intelligence and wisdom; of intelligence which excites admiration, and of wisdom beyond conception.

The wonderful contrivance exhibited in the human frame is, if possible, still more manifest from the curious formation of the eye and ear; of which only a very imperfect idea could be conveyed by verbal description. I shall therefore not attempt to delineate those admirable organs: nor need I mention the construction of the limbs; of the arms and legs; of the hands and feet; so nicely united with joints, and so happily supplied with muscles and tendons, with ligaments and nerves, that they are adapted to all the various purposes of convenience and utility in motion.

I shall conclude this imperfect sketch of the human body with a brief account of digestion, that important process in the animal economy, by means of which the continual and unavoidable waste of the constitution is regularly supplied.

The aliment being received into the mouth, the first operation it undergoes is to be masticated by the action of the teeth and several muscles. This mastication is of a greater moment than is generally imagined; and the good effects of it are further promoted by mixing with the food a quantity of saliva, discharged from the glands of the mouth, and which is greatly conducive to digestion. When the food is carried down the gullet into the stomach, it there meets with an additional supply of juices, called the gastric juices, of a nature yet more efficacious than the former, besides a small portion of bile. During its continuance in the stomach, it experiences the effects of heat and muscular action, from the coats of that organ, and the motion and warmth of the surrounding parts. It thence passes out gradually by the right orifice of the stomach, and there meets with an

additional quantity of bile from the gall-bladder and liver; besides the pancreatic juice, or that of the sweet-bread, of a nature similar to the saliva, but rather more thick, and the fluids separated by the intestines. It now receives the action of the bowels, or the peristaltic motion, by which they churn, as it were, the whole mass, minutely mixing together the food, and the different juices, collected in the passage from the mouth. A fluid is now produced called chyle, which is separated from the grosser materials, and taken up by a set of extremely small absorbent vessels, called lacteals. These have their origin in the inner coat of the intestines, and, passing thence, discharge themselves into a duct named the receptacle of the chyle, whence this fluid proceeds along the *thoracic** duct, which terminates in the left subclavian† vein. In the passage from the intestines to the receptacle, there is a number of glands, which separate a watery liquid, for the purpose of giving the chyle a thinner consistence. To prevent the chyle from falling back in its progress through the lacteals, the construction of these vessels is admirably contrived. They are furnished with a number of valves, which open only forwards, and are shut by any fluid pressing backwards. From the subclavian vein, the chyle is poured into the blood, and thence immediately thrown into the right auricle and ventricle‡ of the heart; from which, now mixed with the blood, it passes into the lungs. It undergoes in that organ a considerable change from the act of respiration. From the lungs it proceeds through the pulmonary vein to the left auricle of the heart, and then into the left ventricle: whence, at last endowed with all the qualities of blood, it passes into the aorta, and is diffused universally through the frame; the wants of which it is fitted to supply by the addition of nourishing particles. Is it possible to contemplate this admirable mechanism without breaking forth in the exclamation of the Psalmist, that “we are wonderfully made?” I may justly add, that, considering the great variety of ways in which the human body may be affected, both from without and within, with the necessity for the perpetual motion of the vital powers, and the millions of vessels, invisible to the naked eye, through which the fluids ought to pass, it is a matter of real astonishment that we should subsist a single day. And doubtless it would be impossible, were not the machine constantly sustained by the same Almighty and Beneficent Being who formed it.

* From thorax, the breast.

† A term applied to any thing under the arm-pit or shoulder.

‡ Two muscular bags, one on each side, are termed its auricles, from the Latin signifying ears.

MEDICINES USED IN PRACTICE.

MANY who peruse the *Domestic Medicine*, have expressed a wish that the catalogue of medicines contained in that book should be more extensive, and likewise that the dose of each article should be ascertained, as they are often at a loss to know how to administer even those medicines, the names of which they meet with in almost every medical author. To obviate this objection, and furnish a greater scope to those who may wish to employ more articles than are contained in the Dispensatory annexed to the above work, the following List of Simples and Compounds, taken from the most improved Dispensatories, is now inserted.

To prevent mistakes, the English name of every medicine is not only used, but the different articles are arranged according to the order of the English alphabet, and the smallest and largest dose placed opposite to each article. The doses indeed refer to adults, but may be adapted to different ages by attending to the rules laid down in the Introduction to the *Appendix*, (page 420.) Short cautions are occasionally inserted under such articles as require to be used with care.

Though a greater variety of medicines is contained in this than in any former edition of the *Domestic Medicine*, yet the author would advise those who peruse it, as far as possible, to adhere to simplicity in practice. Diseases are not cured by the multiplicity of medicines, but by their proper application. A few simples, judiciously administered, and accompanied with a proper regimen, will do more good, than a farrago of medicines employed at random.

A LIST OF THE MEDICINES COMMONLY USED IN PRACTICE, WITH THEIR PROPER DOSES.

ACACIA, the expressed juice,	from	1 scruple to	1 drachm
Acid, the acetous	- - - -	1 scruple	1 drachm
—, muriatic	- - - -	10 drops	40 drops
—, nitrous, diluted	- - - -	15 drops	40 drops
—, vitriolic, diluted	- - - -	15 drops	40 drops
Æther, vitriolic	- - - -	30 drops	2 drachms
Æthiops mineral	- - - -	10 grains	30 grains
Aloes	- - - -	5 grains	30 grains
Alum	- - - -	6 grains	20 grains
—, burned	- - - -	3 grains	12 grains
Amber, prepared	- - - -	$\frac{1}{2}$ drachm	1 drachm
Ammoniac, gum	- - - -	5 grains	30 grains
—, milk of	- - - -	$\frac{1}{2}$ oz.	1 ounce
Angelica, the root powdered	- - - -	$\frac{1}{2}$ drachm	$1\frac{1}{2}$ drachm
Anise, the seeds	- - - -	10 grains	1 drachm
Antimony	- - - -	10 grains	1 drachm
—, calcined	- - - -	1 scruple	1 drachm
—, glass of	- - - -	$\frac{1}{4}$ grain	2 grains
Asafœtida	- - - -	6 grains	half a dra.
—, milk of	- - - -	half oz.	1 ounce
Asarum, to provoke sneezing	- - - -	3 grains	5 grains

Balsam of capivi	- - -	from 20 drops	to 60 drops
——, Canadian	- - -	——	——
——, of Peru	- - -	——	——
——, of Tolu	- - -	——	——
Bark, Peruvian, powder	- - -	2 scruples	2 drachms
Bears foot, powder	- - -	10 grains	20 grains
Benzoin, resin of	- - -	4 grains	20 grains
Benzoin, flowers of	- - -	10 grains	20 grains
Bistort, powder of the root	- - -	1 scruple	1 drachm
Blessed thistle	- - -	10 grains	1 drachm
——, expressed juice of	- - -	2 dra.	2 ounces
Bole Armenian	- - -	10 grains	40 grains
——, French	- - -	——	——
Borax	- - -	10 grains	40 grains
Broom, ashes of the tops	- - -	1 scruple	1 drachm
Burdock, powder of the root	- - -	10 grains	1 drachm
Calomel	- - -	} 1 gr. to 3 gr. alterative 3 do. to 12 do. purgative	
Camphor	- - -		2 grains to half a drachm
Canella alba, powder of	- - -	1 scruple	2 drachms
Cantharides	- - -	$\frac{1}{2}$ grain	4 grains
Cardamoms	- - -	5 grains	20 grains
Caraway seed	- - -	10 grains	40 grains
Cascarilla bark	- - -	10 grains	40 grains
Cassia, the pulp	- - -	2 dra.	1 oz.
Castor	- - -	8 grains	1 drachm
Catechu	- - -	15 grains	30 grains
Camomile, in powder	- - -	20 grains	1 drachm
Chalk	- - -	20 grains	2 scruples
Cinnamon	- - -	5 grains	1 drachm
Colocynth	- - -	10 grains	1 drachm
Columbo	- - -	10 grains	1 drachm
Confection, aromatic	- - -	10 grains	2 scruples
——, opiate	- - -	10 grains	2 scruples
Crabs claws, prepared	- - -	10 grains	1 drachm
Conserve of roses	- - -	1 dra.	1 oz.
——, of squills	- - -	20 grains	30 grains
——, of arum	- - -	20 grains	1 drachm
Contrayerva	- - -	20 grains	2 scruples
Coriander seed	- - -	15 grains	1 drachm
Cowhage, the spiculæ of one pod mixed with honey or molasses.	- - -		
Dandelion, expressed juice	- - -	1 oz.	3 oz.
Decoction of hartshorn, half a pint repeated as often as necessary.	- - -		
——, of broom, 1 oz. to a pint of water, to be taken by tea-cupsful.	- - -		
—— of Peruvian bark	- - -	1 oz.	4 oz.
—— of the inner bark of the elm	- - -	4 oz.	16 oz. daily
—— of sarsaparilla	- - -	4 oz.	16 oz. daily
—— compound	- - -		
—— of guiacum, 3 drachms to a pint of water. A pint daily,	- - -		

Electuary of cassia	- - -	from 1 dra.	to	1 oz.
———— of scammony	- - -	20 grains		1 drachm
———— lenitive, or of senna	- - -	30 grains		6 drachms
Elixir of vitriol	- - - -	15 drops		50 drops
Elecampane, powder of the root	- - -	20 grains		1 drachm
Extract of broom tops	- - - -	$\frac{1}{2}$ dra.		1 drachm
———— of Peruvian bark	- - -	10 grains		$\frac{1}{2}$ drachm
———— carcarilla	- - - -	10 grains		$\frac{1}{2}$ drachm
———— camomile	- - - -	20 grains		1 drachm
———— colocynth	- - - -	5 grains		25 grains
———— gentian	- - - -	10 grains		$\frac{1}{2}$ drachm
———— liquorice	- - - -	1 dra.		$\frac{1}{2}$ oz.
———— logwood	- - - -	10 grains		$\frac{1}{2}$ drachm
———— black hellebore	- - - -	3 grains		10 grains
———— jalap	- - - -	10 grains		20 grains
———— guaiacum	- - - -	10 grains		20 grains
———— white poppies	- - - -	1 grain		5 grains
———— rue	- - - -	10 grains		20 grains
———— savin	- - - -	10 grains		30 grains
———— senna	- - - -	10 grains		30 grains
Fern, powder of the root	- - - -	$\frac{1}{2}$ dra.		$\frac{1}{2}$ oz.
Fennel seed	- - - -	20 grains		1 drachm
Fox glove, powder of the leaves	- - - -	$\frac{1}{2}$ grain		3 grains
or a drachm infused in a pint of				
boiling water, of which a dose is	- - - -	1 oz.		
Should be administered with caution.				
Galbanum	- - - -	10 grains		30 grains
Galls	- - - -	10 grains		20 grains
Garlic, cloves of	- - - -	No. 1.		No. 6.
Gentian	- - - -	10 grains		40 grains
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		12 grains
Hartshorn, prepared	- - - -	20 grains		1 drachm
—, spirits of	- - - -	10 drops		40 drops
—, caustic in some mucila-				
—, ginous vehicle	} - - - -	5 drops		25 drops
—, salt of	- - - -	2 grains		12 grains
Hellebore, white	- - - -	1 grain		5 grains
—, black	- - - -	5 grains		10 grains
Hemlock, should always be begun				
in very small doses, of one grain				
or less, and gradually increased				
as the constitution will bear.				
Hiera picra	- - - -	10 grains		20 grains
Honey of squills	- - - -	10 grains		40 grains
— of roses	- - - -	1 drachm		2 drachms
Hoffman's anodyne liquor	- - - -	20 drops		60 drops
Jalap, powder	- - - -	10 grains		40 grains

Infusion of Gentian, powder	-	from 1 ounce to	3 ounces
----- of roses	- - - -	2 ounces	3 ounces
----- of senna	- - - -	$\frac{1}{2}$ ounce	2 ounces
Ipecacuanha	- - - -	10 grains	30 grains
Iron, rust of	- - - -	5 grains	20 grains
Iron ammoniated	- - - -	2 grains	10 grains
Iron tartarised	- - - -	2 grains	10 grains
----- salt of	- - - -	$\frac{1}{2}$ grain	5 grains
Juniper, powder of the berries	- - - -	20 grains	1 drachm
Kino, gum	- - - -	10 grains	30 grains
Kermes, juice of	- - - -	1 drachm	3 drachms
Lichen, ash-coloured	- - - -	3 grains	40 grains
----- Icelandic, a strong decoction of	- - - -	1 ounce	4 ounces
Lime-water	- - - -	4 ounces	8 ounces
Lixivium, of tartar	- - - -	15 drops	40 drops
Linseed, an infusion of 1 ounce to a quart of water; may be used at pleasure.	- - - -		
Madder powder	- - - -	$\frac{1}{2}$ drachm	1 drachm
Mace	- - - -	10 grains	20 grains
Magnesia	- - - -	$\frac{1}{2}$ drachm	2 drachms
----- calcined	- - - -		
Manna	- - - -	$\frac{1}{2}$ ounce	2 ounces
Mastich, gum	- - - -	10 grains	30 grains
Mercury, crude	- - - -	$\frac{1}{2}$ ounce	4 ounces
----- calcined	- - - -	$\frac{1}{2}$ grain	2 grains
----- with chalk	- - - -	10 grains	30 grains
----- corrosive sublimate	- - - -	$\frac{1}{8}$ grain	$\frac{1}{2}$ grain
----- cinnabar of	- - - -	10 grains	30 grains
----- yellow emetic, as sternutory	- - - -	1 grain	3 grains
Mezereon, decoct. to a pint of water	- - - -		2 drachms
Millepedes	- - - -	20 grains	2 drachms
Musk	- - - -	5 grains	40 grains
Mustard seed	- - - -	1 drachm	1 ounce
Myrrh, gum	- - - -	10 grains	1 drachm
Nitre, purified,	- - - -	10 grains	30 grains
Nutmeg	- - - -	6 grains	$\frac{1}{2}$ drachm
Oil of Almons	- - - -	$\frac{1}{2}$ ounce	1 ounce
----- Linseed	- - - -		
----- Castor	- - - -	2 drachms	1 ounce
Olibanum	- - - -	5 grains	30 grains
Onion, expressed juice of a pow- } erful diuretic	- - - -	$\frac{1}{2}$ ounce	2 ounces
Opium	- - - -	$\frac{1}{2}$ grain	2 ounces
Opopanax	- - - -	10 grains	30 grains
Oxymel of colchicum	- - - -	$\frac{1}{2}$ drachm	1 ounce
----- of squills	- - - -	$\frac{1}{2}$ drachm	2 drachms
Petoleum	- - - -	10 drops	30 drops
Pills, aloetic	- - - -	10 grains	30 grains
----- of the gums	- - - -	10 grains	30 grains
----- mercurial	- - - -	10 grains	20 grains
Pomegranate, powder of	- - - -	20 grains	1 drachm

Powder antimonial	- - -	from 3 grains to	6 grains
May be taken according to the directions for James' powder, with which it nearly coincides.			
Powder of Contrayerva, compound	- - -	15 grains	30 grains
———— of Chalk compound	- - -	20 grains	40 grains
———— of Chalk compound, with opium	- - -	10 grains	40 grains
———— of Ipecacuanha, compound,	}	10 grains	30 grains
or Dover's powder			
Quassia	- - -	5 grains	30 grains
Two drachms to a pint of water for a decoction.			
Quince seeds, mucilage of, at pleasure, to obtund acrimony.			
Rhubarb, powder	- - -	10 grains	40 grains
Resin, yellow	- - -	3 grains	20 grains
Rue powder	- - -	20 grains	40 grains
St. John's-wort	- - -	20 grains	1 drachm
Saffron	- - -	5 grains	20 grains
Sagapenum	- - -	10 grains	30 grains
Sal ammoniac	- - -	10 grains	30 grains
Salt, Epsom	- - -	2 drachms	1½ ounces
—— Glauber	- - -	4 drachms	2 ounces
—— Polychrest	- - -	20 grains	½ ounce
—— of Tartar	- - -	10 grains	30 grains
Sarsaparilla, powder of	- - -	20 grains	40 grains
Scammony	- - -	5 grains	10 grains
Seneca	- - -	20 grains	40 grains
Senna	- - -	20 grains	40 grains
Soap	- - -	20 grains	½ ounce
—— lees	- - -	10 drops	30 drops
Scurvy-grass, expressed juice	- - -	1 ounce	4 ounces
Snake root	- - -	20 grains	40 grains
Sorrel, juice of, depurated	- - -	4 ounces	8 ounces
Spirit of Mindererus	- - -	1 drachm	1 ounce
—— sweet, of vitriol	- - -	15 drops	40 drops
—— ——— of nitre	- - -	15 drops	40 drops
—— of sal ammoniac	- - -	15 drops	40 drops
—— ——— compound	- - -	—————	—————
—— ——— fœtid	- - -	—————	—————
Spirits, distilled	- - -	½ drachm	½ ounce
Spermaceti	- - -	20 grains	1 drachm
Sponge, burned	- - -	20 grains	1 drachm
Sulphur, flowers of	- - -	20 grains	1 drachm
—— precipitated, of antimony	- - -	1 grain	4 grains
Squill, dried powder	- - -	1 grain	3 grains
—— fresh	- - -	5 grains	15 grains
Syrup of poppies	- - -	½ drachm	½ ounce
—— of buckthorn	- - -	1 drachm	2 drachms
—— of ginger	- - -	1 drachm	½ ounce
Syrups in general	- - -	1 drachm	2 drachms
Tar water. A pint daily.			

Tartar, cream of	- - -	from 2 drachms	to 1 ounce
— regenerated	- - -	20 grains	1 drachm
— soluble	- - -	2 drachms	1 ounce
— emetic, alterative	- - -	$\frac{1}{8}$ grain	$\frac{1}{2}$ grain
— — as emetic	- - -	1 grain	3 grains
Terra japonica	- - -	20 grains	40 grains
Tobaco, an infusion of, 1 drachm to a pint of water; should be administered by table spoonfuls: strongly diuretic.			
Tin, powder of	- - -	from 20 grains	to 1 drachm
Tumeric	- - -	20 grains	1 drachm
Turpentine, spirits of	- - -	10 drops	30 drops
Tincture of aloes	- - -	$\frac{1}{2}$ ounce	1 ounce
— — compound	- - -	$\frac{1}{4}$ drachm	2 drachms
— of asafetida	- - -	$\frac{1}{2}$ drachm	2 drachms
— Benzoin, compound	- - -	10 drops	40 drops
— of cantharides	- - -	10 drops	40 drops
— of cardamoms	- - -	1 drachm	$\frac{1}{2}$ drachms
— of castor	- - -	1 drachm	$1\frac{1}{2}$ drachms
— of catechu	- - -	1 drachm	2 drachms
— of Peruvian bark	- - -	1 drachm	$\frac{1}{2}$ ounce
— of iron, muriated	- - -	10 drops	60 drops
— of Columbo	- - -	1 drachm	3 drachms
— of Gentian, compound	- - -	1 drachm	3 drachms
— guaiacum volatile	- - -	1 drachm	3 drachms
— of black hellebore	- - -	1 scruple	1 drachm
— of jalap	- - -	1 drachm	$\frac{1}{2}$ ounce
— of lavender, compound	- - -	20 drops	2 drachms
— of myrrh	- - -	1 scruple	1 drachm
— of opium	- - -	10 drops	40 drops
— — camphorated,	}	1 drachm	3 drachms
or paregoric elixir			
— of rhubarb	- - -	$\frac{1}{3}$ ounce	2 ounces
— of sena	- - -	2 drachms	1 ounce
— of snake-root	- - -	1 drachm	2 drachms
— of valerian	- - -	1 drachm	3 drachms
— — volatile	- - -	1 drachm	2 drachms
Tormentil, powder of	- - -	10 grains	1 drachm
Valerian powder of	- - -	20 grains	2 drachms
Vinegar, distilled	- - -	2 drachms	1 ounce
— — of squills	- - -	10 drops	50 drops
— — as emetic	- - -	$\frac{1}{2}$ ounce	1 ounce
Verdigrease, violent emetic	- - -	1 grain	2 grains
Vitrol, white, as a tonic	- - -	2 grains	5 grains
— — as a quickly	}	20 grains	1 drachm
operating emetic			
— — blue emetic	- - -	1 grain	3 grains
Uva ursi, in powder	- - -	20 grains	1 drachm
Water-cress, expressed juice of	- - -	$\frac{1}{2}$ ounce	2 ounces
Water, the simple distilled,	}	$\frac{1}{2}$ ounce,	3 or 4 oz.
may generally be given			

Wormwood, expressed juice		from	$\frac{1}{2}$ ounce	to	2 ounces
White lead	-	-	1 grain		3 grains
Wine, aloetic	-	-	$\frac{1}{2}$ ounce		1 ounce
— antimonial	-	-	20 drops		2 drachms
— Ipecacuanha	-	-	1 drachm		$1\frac{1}{2}$ ounce
— Rhubarb	-	-	$\frac{1}{2}$ ounce		2 ounces

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 laid; it is therefore of importance, that parents be well acquainted with the various causes which may injure the health of their offspring.

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

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

If parents are above taking care of their children, others must be employed for that purpose: these will always 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 allege, is in some cases impracticable, and would inevitably prove destructive both to the mother and child. Women of delicate constitutions, subject to hysteric fits, or other nervous affections, make very bad nurses: * and these complaints are now so common, that it is rare to find a woman of fashion free from them; such women, therefore, supposing them willing, are often unable to suckle their own children.

Almost every mother would be in a condition to give suck, did man-

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

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

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

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

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

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 show, 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 valetudinarily, useful in life, or the pests of society.

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

It is pity that the men should be so inattentive to this matter. Their negligence is one reason why females know so little of it. Women will ever be desirous to excel in such accomplishments as recommend them to the other sex. But men generally keep at such a distance from even the smallest acquaintance with the affairs of the nursery, that many would reckon it an affront, were they supposed to know any thing of them. Not so, however, with the kennel or the stables: a gentleman of the first rank is not ashamed to give directions concerning the management of his dogs 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 hope 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 ma-

other menial servant.—We are afraid, wherever luxury and effeminacy prevail, there will be too much ground for this complaint.

ny imagine. It is true, children cannot tell their complaints; but the causes of them may be pretty certainly discovered by observing the symptoms, and putting proper questions to the nurses. Besides, the diseases of infants being less complicated, are easier cured than those of adults.*

It is really astonishing, that so little attention should in general be paid to the preservation of infants. What labour and expense are daily bestowed to prop an old tottering carcass 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 and disease.

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

If to the delicacy of mothers, we add the irregular lives of fathers, we shall see further cause to believe that children are often hurt by the constitution of their parents. A sickly frame may be originally induced by hardships and 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 sufferers; but when once a disease is contracted and rivetted in the habit, it is entailed on posterity. What a dreadful inheritance is the gout, the scurvy, or the king's evil, to transmit to our offspring! how happy had it been for the heir of many a great estate, had he been born a beggar, rather than to inherit his father's fortunes at the expense of inheriting his diseases!

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

* 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.

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

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

Such children as have the misfortune to be borne 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 diseases, and guard against it by a proper regimen. It is certain, that family diseases have often, by proper care, been kept off for one generation; and there is reason to believe, that, by persisting in the same course, such diseases might at length be wholly eradicated. This is a subject very little regarded, though of the greatest importance. Family constitutions are as capable of improvement as family estates; and the libertine who impairs the one, 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 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 intime became a business; and, as in all others, those who were employed in it strove to outdo one another in the different branches of their profession. The dressing of a child came of course to be considered as the midwives

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

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

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 shew of the infant as soon as it was born, were ambitious to have as much finery heaped upon it as possible. Thus it came to be thought as necessary for a midwife to excel in bracing and dressing an infant, as for a surgeon to be expert in applying bandages to a broken limb; and the poor child, as soon as it came into the world, had as many rollers and wrappers applied to its body, as if every bone had been fractured in the birth; while these were often so tight, as not only to gall and wound its tender frame, but even to obstruct the motion of the heart, lungs, and other organs necessary 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 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 infatuation! the moment they hold their peace, they are again committed to their chains.

If we consider the body of an infant as a bundle of soft pipes, replenished with fluids in continual motion, the danger of pressure will appear in the strongest light. Nature, in order to make way for the growth of children, has formed their bodies soft and flexible; and lest they should receive any 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.

* 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.

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 disproportionate 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 him 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 with the mother, who is often likewise feverish; to which we may add the heat of the 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.

chamber, the wines, and other heating things, too frequently given to children immediately after the birth. When all these are combined, which does not seldom happen, they must increase the fever to such a degree as will endanger the life of the infant.

The danger of keeping infants too hot will further appear, if we consider that, after they have been 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 transision, 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.*

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

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

Of the Food of Children.

Nature not only points out the food proper for an infant, but actually prepares it. This, however is not sufficient to prevent some who think themselves wiser than Nature, from attempting to bring up their children without her provision. Nothing can show 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 a healthy nurse, is unquestionably the best food for an infant. Neither art nor nature can afford a proper substitute for it. Children

* 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.

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

It is strange how people came to think that the first thing given to a child should be drugs. This is beginning with medicine by times, and no wonder if they generally end with it. It sometimes happens, indeed, that a child does not discharge the *meconium* so soon as could be wished; this has induced physicians, in such cases, to give something of an opening nature to cleanse the first passages. Midwives have improved upon this hint, and never fail to give syrups, oils, &c. whether they be necessary or not. Cramping 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 a 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 wines or spiceries, it will neither heat the blood, load the stomach, nor occasion gripes.

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

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

Next to milk, we would recommend good light bread. Bread may be given to a child as soon as it shews an inclination to chew; and it may at all times be allowed as much plain bread as it will eat. The very

chewing of bread will promote the cutting of the teeth, and the discharge of saliva, while by mixing with the nurse's milk in the stomach, it will afford an excellent nourishment. Children discover an early inclination to chew whatever is put into their hands. Parents observe the inclination, but generally mistake the object. Instead of giving the child something which may at once exercise its gums and afford it nourishment, they commonly put into its hands a piece of hard metal, or impenetrable coral. A crust of bread is the best gum-stick. It not only answers the purpose better than any thing else, but has the additional properties of nourishing the child and carrying the saliva down 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 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 should never be accustomed to eat in the night; neither should it have too much at a time. Children thrive best with small quantities of food frequently given. This neither overloads the stomach nor hurts the digestion, and is certainly most agreeable to nature.

Writers on nursing have inveighed with such vehemence against giving children too much food, that many parents, by endeavouring to shun that error, have run into the opposite extreme, and ruined the constitutions of their children. But the error of pinching children in their food is more hurtful than the other extreme. Nature has many ways of relieving herself when overcharged; but a child, who is pinched with hunger, will never become a strong or 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, salt, 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 stomach 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 peculiarly necessary for the poor; glad to obtain at a small price what will fill the bellies of their children, they stuff them two or three times a day with crude vegetables. Children had better eat a smaller quantity of food which yields a wholesome nourishment, than be crammed with what their digestive powers are unable properly to assimilate.

Butter ought likewise to be sparingly given to children. It both relaxes the stomach, and produces gross humours. Indeed, most things that are fat or oily have this effect. Butter when salted becomes still more hurtful. Instead of butter, so liberally given to children in most parts of Britain, we would recommend honey. Honey is not only wholesome, but cooling, cleansing, and tends to sweeten the humours. Children who eat honey are seldom troubled with worms: they are also less subject to cutaneous diseases, as itch, scabbed head, &c.

Many persons err in thinking that the diet of children ought to be altogether moist. When children live entirely upon slops, it relaxes their

* 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 forbid to give them any fruit without the knowledge of their parents.

solids, renders them weak, and disposes them to the rickets, scrophula, and other glandular disorders. Relaxation is one of the most general causes of the diseases of children. Every thing therefore which tends to increase their solids, ought to be carefully avoided.

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

Of the Exercise of Children.

Of all the causes which conspire to render the life of man short and miserable, none have 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 themselves, it is the business of their parents and nurses to assist them.

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

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

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

hurt the digestion, and occasion consumptions of the lungs, and other diseases.

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

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

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

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

Arguments to shew the importance of exercise might be drawn from every part of the animal economy; without exercise, the circulation of the blood cannot be properly carried on, nor the different secretions duly performed; without exercise, the fluids cannot be properly prepared, nor the solids rendered strong or firm. The action of the heart, the motion of the lungs, and all the vital functions are greatly assisted by exercise.

* 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 had alive at the year's end, would save more infant lives than if the whole revenue of the nation were expended on hospitals for this purpose. This would make the poor esteem fertility a blessing; whereas many of them think it the greatest curse that can befall 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.

But to point out the manner in which these effects are produced, would lead us further into the economy of the human body, than most of those for whom this treatise is intended would be able to follow. We shall therefore only add, that, when exercise is neglected, none of the animal functions can be duly performed; and when that is the case, the whole constitution must go to wreck.

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

One very common error of parents, by which they hurt the constitutions of their children, is the sending them too young to school. This is often done solely to prevent trouble. When the child is at school he needs no keeper. Thus the schoolmaster is made the nurse; and the poor child is fixed to a seat seven or eight hours a-day, which time ought to be spent in exercise and diversions. Sitting so long cannot fail to produce the worst effects upon the body: nor is the mind less injured.

Early application weakens the faculties, and often fixes in the mind an aversion to books, which continues for life.*

But suppose this were the way to make children scholars, it certainly ought not to be done at the expense of their constitutions. Our ancestors, who seldom went to school very young, were not less learned than we. But we imagine the boys 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 happens 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 disease, to almost every individual in a numerous school.

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

It would be of great service to boys, if, at a proper age, they were taught the military exercise. This would increase their strength, inspire them with courage, and when their country called for their assistance, would enable them to act in her defence, without being obliged to undergo a tedious and troublesome course of instructions, at a time when they are less fit to learn new motions, gestures, &c.†

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

† 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 sergeant for teaching the

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 child-bed; while those who have been used to romp about, and take sufficient exercise, are seldom in any danger.

One hardly meets with a girl who can at the same time boast of early performances by the needle, and a good constitution. Close and early confinement generally occasions indigestions, head-achs, 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 house-wifery, and allow them sufficient exercise in the open air, they would both make them more healthy mothers, and more useful members of society. I am no enemy to genteel accomplishment, but would have them only considered as secondary, and always disregarded when they impair the 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 benefitted, is a real loser by their labour. There are few employments, except sedentary ones, by which children can earn a livelihood; and if they be set to these too soon, it ruins their constitutions. Thus, by gaining a few years from childhood, we generally lose twice as many in the latter period of life, and even render the person less useful while he does live.

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

boys the military exercise. This, besides contributing to their health and vigour of body, would have many other happy effects.

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 large 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 know 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 among our ancestors.

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

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

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

The bad Effects of unwholesome Air upon Children.

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

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

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

A child is generally laid to sleep with all its clothes on; and if a number of others are heaped above them, it must be over-heated; by which means it cannot fail to catch cold on being taken out of the cradle, and

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

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

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

Though it admits of some exceptions, yet we may lay it down as a general rule, *That every woman who nurses for hire should be carefully looked after, otherwise she will not do her duty.* For this reason parents ought always to have their children nursed under their own eye, if possible; and where this cannot be done, they should be extremely cir-

* 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.

† Next of importance to a healthy, cleanly, and good-natured nurse, is her diet—On this subject after a close and lengthy investigation, Dr. Cullen, concludes. "I allege it to be a matter of experience, that nurses living entirely, or for the most part, upon vegetable aliment, afford a greater quantity of milk, and of a more proper quality, than nurses living upon much animal food. This, I venture to assert, from the observation of fifty years; during which time, I have known innumerable instances of the healthiest children reared upon the milk of nurses living entirely upon vegetable aliments; and I have known many instances of children becoming diseased, by their being fed by the milk of nurses who had changed their diet from entirely vegetable, to their taking in a quantity of animal food. Nay, I have known instances of children's becoming disordered from a nurse's making a single meal, of an unusually large portion of animal food."

respect in the choice of those persons to whom they intrust them. It is folly to imagine that any woman, who abandons her own child to suckle another for the sake of gain, should feel all the affections of a parent towards her nursling; yet so necessary are the affections in a nurse, that, but for them, the human race would soon be extinct.

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

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

Children are often hurt by nurses suffering them to cry long and vehemently. This strains their tender bodies, and frequently occasions ruptures, inflammations of the throat, lungs, &c. A child never continues to cry long without some cause, which might always be discovered by proper attention; and the nurse who can hear an infant cry till it has almost spent itself, without endeavouring to please it, must be cruel indeed, and is unworthy to be intrusted with the care of an 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, Dalby's carminative, &c. at hand. Such generally imagine, that a dose of medicine will make up for all defects in food, air, exercise, and cleanliness. By errors of this kind, I will venture to say, that one half of the children who die annually in London lose their lives.

Allowing children to continue long wet, is another very pernicious custom of indolent nurses. This is not only disagreeable, but 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.

* 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.

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

One of the greatest faults of nurses is, concealing the diseases of children from their parents. This they are extremely ready to do, especially when the disease is the effect of their own negligence. Many instances might be given of persons who have been rendered lame for life by a fall from 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 befall it.

We can see no reason why a nurse, who conceals any misfortune which happens to a child under her care, till it loses its life, or limbs, should not be punished. A few examples of this would save the 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, through 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. This air is not only loaded with the noxious exhalations arising from metals and minerals, but is so charged with phlogiston as to be rendered unfit for expanding the lungs sufficiently, and answering the other important purposes of respiration. Hence proceed asthmas, coughs, and consumptions of the lungs, so incident to persons who follow these employments.

To prevent such consequences, as far as possible, the places where these occupations are carried on, ought to be constructed in such a manner as to discharge the smoke and other exhalations, and admit a free current of fresh air. Such artists ought never to continue too 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, sallads, 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 sallad 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

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

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 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 *Studios*.

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 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 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 soon will be worn out, and a premature old age be induced.

The erysipelas, or St. Anthony's fire, is a disease very incident to the laborious. It is occasioned by whatever gives a sudden check to

the perspiration, as drinking cold water when the body is warm, wet feet, keeping on wet clothes, sitting or lying on the damp ground, &c. It is impossible for those who labor 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 cholick, and other complaints of the bowels, are often occasioned by the same causes as the erysipelas; but they may likewise proceed from flatulent and indigestible food. Labourers generally eat unfermented bread, made of peas, beans, rye, and other windy ingredients. They also devour great quantities of unripe fruits, baked, stewed, or raw, with various kinds of roots and herbs, upon which they often 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.

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

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

Labourers in the hot season are apt to lie down and sleep in the sun. This practice is so dangerous, that they often awake in a burning fever. These ardent fevers which prove so fatal about the end of the 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 employment in the fields from morning till night, without eating any thing. This cannot fail to hurt their health. However homely their fare be, they ought to have it at regular times; and the harder they work, the more frequently they should eat. If the humours be not frequently replenished with fresh nourishment, they soon become putrid, and produce fevers of the very worst kind.

Many peasants are extremely careless with respect to what they eat or drink, and often, through mere indolence, use unwholesome food, when they might, for the same expense, 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 shows 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 those scenes of calamity, can form a notion of what numbers perish in diseases, for want of proper assistance, and even for want of the necessaries of life.

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

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

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

Sailors may also be numbered among the laborious. They undergo great hardships from the change of climate, the violence of the

* It is indeed to be regretted, that soldiers suffer not less from indolence and intemperance in the time of peace, than from hardships in time of war. If men are idle they will be vicious. It would therefore be of great importance, could a scheme be formed for rendering the military, in times of peace, both more healthy and more useful. These desirable objects might, in our opinion, be obtained, by employing them for some hours every day, and advancing their pay accordingly. By this means, idleness, the mother of vice, might be prevented, the price of labour lowered, public works, as harbours, canals, turnpike roads, &c. might be made without hurting manufactures; and soldiers might be enabled to marry and bring up children. A scheme of this kind might easily be conducted, so as not to depress the martial spirit, provided the men were only to work four or five hours every day, and always to work without doors: no soldiers 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.

weather, hard labour, bad provisions, &c. Sailors are of so great importance, that too much pains can never be bestowed in pointing out the means of preserving their lives.

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

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

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

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

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

* The celebrated Captain Cook, has shown 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 ships company, he lost only one, who died of a *Phthisis Pulmonalis*. The principal means he used were, to preserve a strict attention to cleanliness, to procure abundance of vegetable and fresh provisions, especially good water, and to allow his people sufficient time for rest.

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 syrups of lemons, oranges, or the like.

The Sedentary.

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

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

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

* A regulation on board the United States' Navy, requiring every individual, at least once a week to wash their feet clean, is worthy of general attention, as a means of preserving health.

A. E.

† 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.

But it is not 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 situation they generally continue for many hours at a time, often with the addition of several candles, which tend likewise to waste the air, and render it less fit for respiration. Air that is breathed repeatedly becomes unfit for expanding the lungs. This is one cause of the phthical 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, headaches, pains of the breast, &c.

The aliment in sedentary people, instead of being pushed forwards by an erect posture, and the action of the muscles, is in a manner confined in the bowels. Hence indigestion, costiveness, wind, and other hypochondrical 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 in 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 the 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 is obstructed; from whence proceed the scab, ulcerous sores, foul blotches, and other cutaneous diseases so common among sedentary artificers.

A bad figure of body is a very common consequence of close appli-

* 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.

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

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

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

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

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

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

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

Sedentary people ought to avoid food that is windy or hard of digestion, and should pay the strictest regard to sobriety. A person who works hard without doors will soon throw off a debauch; but one who sits has by no means an equal chance. Hence it often happens, that sedentary people are seized with fevers after hard drinking. When such persons feel their spirits low, instead of running to the tavern for relief, they should ride or walk in the field. 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 peice of ground with his own hands. This he might dig, plant, sow, and weed at leisure hours, so as to make it both an exercise and amusement, while it produced many of the necessaries of life. After working an hour in a garden, a man will return with more keenness to his employment within doors, than if he had been all the while idle.

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

It may seem romantic to recommend gardening to manufacturers in great towns; but observation proves that the plan is very practicable. In the town of Sheffield, in Yorkshire, where the great iron manufacture is carried on, there is hardly a journeyman cutler who does not possess a peice of ground, which he cultivates as a garden. This practice has many salutary effects. It not only induces these people to take exercise without doors, but also to eat may 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 chuse to embrace them.

Mechanics are two 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 peice 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 awhile drag out life, can hardly be said to enjoy it. Weak and effeminate, they languish for a few years, and soon drop into an untimely grave.

The Studios.

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 the other.

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

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

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

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

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

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

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

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

Long and intense thinking often occasions grievous head-achs, which bring on vertiges, 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 cool 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; which clearly points out the method of prevention.

Fevers, especially of the nervous kind, are often the effect of study. Nothing effects 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 afflicting of all the diseases which attack the studious is the hypochondriac. This disease seldom fails to be the companion of deep thought. It may rather be called a complication of maladies than a single one. To what a wretched condition are the best of men often reduced by it! Their strength and appetite fail; a perpetual gloom hangs over their minds; they live in the constant dread of death, and are continually in search of relief from medicine; where, alas! it is not to be found. Those who labour under this disorder, though they are often made the subject of ridicule, justly claim our highest sympathy and compassion.

Hardly any thing can be more preposterous than for a person to make study his sole business. A mere student is seldom an useful member of society. He often neglects the most important duties of life, in order to pursue studies of a very trifling nature. Indeed it rarely happens, that any useful invention is the effect of mere study. The farther men dive into profound researches, they generally deviate the more from common sense, and too often lose sight of it altogether. Profound speculations, instead of making men wiser or better, generally render them absolute sceptics, and overwhelm them with doubt and uncertainty. All that is necessary for a 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 not so far occupy the thought as to make them forget the business of the closet. A solitary ride or walk are so far from relaxing the mind, that they rather encourage thought. Nothing can divert the mind when it gets into a train of serious thinking, but attention to subjects of a more trivial nature. These prove a kind of play to the mind, and consequently relieve it.

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

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

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

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

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

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

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

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

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

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

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

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

* "To such persons," says Dr. Rush, "it may be a discovery to know, that tea is a much better remedy for that purpose. By its grateful and gentle stimulus, it removes fatigue, restores the excitement of the mind, and invigorates the whole system. I am no advocate for the excessive use of tea. When taken too strong, it is hurtful, especially to the female constitution; but when taken of a moderate degree of strength, and in moderate quantities, with sugar and cream, or milk. I believe it is, in general, innoxious, and, at all times, to be preferred to ardent spirits, as a cordial for studious men."

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

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. Di-

* The poor, indeed, are generally the first who suffer by unsound provisions; but the lives of the labouring poor are of great importance to the state: 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 spoilt provisions of any kind be exposed to sale.

seased 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, seemed to have a strict regard to health; and ought to be observed by Christians as well as Jews. Animals never die themselves without some previous disease; but how a diseased animal should be wholesome food, is inconceivable: even those which die by accident must be hurtful, as their blood is mixed with the flesh, and soon turns putrid.

Animals which feed grossly, as tame ducks, hogs, &c. are neither so easily digested, nor afford such wholesome nourishment as others. No animal can be wholesome which does not take sufficient exercise. Most of our stabled 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 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 chuse to eat the flesh of an animal which had died in a high fever; yet that is the case with all over-drove cattle; and the fever is often raised even to the degree of madness.

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

Butchers have likewise a method of filling the cellular membranes of animals with blood. This makes the meat seem fatter, and likewise weigh more, but is notwithstanding a very pernicious custom, as it both renders the meat unwholesome and unfit for keeping. I seldom see a piece of meat from the shambles, where the blood is not diffused through the cellular texture. I shall not say that this is always the effect of design; but am certain it is not the case with animals that are killed for domestic use, and properly blooded.

Veal seems to be most frequently spoilt in this way. Perhaps that may in some measure be owing to the practice of carrying calves from a great distance to market, by which means their tender flesh is bruised, and many of their vessels burst.

No people in the world eat such quantities of 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 twenty-four hours, and this ought to consist of one kind only.

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

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

Much has been said on the ill effects of tea in diet. They are, no doubt, numerous; but they proceed rather from the imprudent use of it, than from any bad qualities in the tea itself. Tea is now the universal breakfast in this part of the world; but the morning is surely the most improper time of the day for drinking it. Most delicate persons, who, by the bye, are the greatest tea drinkers, cannot eat any thing in the morning. If such persons, after fasting ten or twelve hours, drink four or five cups of green tea without eating scarcely 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 part of most bodies with which it comes into contact; by this means it is often impregnated with metals or minerals of a hurtful or poisonous nature. Hence the inhabitants of some hilly countries have peculiar diseases, which in all probability proceed from the water. Thus the people who live near the Alps in Switzerland, and the inhabitants of the Peak of Derby in England, have large tumours or wens on their necks. This disease is generally imputed to the snow water; but there is more reason to believe it is owing to the minerals in the mountains through which the waters pass.

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

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

The common 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 and vegetable bodies with which they abound. Even cattle frequently suffer by drinking, in dry seasons, water which has stood long in small reservoirs, without being supplied by springs, or freshened with showers. All wells ought to be kept clean, and to have a free communication with the air.

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

Fermented liquors, which are too strong, hurt digestion: and the body is so far from being strengthened by them, that it is weakened and relaxed. Many imagine that hard labor 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 and 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 sower on the stomach, and hurt digestion. For this reason all malt-liquor, 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 venders of liquor is, to render it intoxicating, and give it the appearance of age. But it is well known that this may be done by other ingredients, than those which ought to be used for making it strong. It would be imprudent even to name those things which are daily made use of to render liquors heady. Suffice it to say, that the practice is very common, and that all 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 their general use. Though they do not kill suddenly, yet they hurt the nerves, relax and weaken the stomach, and spoil the digestion.

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

We would recommend it to families not only to prepare their own liquors, but likewise their bread. Bread is so necessary a part of diet, that too much care cannot be bestowed in order to have it sound and wholesome. For this purpose, it is not only necessary that it be made of good grain, but likewise properly prepared, and kept free from all unwholesome ingredients. This, however, we have reason to believe is not always the case with bread prepared by those who make a trade of vending it. Their object is rather to please the eye, than to consult the health. The best bread is that which is neither too coarse nor too fine; well fermented, and made of wheat flower, 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 such like. Their food should consist chiefly of bread and other vegetable substances; and their drink ought to be water, whey or small beer.

Fat people should not eat freely of oily nourishing diet. They ought frequently to use horse-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 bilious eructations, ought to use a diet consisting chiefly of acid vegetables.

People who are afflicted with the gout, low spirits, hypocondriac or hysteric disorders, ought to avoid all flatulent food; every thing that is viscid, or hard of digestion, all salted or smoke dried provisions,

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

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

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

Those who labour under any particular disease, ought to avoid such aliments as have a tendency to increase it: for example, a gouty person should not indulge in rich wines, strong soups, or gravies, and should avoid all 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 long fasting will atone for excess; but this, instead of mending the matter, generally makes it worse. When the stomach and intestines are over distended with food, they lose their proper tone, and, by long fasting, they become weak, and inflated with wind. Thus, either gluttony or fasting destroys the 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 fluids sound and sweet. Our humours, even in the most healthy state, have a constant tendency to putrefaction, which can only be prevented by frequent supplies of fresh nourishment: when that is wanting too long, the 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 and a glass of wine, or taking any other solid food; which plainly points out the method of preventing them.

It is more than probable, that many of the sudden deaths, which happen in the advanced periods of life, are occasioned by fasting too long, as it exhausts the spirits, and fills the bowels with wind; we would therefore advise people in the decline of life, never to allow their ste-

machs to be too long empty. Many people take nothing but a few cups of tea and a little bread, from nine o'clock at night till two or three next afternoon. Such may be said to fast almost three fourths of their time. This can hardly fail to ruin the appetite, vitiate the humours, and fill the bowels with wind; all which might be prevented by a solid breakfast.

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

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

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

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

§ Notwithstanding our author's omission of a general account of the qualities of the different kinds of animal and vegetable food most commonly used in diet, we think the following not unworthy attention.

“*Beef*. When this is the flesh of a bullock of middle age it affords good and strong nourishment, and is peculiarly well adapted to those who labour, or take much exercise. It will often sit easy upon stomachs that can digest no other kind of food; and its fat is almost as easily digested as that of *veal*.

“*Veal* is a proper food for persons recovering from an indisposition, and may even be given to febrile patients in a very weak state, but it affords less nourishment than the flesh of the same animal in a state of maturity. The fat of it is lighter than that of any other animal, and shews the least disposition to putrescency. *Veal* is a very suitable food in costive habits; but of all meat it is the least calculated for removing an acid from the stomach.

“*Mutton*, from the age of four to six years, and fed on dry pasture, is an excellent meat. It is of a middle kind between the firmness of

beef and the tenderness of veal. The lean part of mutton, however, is the most nourishing and conducive to health; the fat being hard of digestion. The head of the sheep, especially when divested of the skin, is very tender; and the feet, on account of the jelly they contain, highly nutritive.

“*Lamb* is not so nourishing as mutton; but it is light, and extremely suitable to delicate stomachs.

“*House-lamb*; though much esteemed by many, possesses the bad qualities common to the flesh of all animals reared in an unnatural way.

“*Pork* affords rich and substantial nourishment; and its juices are wholesome when properly fed, and when the animal enjoys pure air and exercise. But the flesh of hogs reared in towns is both hard of digestion and unwholesome. Pork is particularly improper for those who are liable to any foulness of the skin. It is almost proverbial, that a dram is good for promoting its digestion: but this is an erroneous notion; for though a dram may give a momentary stimulus to the coats of the stomach, it tends to harden the flesh, and of course to make it more indigestible.

“*Smoked-hams* are a strong kind of meat, and rather fit for a relish than for diet. It is the quality of all salted meat that the fibres become rigid, and therefore more difficult of digestion; and when to this is added smoking, the heat of the chimney occasions the salt to concentrate, and the fat between the muscles to become rancid.

“*Bacon* is also of an indigestible quality, and is apt to turn rancid on weak stomachs.

“The flesh of *goats* is hard and indigestible; but that of kids is tender as well as delicious, and affords good nourishment.

“*Venison*, or the flesh of *deer*, and that of *hares*, is of a nourishing quality, but is liable to one inconvenience; which is, that though much disposed to putrescency of itself, it must be kept for a little time before it becomes tender.

“The *blood* of animals is used as aliment by the common people: but they could not long subsist upon it unless mixed with oat-meal, &c. for it is not soluble alone by the digestive powers of the human stomach, and therefore cannot be nourishing.

“*Milk* is of very different consistence in different animals; but that of cows being the kind used in diet, is at present the object of our attention. Milk, where it agrees with the stomach, affords excellent nourishment for those who are weak and cannot digest other aliments. Though an animal production, it does not readily become putrid, as being possessed of the properties of vegetable aliment; but it is apt to become sour on the stomach, and thence to produce flatulence, the heart-burn, or gripes, and, in some constitutions, a looseness. The best milk is from a cow at three or four years of age, about two months after producing a calf. It is lighter, but more watery, than the milk of sheep and goats; while, on the other hand, it is more thick and heavy than the milk of asses and mares, which are the next in consistence to human milk.

“On account of the acid which is generated after digestion, milk coagulates in all stomachs; but the caseous or cheesy part is again dissolved by the digestive juices and rendered fit for the purpose of nutrition. It is however, improper to eat acid substances with milk, as these would tend to prevent the due digestion of it.

“*Cream* is very nourishing, but on account of its fatness is difficult to be digested in weak stomachs. Violent exercise, after eating it, will in a little time convert it into butter.

“Some writers inveigh against the use of *Butter* as universally pernicious; but they might with equal reason condemn all vegetable oils, which form a considerable part of diet in the southern climates, and seem to have been beneficently intended by nature for that purpose. Butter, like every other oily substance, has doubtless a relaxing quality, and, if long retained in the stomach, is liable to become rancid; but, if eaten in moderation, it will not produce those effects in any hurtful degree. It is however, improper in bilious constitutions.—The worst consequence produced by butter, when eaten with bread, is, that it obstructs the discharge of the saliva in the act of mastication or chewing; by which means the food is not so readily digested. To obviate this effect, it would be a commendable practice at breakfast, first to eat some dry bread, and chew it well, till the salivary glands were exhausted, and afterwards to eat it with butter. By these means such a quantity of saliva might be carried into the stomach as would be sufficient for the purpose of digestion.

“*Cheese* is likewise reprobated by many as extremely unwholesome. It is doubtless not easy of digestion; and, when eaten in a great quantity, may load the stomach; but if taken sparingly, its tenacity may be dissolved by the digestive juices, and it may yield a wholesome, though not a very nourishing chyle. Toasted cheese is agreeable to most palates, but is rendered more indigestible by that process.

“The flesh of *Birds* differs in quality according to the food on which they live. Such as feed upon grain and berries afford, in general, good nourishment, if we except *geese* and *ducks*, which are hard of digestion. A young *hen* or chicken is tender and delicate food, and extremely well adapted when the digestive powers are weak. But of all tame fowls the *capon* is the most nutritious.

“*Turkies*, as well as *Guinea* or *India* fowls, afford a substantial aliment, but are not so easy of digestion as the common domestic fowls. In all birds those parts are the most firm which are most exercised; in the small birds, therefore, the wings, and in the larger kinds, the legs, are commonly the most difficult of digestion.

“The flesh of *wild birds*, in general, though more easily digested, is less nourishing than that of quadrupeds, as being more dry, on account of their almost constant exercise. Those birds are not wholesome which subsist upon worms, insects and fishes.

“*Eggs*. In the last class of terrestrial animal food, we may rank the eggs of birds, which are a simple and wholesome aliment. Those of the turkey are superior in all the qualifications of food. The white of eggs is dissolved in a warm temperature, but by much heat it is rendered tough and hard. The yolk contains much oil, and is highly nourishing, but has a strong tendency to putrefaction; on which account eggs are improper for people of weak stomachs, especially when they are not quite fresh. Eggs hard boiled or fried are difficult of digestion, and are rendered still more indigestible by the addition of butter. All eggs require a sufficient quantity of salt, to promote their solution in the stomach.

“*Fish*, though some of them be light, and easy of digestion, afford less nourishment than vegetables or the flesh of quadrupeds, and are of

all the animal tribes the most disposed to putrefaction. Salt-water fish, are, in general the best; but when salted, though less disposed to putrescency, they become more difficult of digestion. Whittings and flounders are the most easily digested. Acid sauces and pickles, by resisting putrefaction, are a proper addition to fish, both as they retard putrescency, and correct the relaxing tendency of butter, so generally used with this kind of aliment.

“*Oysters* are eaten both raw and dressed; but in the former state they are preferable; because heat dissipates considerably their nutritious parts as well as the salt-water, which promotes their digestion in the stomach; if not eaten very sparingly, they generally prove laxative.

“*Muscles* are far inferior to oysters, both in point of digestion and nutriment. Sea muscles are by some supposed to be of a poisonous nature; but though this opinion is not much countenanced by experience, the safest way is to eat them with vinegar, or some other vegetable acid.

“*Bread*. At the head of the vegetable class stands bread, that article of diet, which, from general use, has received the name of *the staff of life*. *Wheat* is the grain chiefly used for the purpose in this country, and is among the most nutritive of all the farinaceous kinds, as it contains a great deal of mucilage. Bread is very properly eaten with animal food, to correct the disposition to putrescency; but is most expedient with such articles in diet as contain much nourishment in a small bulk, because it then serves to give the stomach a proper degree of expansion. But as it produces a slimy chyle, and disposes to costiveness, it ought not to be eaten in a large quantity. To render bread easy of digestion, it ought to be well fermented and baked; and it never should be used till it has stood twenty-four hours after being taken out of the oven. otherwise it is apt to occasion various complaints in those who have weak bowels; such as flatulence, the heart-burn, watchfulness, and the like. The custom of eating butter with bread hot from the oven is compatible only with strong digestive powers.

“*Pastry*, especially when hot, has all the disadvantages of hot bread and butter; and even buttered toast, though the bread is stale, is scarcely inferior in its effects on a weak stomach. Dry toast without butter is by far the wholesomest breakfast.

“Bread made of *Rye* is apt to sour on the stomach, and to excite heart-burn in certain constitutions—is of a laxative nature, and, therefore, better suited to costive habits, either alone, or mixed with wheat: But on account of its disposition to acescency, fermentation, and flatulency, may not be so well adapted for persons of choleric temperaments, and those afflicted with dyspeptic, hypochondriac, and hysteric symptoms: yet, is the best to prevent or cure the scurvy.

“That made of *Indian Corn* appears to agree well with most people who like it; and when mixed with *Wheat* or *Rye*, or both, it makes them palatable, and keeps moist a considerable time.

“*Buckwheat* being somewhat liable to an ascenscent fermentation in the stomach, does not agree well with all constitutions. The grain should, previous to being ground, be freed from the dust and grit. It is supposed that its use occasions itchings and cutaneous eruptions—and constantly used is not thought as wholesome as other bread.

“*Oats*, when deprived of the husk, and particularly *barley*, when

properly prepared, are each of them softening, and afford wholesome and cooling nourishment. *Rice* likewise contains a nutritious mucilage, and is less used in this country than it deserves, both on account of its wholesomeness and economical utility. The notion of its being hurtful to the sight is a vulgar error. In some constitutions it tends to make them costive; but this seems to be owing chiefly to flatulence, and may be corrected by the addition of some spice, such as caraway, anise seed, and the like.

“*Potatoes* are an agreeable and wholesome food, and yield as much nourishment as any of the roots used in diet. The farinaceous or mealy kind is in general the most easy of digestion; and they are much improved by being roasted.

“*Green pease*, and *Turkey beans*, boiled in their fresh state, are both agreeable to the taste and wholesome; being neither near so flatulent, nor difficult of digestion, as in their ripe state; in which they resemble the other leguminous vegetables. *French beans* possess much the same qualities, but yield a more watery juice, and have a greater disposition to produce flatulence. The leguminous vegetables in general ought to be eaten with some spice.

“*Salads*, being eaten raw, require good digestive powers, especially those of the cooling kind; and the addition of oil and vinegar, though qualified with mustard, hardly renders the free use of them consistent with the weak stomach.

“*Spinage* affords a soft lubricating aliment, but contains little nourishment. In weak stomachs it is apt to produce acidity, and frequently a looseness. To obviate these effects, it ought always to be well beaten, and but little butter mixed with it.

“*Asparagus* is a nourishing article in diet, and promotes urine; but, in common with the vegetable class, disposes a little to flatulence.

“*Artichokes* resemble asparagus in their qualities, but seem to be more nutritive, and less diuretic.

“*White cabbage* is one of the most conspicuous plants in the garden. It does not afford much nourishment, but is an agreeable addition to animal food, and not quite so flatulent as the common greens. It is likewise diuretic, and somewhat laxative. Cabbage has a stronger tendency to putrefaction than most other vegetable substances; and, during their putrefying state, sends forth an offensive smell, much resembling that of putrefying animal bodies. So far, however, from promoting a putrid disposition in the human body, it is on the contrary, a wholesome aliment in the true putrid scurvy.

“*Turnips* are a nutritious article of vegetable food, but not very easy of digestion, and are flatulent. This effect, is in a great measure, obviated by pressing the water out of them before they are eaten.

“*Carrots* contain a considerable quantity of nutritious juice, but are among the most flatulent of vegetable productions.

“*Parsnips* are more nourishing and less flatulent than carrots, which they also exceed in the sweetness of their mucilage. By boiling them in two different waters, they are rendered less flatulent, but their other qualities are thereby diminished in proportion.

“*Parsley* is of a stimulating and aromatic nature, well calculated to make agreeable sauces. It is also a gentle diuretic, but preferable in all its qualities when boiled.

“*Celery* affords a root both wholesome and fragrant, but is difficult

of digestion in its raw state. It gives an agreeable taste to soups, as well as renders them diuretic.

“*Onions, garlic, and shallots*, are all of a stimulating nature, by which they assist digestion, dissolve slimy humours, and expel flatulency. They are, however, most suitable to persons of a cold and phlegmatic constitution.

“*Radishes* of all kinds, particularly the horse-radish, agree with the three preceding articles in powerfully dissolving slimy humours. They excite the discharge of air lodged in the intestines; but this proceeds from the expulsion of the air contained in themselves.

“*Apples* are a wholesome vegetable aliment, and in many cases medicinal, particularly in diseases of the breast and complaints arising from phlegm. But, in general, they agree best with the stomach when eaten either roasted or boiled. The more aromatic kinds of apples are the fittest for eating raw.

“*Pears* resemble much in their effects the sweet kind of apples, but have more of a laxative quality, and a greater tendency to flatulence.

“*Cherries* are, in general, a wholesome fruit, when they agree with the stomach, and they are beneficial in many diseases, especially those of the putrid kind.

“*Plumbs* are nourishing, and have besides an attenuating, as well as a laxative, quality; but are apt to produce flatulence. If eaten fresh, and before they are quite ripe, especially in large quantities, they occasion cholics and other complaints of the bowels.

“*Peaches* are not of a very nourishing quality, but they abound in juice, and are serviceable in bilious complaints.

“*Apricots* are more pulpy than peaches, but are apt to ferment and produce acidities in weak stomachs. Where they do not disagree they are cooling, and tend likewise to correct a disposition to putrescency.

“*Gooseberries*, as well as *currants*, when ripe, are similar in their qualities to *cherries*, and, when used in a green state, they are agreeably cooling.

“*Strawberries*, are an agreeable, cooling aliment, and are accounted good against the gravel.

“*Cucumbers* are cooling, and agreeable to the palate in hot weather; but to prevent them from proving hurtful to the stomach, the juice ought to be squeezed out after they are sliced, and vinegar, pepper, and salt, afterwards added.

“*Tea*. By some the use of this exotic is condemned in terms the most vehement and unqualified, while others have either asserted its innocence, or gone so far as to ascribe to it salubrious and even extraordinary virtues. The truth seems to lie between these extremes: there is however an essential difference in the effects of green tea and of black, or bohea; the former of which is much more apt to affect the nerves of the stomach than the latter, especially when drunk without cream, and likewise without bread and butter. That when taken in a large quantity, or at a later hour than usual, it often produces watchfulness, is a point which cannot be denied; but if used in moderation, and accompanied with the addition just now mentioned, it does not sensibly discover any hurtful effects, but greatly relieves an oppression of the stomach, and abates a pain of the head. It ought always to be made of a moderate degree of strength: for if too weak it certainly relaxes the stomach.

As it has an astringent taste, which seems not very consistent with a relaxing power, there is ground for ascribing this effect not so much to the herb itself, as to the hot water, which not being impregnated with a sufficient quantity of tea to correct its own emolient tendency, produces a relaxation unjustly imputed to some noxious quality of the plant. But tea, like every other commodity, is liable to damage, and when this happens it may produce effects not necessarily connected with its original qualities.

“*Coffee*. It is allowed that coffee promotes digestion, and exhilarates the animal spirits; besides which, various other qualities are ascribed to it, such as dispelling flatulency, removing dizziness of the head, attenuating viscid humours, increasing the circulation of the blood, and consequently perspiration; but if drunk too strong, it effects the nerves, occasions watchfulness, and tremor of the hands; though in some phlegmatic constitutions it is apt to produce sleep. Indeed it is to persons of that habit that coffee is well accommodated: for to people of a thin and dry habit of body it seems to be injurious. Turkey coffee is greatly preferable in flavour to that of the West-Indies. Drank only in the quantity of one dish after dinner to promote digestion, it answers best without either sugar or milk: but if taken at other times it should have both, or in place of the latter rather cream, which not only improves the beverage, but tends to mitigate the effect of coffee upon the nerves.

“*Chocolate* is a nutritive and wholesome composition if taken in small quantity, and not repeated too often; but is generally hurtful to the stomach of those with whom a vegetable diet disagrees. By the addition of vanilla and other ingredients it is made too heating, and so much effects particular constitutions as to excite nervous symptoms, especially complaints of the head.”

CHAP. IV.

OF AIR.

UNWHOLESOME air is a very common cause of diseases. Few are aware of the danger arising from it. People generally pay some attention to what they eat or drink, but seldom regard what goes into the 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 a noxious quality, as to occasion immediate death. But such violent effects seldom happen, as people are generally on their guard against them. The less perceptible influences of bad air prove more generally hurtful to mankind; we shall therefore endeavour to point out some of these, and to 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, constricts the solids, and condenses the fluids. It occasions rheumatisms, coughs, and catarrhs, with other diseases of the throat and breast. Air that is too moist destroys the elasticity or spring of the solids, induces phlegmatic or lax constitutions, and disposes the body to agues, or intermitting fevers, dropsies, &c.

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

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

It is very common in this country to have church-yards in the middle of populous cities. Whether this be the effect of ancient superstition, or owing to the increase of such towns, is a matter of no consequence. Whatever gave rise to the custom, it is a bad one. It is habit alone which reconciles us to these things; by means of which the most ridiculous, nay pernicious customs, often become sacred. Certain it is, that thousands of putrid carcasses, 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 carcasses must render it still worse. Churches are commonly old buildings with arched roofs. They are seldom open above once a week, are never ventilated by fires nor open windows, and rarely kept clean. This occasions that damp, musty, unwholesome smell which one feels upon entering a church and renders it a very unsafe place for the weak and valetudinary. These inconveniences might, in a great measure, be obviated, by prohibiting all persons from burying within churches, by keeping them clean, and permitting a stream of fresh air to pass frequently through them, by opening opposite doors and windows.†

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

* 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 this country should not have followed their example in a custom so truly laudable.

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

lurking places of bad air 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 people rise out of them, ought to be turned down, and exposed to the fresh air from the open windows through the day. This would expel any noxious vapour, and could not fail to promote the health of the inhabitants.

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

Air which stagnates in mines, wells, cellars, &c. is extremely noxious. That kind of air is to be avoided as the most deadly poison. It often kills almost as quickly as 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, chuse to sleep in small apartments. This conduct is very imprudent. A bed-chamber ought always to be well aired; as it is generally occupied in the night only, when all doors and windows are shut. If a fire be kept in it, the danger from a small room becomes still greater. Numbers have been stifled when asleep by a fire in a small apartment, which is always hurtful.

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

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

* 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.

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 of 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 England are rendered very unwholesome from the great quantity of wood which surrounds them.

Houses situated in low marshy countries, or near large lakes of stagnating water are likewise unwholesome. Waters which stagnate not only render the air damp, but load it with putrid exhalations, which produce the most dangerous and fatal diseases. Those who are obliged to inhabit marshy countries, ought to 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 a chamber where a patient lies, without being ready to faint, by reason of the hot suffocating smell. How this must affect the sick, any one may judge. No medicine is so beneficial to the sick as fresh air. It is the most reviving of all cordials, if it be administered with prudence. We are not however, to throw open doors and windows at random upon the sick. Fresh air is to be let into the chamber gradually, and if possible, by opening the windows of some other apartment.

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

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

Physicians, surgeons, and others who attend hospitals, ought, for their own safety, to take care that they be properly ventilated. Such persons as are obliged to spend the most of their time amongst the sick, run great hazard of being themselves infected when the air is bad. All hospitals, and places of reception for the sick, ought to have an open situation, at some distance from any great town, and such patients as labour under

any infectious disease ought never to be suffered to come near the rest.*

CHAP. V. OF EXERCISE.

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

The love of activity shews itself very early in man. So strong is this principle, that a healthy youth cannot be 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. 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 carcass, over-run with diseases occasioned by inactivity, dragged through the streets by half a dozen horses.†

* 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.

† It is not necessity, but fashion, which makes the use of carriages so common. There are many people who have not exercise enough to keep their humours wholesome, who yet dare not venture to make a visit to their next neighbours, but in a coach or sedan, lest they should be looked down upon. Strange, that men should be such fools 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!

Glandular obstructions, now so common, generally proceed from inactivity. These are the most obstinate 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 have been completely cured of these disorders by being reduced, from a state of opulence, to labour for their daily bread. This plainly points out the sources from whence nervous diseases flow, and the means by which they may be prevented.

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

A late author,* in his excellent treatise on health, says that the weak and valetudinary ought to make exercise a part of their religion. We would recommend this, not only to the weak and valetudinary, but to all whom 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 a 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

* Cheyne.

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

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

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

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

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

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

Every man should lay himself under some sort of necessity to take exercise. Indolence, like other vices when indulged, gains ground, and at length becomes agreeable. Hence many who were fond of exercise in the early part of life, become quite averse to 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

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

is, that if gentlemen were frequently to amuse and exercise themselves in this way; it might have many good effects. They would at least derive as much honour from a few masterly specimens of their own workmanship, as from the character of having ruined most of their companions by gaming or drinking. Besides, men of leisure, by applying themselves to the mechanical arts, might improve them, to the great benefit of society.

Indolence not only occasions diseases, and renders men useless to society, but promotes all manner of vice. To say a man is idle, is little better than to call him vicious. The mind, if not engaged in some useful pursuit, is constantly in quest of idle 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.

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 fore-part of the night, sink to rest towards morning, and dose till noon. The best way to make sleep sound and refreshing is to rise betimes. The custom of laying 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 a great pity that a practice so destructive to health should be so much in fashion. How quickly the want of rest in due season will blast the most blooming complexion, or ruin the best constitution, is evident from the ghastly countenances of those who, as the phrase is, turn day into night, and night into day.

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

It is certain that too much exercise will prevent sleep, as well as too little. We seldom however hear the active and laborious complain of 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 quantity of solid food and exercise.

Nothing more certainly disturbs our repose than anxiety. When the mind is not at ease, one seldom enjoys sound sleep. This greatest of human blessings flies the wretched, and visits the happy, the cheerful, and the gay. This is a sufficient reason why every man should endeavour to be as easy in his mind as possible when he goes to rest. Many, by indulging grief and anxious thought, have banished sound sleep so long, that they could never afterwards enjoy it.

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

Of Clothing.

The clothing ought to be suited to the climate. Custom has no doubt a very great influence in this article; but no custom can ever change the nature of things so far, as to render the same clothing fit for an inhabitant of Nova Zembla and the island of Jamaica. It is not indeed necessary to observe an exact proportion between the quantity of clothes we wear and the degree of latitude which we inhabit; but, at the same time, proper attention ought to be paid to it, as well as to the openness of the country, the frequency and violence of storms, &c.

In youth, while the blood is hot and the perspiration free, it is less necessary to cover the body with a great quantity of clothes; but in

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

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 do it gradually; and indeed the changes of apparel in this climate ought to be very inconsiderable, especially among those who have passed the meridian of life.*

Clothes often become hurtful by their being made subservient to the purposes of pride or vanity. Mankind in all ages seem to have considered clothes in this view; accordingly their fashion and figure have been continually varying, with very little regard either to health, the climate, or convenience; 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 monstrous 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, synopes or fainting fits, coughs, consumptions of the lungs, and other complaints so common among females.

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

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

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

‡ We often see persons, who are rendered quite lame by the nails of their toes having grown into the flesh, and frequently hear of mortifications proceed-

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, necklaces, &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 any one to make himself a slave to fine clothes. Such a one, and many such there are, would rather remain as fixt as a statue from morning till night, than discompose a single hair, or alter the position of a pin. Were we to recommend any particular pattern for dress, it would be that which is worn by the people called Quakers. They are always neat, clean, and often elegant, without any thing superfluous. What others lay out upon tawdry laces, ruffles, and ribands, they bestow upon superior cleanliness. Finery is only the affectation of dress, and very often covers a great deal of dirt.

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

ing from this cause. All these, and many other inconveniences attending the feet, must be imputed solely to the use of short and strait shoes.

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

CHAP. VII. OF INTEMPERANCE.

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

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

The analogy between the nourishment of plants and animals affords a striking proof of the danger of intemperance. Moisture and manure greatly promote vegetation; yet an over-quantity of either will entirely destroy it. The best things become hurtful, nay, destructive, when carried to excess. Hence we learn, that the highest degree of human wisdom consists in regulating our appetites and passions so as to avoid all extremes. It is that chiefly which entitles 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 the abuse of these passions; and moderation consists in the proper regulation of them. Men, not contented with satisfying the simple calls of Nature, create artificial wants, and are perpetually in search after something that may gratify them; but imaginary wants can never be gratified. Nature is content with little; but luxury knows no bounds. Hence the epicure, the drunkard, and the debauchee seldom stop in their career till their money or their constitution fails: they 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 dropsics, fevers and lethargies, with other innumerable distempers, lying in ambuscade among the dishes."

* Rosseau.

† Addison.

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

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 shorten the lives of children, as the intemperance of parents. The poor man who labours all day, and at night lies down contented with his humble fare, can boast a numerous offspring, while his pampered lord, sunk in ease and luxury, often languishes without an heir to his ample fortunes. Even states and empires feel the influence of intemperance, and rise or fall as it prevails.

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

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

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

Many people injure their health by drinking, who seldom get drunk. The continual habit of soaking, as it is called, though its effects be not so violent, is not less pernicious. When the vessels are kept constantly full and upon the stretch, the different digestions can neither be duly performed, nor the humors 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 drunk by the common people of England, cannot fail to render the blood sily 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 stroug wiuies, 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 or ill humour.

Drunkenness not only proves destructive to health, but likewise to the faculties of the mind. It is strange that creatures who value themselves on account of a superior degree of reason to that of brutes, should take pleasure in sinking so far below them. Were such as voluntarily deprive themselves of the use of reason, to continue ever after in that condition, it would seem but a just punishment. Though this be not the consequence of our 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.†

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

† 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 fa-

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.

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 reabsorbed from dirty clothes, it must occasion diseases.

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

shion 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.

* Mr. Pot, 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 justness. I am convinced, that if that part of the body which is the seat of this cruel disease was kept clean by frequent washing, it would never happen. The climbing boys, as they are called, are certainly the most miserable wretches on the face of the earth; yet, for cleaning chimnies, no such persons are necessary.

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

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

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

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

* 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 Tarquinus, Agrippa, and others who made and improved them, than on those who achieved the greatest conquests.

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

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; 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 sores 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 luke-warm water at night, after being exposed to cold or wet through the day, they would seldom experience the ill effects which often proceed from these causes.

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

In places where great numbers of sick people are collected together, 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 per-

* 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 shall turn back, and cover that which cometh from thee, &c.

fect 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, they 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 eradicated.

Cleanliness is certainly agreeable to our nature. We cannot help approving it in others, even though we should not practice 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 to 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.*

CHAP. IX.

OF INFECTION.

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

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

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

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

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 connections, but likewise hurt the sick. By crowding the house they render the air unwholesome, and by their private whispers and dismal countenances disturb the imagination of the patient, and depress his spirits. Persons who are ill, especially in fevers, ought to be kept as quiet as possible. The sight of strange faces, and every thing that disturbs the mind, hurts them.

The common practice in country places of inviting great numbers of people to funerals, and crowding them into the same apartment where the corpse lies, is another way of spreading infection. The infection does not always die with the patient. Every thing that comes into contact with his body while alive, receives the contagion, and some of them, as clothes, blankets, &c. will retain it for a long time. Persons who die with 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 shews the danger of buying at random the clothes which have been worn by other people.

Infectious disorders are frequently imported. Commerce, together with the riches of foreign climes, 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.*

* 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 disorders 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,

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

Many are the causes which tend to diffuse infection through populous cities. The whole atmosphere of a large town is one contaminated mass, abounding with various kinds of infection, and must be pernicious to health. The best advice that we can give to such as are obliged to live in large cities, is to chuse an open situation; to avoid narrow, dirty, crowded streets; to keep their own houses 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 diseases are in some degree infectious, no one should continue long with the sick, except the necessary attendance. 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

bedding, &c. which had been used by the sick during the voyage, to be either destroyed, or thoroughly cleansed by fumigation, &c. before any of 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 seaport towns, and by this means diffused all over the country.

* 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 bed-side, 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.

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 master's 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, 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 more cleanly, and the wealthy. Were proper attention paid to the first appearances of such disorders, and the patient's early conveyance to an hospital, we should seldom see a putrid fever, which is almost as infectious as the plague, become epidemic.

CHAP. X.

OF THE PASSIONS.

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

Of Anger.

The passion of *anger* ruffles the mind, distorts the countenance, hurries on the circulation of the blood, and disorders the whole vital and animal functions. It often occasions fevers, and other acute diseases; and sometimes even sudden death. This passion is peculiarly

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

hurtful to the delicate, and those of weak nerves. I have known such persons frequently lose their lives by a violent fit of anger, and would advise them to guard against the excess of this passion with the utmost care.

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

Such as value health should avoid violent gusts of anger, as they would be 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 tranquility 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 childbed. Many of those who die in that situation, are impressed with a 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 apprehension 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 are apt 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 to 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 sympathizing friends, but they ought rather to be considered as enemies. All who wish well to the sick ought to keep such persons at the greatest distance from them.

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

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

We readily admit, that there are cases where the physician ought to give intimation of the patient's danger to some of his near connections; 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 deserves 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 to 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 changes 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 indeed may 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 in 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 up-

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

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

Innocent 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 wishes. 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 which any one can be guilty of. What we eagerly wish for we easily credit. Hence the too credulous fair are often betrayed into a situation which is truly deplorable, before they are able to discover that the pretended lover was only in jest. But there is no jesting with this passion. When love has got to a certain height, it admits of no

other cure but the possession of its object, which in this case ought always, if possible, to be obtained.*

Of Religious Melancholy.

Many persons of a religious turn of mind behave as if they thought it a crime to be cheerful. They imagine the whole of religion consists in certain mortifications, or denying themselves the smallest indulgence, even of the most innocent amusements. A perpetual gloom hangs over their countenances, while the deepest melaucholy 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 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 tranquility 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.

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 off the body is 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, putresence, &c.

Of the Evacuation by Stool.

Few things conduce more to health than keeping the body regular.

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

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

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

It would be difficult to ascertain the exact number of stools which may be consistent with health, as these differ in the different periods of life, in different constitutions, and even in the same constitution under a different regimen of diet, exercise, &c. It is however generally allowed, that one stool a day is sufficient for an adult, and that 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 a 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

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

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

When the urine is too long retained, it is not only reabsorbed, 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

* 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.

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 shew how far they may either be avoided, or have their influence counteracted by timely care. The want of a due attention to these, costs Britain annually some thousands of useful lives.

Changes in the Atmosphere.

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

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 colds. 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.

* I never knew a more remarkable instance of the uncertainty of the weather in this country, than happened when I was writing these notes. This morning, August 14, 1783, the thermometer in the shade was down at fifty-three degrees, and a very few minutes 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.

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 frequently go 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 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 cholick, 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 are not accustomed to have their clothes or feet wet, should be peculiarly careful in this respect.

Night Air.

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

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

Damp Beds.

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

But inns are not the only places where damp beds are to be met with. Beds kept in private families for the reception of strangers are often equally dangerous. All kinds of linen and bedding, when not frequently used, become damp. How then is it possible that beds, which are not slept in above two or three times a year, should be safe? Nothing is more common than to hear people complain of having caught cold by changing their bed. The reason is obvious: were they careful never to sleep in a bed but what was frequently used, they would seldom find any ill consequences from a change.

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

That baneful custom said to be practised in many inns, of damping sheets, and pressing them in order to save washing, and afterwards laying them on 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 linen, especially if it has been washed in winter, ought not to be used till it has been exposed for some time to the fire; nor is this operation less necessary for linen washed in summer, provided it has lain by for any length of time. This caution is the more needful, as gentlemen are often exceedingly attentive to what they eat or drink at an inn, yet pay no regard to a circumstance of much more importance.*

Damp Houses.

Damp houses frequently produce the like ill consequences; for this reason those who build should be careful to chuse a dry situation. A house which stands on a damp marshy soil or deep clay, will never be thoroughly dry. All houses, unless where the ground is exceeding dry, should have the first floor a little raised. 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, plasterers, &c. have done with it: such houses are not only dangerous from their dampness, but likewise from the smell of lime, paint, &c. The asthmas, consumptions, and other diseases of the lungs, so incident to people who work in these articles, are sufficient proofs of their being unwholesome.

Rooms are often rendered damp by an unseasonable piece of cleanliness; I mean the pernicious custom of washing them immediately before 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

* 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.

delicate ought carefully to avoid such a situation, and even the robust are not always proof against its influence.*

Sudden Transitions from Heat to Cold.

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

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

† The beer-houses in great towns, where such numbers of people spend their

People are very apt, when a room is hot, to throw open a window, and to sit near it. This is the 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 season, unless the window is at a distance. I have known mechanics frequently contract fatal diseases, by working stript at an open window, and would advise all of them to beware of such a practice.

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

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

The result of all 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 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."

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

PART II.

OF DISEASES.

CHAP. XII.

OF THE KNOWLEDGE AND CURE OF DISEASES.

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

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

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

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

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

Particular constitutions not only dispose persons to peculiar diseases, but likewise render it necessary to treat these diseases in a peculiar manner. A delicate person, for example, with weak nerves, who lives

mostly within doors, must not be treated, under any disease, precisely in the same manner as one who is hardy and robust, and who is much exposed to the open air.

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

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

It has already been observed, that the different occupations and situations in life dispose men to peculiar diseases. It is therefore necessary to 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 inquire, whether the disease be constitutional or accidental; whether it has been of long or short duration; whether it proceeds from any great and sudden alteration in the diet, manner of life, &c. The state of the patient's body, and of the other evacuations, ought also to be inquired into; and likewise whether he can with ease perform all the vital and animal functions, as breathing, digestion, &c.

Lastly, it will be proper to inquire what diseases the patient has formerly been 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 which goes by the name of a medicine possesses some wonderful power or secret charm, and think, if the patient swallows enough of drugs, that he must do well. This mistake has many ill consequences; it makes people trust to drugs, and neglect their own endeavours; besides it discourages all attempts to relieve the sick where medicines cannot be obtained.

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

Every disease weakens the digestive powers. The diet ought therefore, in all cases, to be light and easy of 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 a proper attention to the diet of less importance in chronic than in acute diseases. Persons afflicted with low spirits, wind, weak nerves, and other hypochondriacal affections, generally find more benefit from the use of solid food and generous liquors, than from all the cordial and carminative medicines, which can be administered to them.

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

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

Nor is 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 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 a 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 re-absorbed, or taken up into it, which serves to nourish the disease and increase the danger. Many diseases may be cured by cleanliness alone; most of them may be mitigated by it, and in all of them it is highly necessary both for the patient and those who attend him.

Many other observations, were it necessary, might be adduced to prove the importance of a proper regimen in diseases. Regimen will often cure diseases without medicine, but medicine will seldom succeed where a proper regimen is neglected. For this reason, in the treatment of diseases, we have always given the first place to regimen. Those who are ignorant of medicine may confine themselves to it only. For others who have more knowledge, we have recommended some of the most simple but approved forms of medicine in every disease. These however are never

to be administered but by people of better understanding; nor even by them without the greatest precaution.

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 cases. The most general causes of fevers are, *infection, errors in diet, unwholesome air, violent emotions of the mind, excess or suppression of usual evacuations, external or internal injuries, and extreme degrees of heat or cold.* As most of these have already been treated of at considerable length, and their effects 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 several different symptoms. The distinguishing symptoms of fever are, *increased heat, frequency of pulse, loss of appetite, general debility, pain in the head, and a difficulty in performing some of the vital or animal functions.* The symptoms usually attendant on fevers are, nausea, thirst, anxiety, delirium, weariness, wasting of the flesh, want of sleep, or the sleep disturbed and not refreshing.

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

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

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

A remitting fever differs from a continual only in a degree. It has frequent increases and decreases, or exacerbations and remis-

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

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

Many cooling liquors, which are extremely grateful to patients in a fever may be prepared from fruits, as decoctions of tamarinds, apple tea, orange whey, and the like. Mucilaginous liquors might also be prepared from marsh-mallow roots, linseed, limetree 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 the fever upon them, which conduct seldom fails to render it fatal.

In fevers the mind as well as the body should be kept easy. Company is seldom agreeable to the sick. Indeed every thing that disturbs the imagination, increases the disease; for which reason every person in a fever ought to be kept perfectly quiet, and neither allowed to see nor hear any thing that may in the least affect or discompose 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 of urging him to take victuals is evident. Much solid food in a fever is every way hurtful. It oppresses nature, and instead of nourishing the patient, serves only to feed the disease. What food the patient takes should be in small quantity, light, and of easy digestion. It ought to be chiefly of the vegetable kind, as 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.

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, fright him with the views of hell and damnation. It would be unsuitable here to dwell upon the impropriety and dangerous consequences of this conduct; it often hurts the body, and there is reason to believe seldom benefits the soul.

Among common people, the very name of a fever generally suggests the necessity of bleeding. This notion seems to have taken its rise from most fevers in this country having been formerly of an inflammatory nature; but true inflammatory fevers are now seldom to

be met with. Sedentary occupations, and a different manner of living, have so changed the state of diseases in Britain, that there is now hardly one fever in ten where the lancet is necessary. In most low, nervous, and putrid fevers, which are now so common, bleeding is really hurtful, as it weakens the patient, sinks his spirits, &c. We would recommend this general rule, never to bleed at the beginning of a fever, unless there be evident signs of inflammation. Bleeding is an excellent medicine when necessary, but should never be wantonly performed.

It is likewise a common notion, that sweating is always necessary in the beginning of a fever. When the fever proceeds from an obstructed perspiration, this notion is not ill-founded. If the patient only lies in bed, bathes his feet and legs in warm water, and drinks 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 longings. These are the calls of Nature, and often point out what may be of real use. Patients are not indeed to be indulged in every thing that the sickly appetite may crave; but it is generally right to let them have a little of what they eagerly desire, though it may not seem altogether proper. What the patient longs for, his stomach will generally digest; and such things have sometimes a very happy effect.

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

CHAP. XIV.

OF INTERMITTING FEVERS, OR AGUES.

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

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

CAUSES.—Agues are occasioned by effluvia from putrid stagnating water. This is evident from their abounding in rainy seasons, and being most frequent in countries where the soil is marshy, as in Holland,

the fens of Cambridgeshire, the Hundreds of Essex, &c. This disease may also be occasioned by eating too much stone fruit, by a poor watery diet, damp houses, evening dews, lying upon the damp ground, watching, fatigue, depressing passions, and the like. When the inhabitants of a high country remove to a low one, they are generally seized with intermitting fevers, and to such the disease is most apt to prove fatal. In a word, whatever relaxes the solids, diminishes the perspiration, or obstructs the circulation in the capillary or small vessels, disposes the body to agues.

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

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

Between the paroxysms the patient must be supported with food that is nourishing, but light and 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 watertrefoil, 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 and 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.

MEDICINE.—The first thing to be done in the cure of an intermitting fever, is to cleanse the stomach and bowels. This not only

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

renders the application of other medicines more safe, but likewise more efficacious. In this disease the stomach is generally loaded with cold viscid phlegm, and frequently great quantities of bile are discharged by vomit; which plainly points out the necessity of 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 this 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 smaller quantity of this medicine will be sufficient, and the dose must be adapted to the age, constitution and violence of the symptoms.†

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

† 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 depends 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

The above quantity of bark will frequently cure an ague; the patient, however, ought not to leave off taking the medicine as soon as the paroxysms are stopped, but should continue to use it till there is reason to believe the disease is entirely overcome. Most of the failures in the cure of this disease are owing to patients not continuing to use the medicine long enough. They are generally directed to take it till the fits are stopped, then to leave it off, and begin again at some distance of time; by which 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 handful of camomile-flowers, and an handful of coriander-seed, all bruised together in a mortar, may be used in form of infusion or tea. About half an handful of these ingredients may be put into a tea-pot, and an English pint of boiling water poured on 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 handful 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 of snake-root^e bruised, with an equal quantity of salt of wormwood, may be boiled in a quart of water to an English pint. To the strained liquors 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 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 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.

taken in the course of some weeks. When this medicine is intended either to stop a mortification, or cure an obstinate ague, it ought to be thrown in as fast as the stomach can possibly bear it. Inattention to this circumstance has hurt the reputation of one of the best medicines of which we are in possession.

* 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 intermittent 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 cautious of whom they purchase it.

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 proves 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 too much abroad in wet weather, especially in cold easterly winds.

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

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

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

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

* In obstinate agues, when the patient is old, the habit phelgmatic, 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 Virginia 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 worm-wood or salt of tartar may be added to the above quantity of bark.

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

to 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 state. In cases where the bark cannot be administered, the *saline mixture* may be given with advantage to children.*

Whine-why 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 harts-horn. Exercise is likewise of considerable service; and when the disease proves too 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 waiscoat with powdered bark quilted between the folds of it; by bathing them frequently in a strong decoction of the bark, and by rubbing the spine with strong spirits, or with a mixture of equal parts of laudanum and the saponaceous liniment.

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

To prevent agues, people must endeavour to avoid their causes—These have been already pointed out in the beginning of this section: we shall therefore only add one preventative 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; Virginia snake-root, and orange peel, of each half an ounce; bruise them all together, and infuse for five or six days in a bottle of brandy, Holland gin, or any good spirit; afterwards pour off the clear liquor, and take a wine glass of it twice or thrice a day. This indeed is recommending a dram; but the bitter ingredients in a great measure take off the ill effects of the spirit. Those who do not chuse it in brandy, may infuse it in wine; and such as can bring themselves to chew the bark, will find that method succeed very well. Gentian root or calamus aromaticus, may also be chewed by turns for the purpose. All bitters seem to be antidotes to agues, especial those that are warm and astringent.

* See Appendix, *Saline mixture*.

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 chillness 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, hickup, cold clammy sweats, an involuntary discharge of urine, are very dangerous symptoms.

As this disease is always attended with danger, the best medical assistance ought to be procured as soon as possible. A physician may be of use at the beginning, but his skill is often of no avail afterwards. Nothing can be more unaccountable than the conduct of those who have it in their power, at the beginning of a fever, to procure the best medical assistance, yet put it off till things come to an extremity. When the disease, by delay or wrong treatment, has become incurable, and has exhausted the strength of the patient, it is vain to hope for relief from medicine. Physicians may indeed assist Nature; but their attempts must ever prove fruitless, when she is no longer able to co-operate with their endeavours.

REGIMEN.—From the symptoms of this disease, it is evident, that the blood and other humours require to be attenuated; that the perspiration, urine, saliva, and all the other secretions, are in too small 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 structure of the vessels, and promote the secretions.

These important purposes may be greatly promoted by drinking plentifully of diluting liquors; as water-gruel, or oatmeal-tea, clear whey, barley-water, balm-tea, apple-tea, &c. These may be sharpened with juice of orange, jelly of currants, raspberries, and such like: orange-whey is likewise an excellent cooling drink. It is made by boiling among milk and water a bitter orange sliced, till the curd separates. If no orange can be had, a lemon, a little cream of tartar,

or a few spoonful of vinegar, will have the same effect. Two or three spoonful 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. 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 chuse those which are most agreeable, and that, when tired of one, he may have recourse to another.

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

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

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

Sitting upright in bed, if the patient 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 is 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 luke-warm 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 effects 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.

* See Appendix, *Pectoral decoction.*

MEDICINE.—In this and all other fevers, attended with a hard, full, quick pulse, bleeding is of the greatest importance. This operation ought always to be performed as soon as the symptoms of an inflammatory fever appear. The quantity of blood to be taken away, however, must be in proportion to the strength of the patient and the violence of the disease. If after the first bleeding the fever should increase, and the pulse become more frequent and hard, there will be a necessity for repeating it a second, and perhaps a third, or even a fourth time, which may be done at the distance of twelve, eighteen, or twenty-four hours from each other, as the symptoms require. If the pulse continues 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 luke-warm 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 drachm of sena

may be boiled for a few minutes in an English pint of water, and an ounce of manna dissolved in the decoction; afterwards it may be strained, and a tea-cupful drank every hour till it operates. This dose may be repeated twice or thrice, five or six days intervening.

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

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 the usual evacuations; as old ulcers, issues, sweating of the feet or hands, &c. the sudden striking in of an 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 succeeds a violent pricking pain in one of the sides among the ribs. Sometimes the pain extends towards the backbone, sometimes towards the forepart of the breast, and at other times towards the shoulder-blades. The pain is generally most violent when the patient draws his breath.

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

REGIMEN.—Nature generally endeavours to carry off this disease by a critical discharge of blood from some part of the body, by ex-

pectoration, 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 pints of water to two, which must afterwards be strained. The decoction of figs, raisins and barley, recommended in the preceding disease, is here likewise very proper. These and other diluting liquors are not to be drank in large quantities at a time; but the patient ought to keep continually sipping them, so as to render his mouth and throat always moist. All his food and drink should be taken a little warm.

The patient should be kept quiet, cool, and every way easy, as directed under the foregoing disease. His feet and hands ought daily to be bathed in lukewarm water; and he may sometimes sit up in bed for a short space, in order to relieve his head.

MEDICINE.—Almost every person knows when a fever is attended with a violent pain of the side, and a quick hard pulse, that bleeding is necessary. When these symptoms come on, the sooner this operation is performed the better; and the quantity at first must be pretty large, provided the patient is able to bear it. A large quantity of blood let at once, in the beginning of a pleurisy, has a much better effect than repeated small bleedings. A man may lose twelve or fourteen ounces of blood as soon as it is certainly known that he is seized with a pleurisy. For a younger person, or one of a delicate constitution, the quantity must be less.

If, after the first bleeding, the stich 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 abates, the pulse becomes softer, or the patient begins to spit freely, bleeding ought not to be repeated. This operation is seldom necessary after the third or fourth day of the fever, and ought not then to be performed, unless in the most urgent circumstances.

The blood may be many ways attenuated without bleeding. There are likewise many things that may be done to ease the pain of the side without this operation, as fomenting, blistering, &c. Fomentations may be made by boiling a handful of the flowers of elder, camomile, and common mallows, or any other soft vegetable 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 clothes grow cool, they must be changed, and great care taken that the patient do not catch cold. A bladder may be filled

* See Appendix, *Pectoral infusion.*

with warm milk and water, and applied to the side, if the above method of fomenting be found inconvenient. Fomentations not only ease the pain, but relax the vessels, and prevent the stagnation of the blood and other humours. The side may likewise be frequently rubbed with a little of the volatile liniment.*

Topical bleeding has often a very good effect in this disease. It may either be performed by applying a number of leeches to the part affected, or by cupping, which is both a more certain and expeditious method than the other.

Leaves of various kinds 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 continues after repeated bleedings, fomentations, &c. a blistering-plaster must be applied over the part affected, and suffered to remain for two days. This not only procures a discharge from the side, but takes off the spasm, and by that means assists in removing the cause of the disease. To prevent a strangury when the blistering-plaster is on, the patient may drink freely of the Arabic emulsion.†

If the patient is costive, a clyster of thin water-gruel, or of barley-water, in which a handful of mallows, or any other emollient vegetable has been boiled, may be daily administered. This will not only empty the bowels, but have the effect of a warm fomentation applied to the inferior viscera, which will help to make a derivation from the breast.

The expectoration may be prompted 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 spoonsful of it taken every two hours.

Should the squill disagree with the stomach, the oily emulsions may be administered;‡ or, in place of it, two ounces of the oil of sweet almonds, or oil of olives, and two ounces of syrup of violets may be mixed with as much sugar-candy powdered, as will make an electuary of the consistence of honey. The patient may take a tea-spoonful of this frequently, when the cough is troublesome. Should oily medicines prove nauseous, which is sometimes the case, two table spoonsful 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 every five or six hours, in a little of the patient's ordinary drink.

We shall only mention one medicine more, which some reckon almost a specific in the pleurisy, *viz.* the decoction of the seneka

* See Appendix, *Volatile liniment.*

† See Appendix, *Arabic emulsion.*

‡ See Appendix, *Oily emulsion.*

§ See Appendix, *Solution of gum ammoniac.*

rattle-snake root.* After bleeding and other evacuations have been premised, the patient may take two, three, or four table-spoonsful of this decoction, according as his stomach will bear it, three or four times a-day. If it should occasion vomiting, two or three ounces of simple cinnamon-water may be mixed with the quantity of decoction here directed, or it may be taken in smaller doses. As this medicine promotes perspiration and urine, and likewise keeps the body easy, it may be of some service in a pleurisy, or any other inflammation of the breast.

No one will imagine that these medicines are all to be used at the same time. We have mentioned different things, on purpose that people may have it in their power to chuse; and likewise, that when one cannot be obtained they may make use of another. Different 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, 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 the acute continual fever. He ought likewise to use a light diet, of easy digestion, and his drink should be butter-milk, whey, and other things of a cleansing nature.

Of the Bastard Pleurisy.

That species of pleurisy which is called the *bastard* or *spurious* generally goes off by keeping warm for a few days, drinking plenty of diluting liquors, and observing a cooling regimen.

It is known by a dry cough, a quick pulse, and a difficulty of lying on the affected side, which last does not always happen in the true pleurisy. Sometimes indeed this disease proves obstinate, and requires bleeding, with cupping, and scarifications of the part affected. These, together with the use of nitrous and other cooling medicines, seldom fail to effect a cure.

Of the Paraphrenitis.

The *paraphrenitis*, or inflammation of the diaphragm, is so nearly connected with the pleurisy, and resembles it so much in the manner of treatment, that it is scarce 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,

* See Appendix, *Decoction of Seneca root.*

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 hickup, 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 viscid pituitous matter obstructing the vessels of the lungs, it is called a *spurious* or *bastard peripneumony*. When it arises from a thin acrid deflunction 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 quinsy, a pleurisy, &c. It proceeds from the same causes as the pleurisy, viz. an obstructed perspiration from cold, wet clothes, &c. or from an increased circulation of the blood by violent exercise, the use of spices, 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 slender and thin in this than in any other inflammatory disease. The learned Dr. Arbuthnot asserts, that even common whey is sufficient to support the patient, and that decoctions of barley, and in-

fusions of fennel roots in warm water with milk, are the most proper both for drink and nourishment. He likewise recommends the steam of warm water taken in by the breath, which serves as a kind of internal fomentation, and helps to attenuate the impacted humours. If the patient has loose stools, but is not weakened by them, they are not to be stopped, but rather promoted by the use of emollient clysters.

It has already been observed, that the *spurious* or *bastard* peripneumony is occasioned by a viscid pituitous matter obstructing the vessels of the lungs. It commonly attacks the old, infirm, and phlegmatic, in winter and wet seasons.

The patient at the beginning is cold and hot by turns, has a small quick pulse, feels a sense of weight upon his breast, breathes with difficulty, and sometimes complains of a pain and giddiness of his head. His urine is usually pale, and his colour very little changed.

The diet, in this as well as in the true peripneumony, must be very slender, as weak broths, sharpened with the juice of orange or lemon, or 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 is 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 does 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 spoonsful 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, which is more or less dangerous, according to the part where it is situated. When this happens in the pleura, it sometimes breaks outwardly, and the matter is discharged by the wound.

When the suppuration happens within the substance or body of the lungs, the matter may be discharged by expectoration; but if the matter floats in the cavity of the breast, between the plura and the lungs, it can only be discharged by an incision made between the ribs.

If the patient's strength does not return after the inflammation is to all appearance removed; if his pulse continues quick though soft, his breathing difficult and oppressed; if he has 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 or decay of the whole body from an ulcer, tubercles, or concretions 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 variability of the weather.

CAUSES.—It has already been observed, that an inflammation of the breast often ends in an imposthume: consequently whatever disposes people to this disease, must likewise be considered as a cause of consumption.

Other diseases, by vitiating the habit, may likewise occasion consumptions; as the scurvy, the scrophula, or king's evil, the venereal disease, the asthma, small-pox, measles, &c.

As this disease is seldom cured, we shall endeavour the more particularly to point out its causes, in order that people may be enabled to avoid it. These are:

—Confined or unwholesome air. When this fluid is impregnated with the fumes of metals or minerals, it proves extremely hurtful to the lungs, and often corrodes the tender vessels of that necessary organ.

—Violent passions, exertions, or affections of the mind: as grief, disappointment, anxiety, or close application to the study of abstruse arts or sciences.

—Great evacuations; as sweating, diarrhoeas, diabetes, excessive venery, the fluor albus, an over-discharge of the menstrual flux, giving suck too long, &c.

—The sudden stoppage of customary evacuations; as the bleeding piles, sweating of the feet, bleeding at the nose, the menses, issues, ulcers, or eruptions of any kind.

—Injuries done to the lungs, calculi, &c. I lately saw the symptoms of a phthisis occasioned by a small bone sticking in the *bronchia*. It was afterwards vomited along with a considerable quantity of purulent matter, and the patient, by a proper regimen, and the use of the Peruvian bark, recovered.

—Making a sudden transition from a hot to a very cold climate, change of apparel, or whatever greatly lessens the perspiration.

—Frequent and excessive debaucheries. Late watching, and drinking strong liquors, which generally go together, can hardly fail

to destroy the lungs. Hence the *bon companion* generally falls a sacrifice to this disease.

—Infection. Consumptions are likewise caught by sleeping with the diseased; for which reason this should be carefully avoided. It cannot be of great benefit to the sick, and must hurt those in health.

—Occupations in life. Those artificers who sit much, and are constantly leaning forward, or pressing upon the stomach and breast, as cutlers, tailors, shoe-makers, 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 great. There is generally a quick, soft, small pulse; though sometimes the pulse is pretty full, and rather hard. These are the common symptoms of a beginning consumption.

Afterwards the patient begins to spit a greenish, white, or bloody matter. His body is extenuated by the hectic fever, and colliquative sweats, which mutually succeed one another, *viz.* the one towards night, and the other in the morning. A looseness, and an excessive discharge of urine, are often troublesome symptoms at this time, and greatly weakens 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 more harm than good.

It is a pity those who attend the sick seldom recommend riding in this disease, till the patient is either unable to bear it, or the malady has become incurable. Patients are likewise apt to trifle with every thing that is in their 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 upon fruits, and the broth of chickens, or other young animals which can be kept alive on board. It is scarcely necessary to add, that such voyages should be undertaken, if possible in the mildest season, and that they ought to be towards a warmer climate.†

Those who have not courage for a long voyage may travel into a more southern climate, as the south of France, Spain, or Portugal; and if they find the air of these 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 neither eat nothing that is either heating or hard of digestion, and his drink must be of a soft 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 effect, 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 humours of an adult; and when people do not perceive its effects soon, they lose hope, and so leave it off. Hence it happens that this medicine, however valuable, very seldom performs a cure. The reason is obvious; it is commonly used too late, is taken in too small quantities, and is not duly persisted in.

* Two things chiefly operate to prevent the benefits which would arise from sailing. The one is that physicians seldom order it till the disease is too far advanced; and the other is, that they seldom order a voyage of a sufficient length. A patient may receive no benefit by crossing the channel, who, should he cross the Atlantic, might be completely cured. Indeed we have reason to believe, that a voyage of this kind, if taken in due time, would seldom fail to cure a consumption.

† Though I do not remember to have seen one instance of a genuine consumption of the lungs cured by medicine, yet I have known a West-India voyage work wonders in that dreadful disorder.

I have known very extraordinary effects from asses' milk in obstinate coughs, which threatened a consumption of the lungs; and do verily believe, if used at this period, that it would seldom fail; but if it be delayed till an ulcer is formed, which is generally the case, how can it be expected to succeed?

Asses' milk ought to be drank, if possible, in its natural warmth, and by a grown person, in the quantity of half an English pint at a time. Instead of taking this quantity night and morning only, the patient ought to take it four times, or at least thrice a-day, and to eat a little light bread along with it, so as to make it a kind of meal.

If the milk should happen to purge, it may be mixed with cold 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, until it comes to be almost the sole food. I never knew it succeed unless where the patient almost lived upon it.

Cows milk is most readily obtained of any, and though it be not so easily digested as that of asses or mares, it may be rendered lighter by adding to it an equal quantity of barley-water, or allowing it to stand for some hours, and afterwards taking off the cream. If it should notwithstanding prove heavy on the stomach, a small quantity of brandy or rum, with a little sugar, may be added, which will render it both more light and nourishing.

It is not to be wondered, that milk should for some time disagree with a stomach that has not been accustomed to digest any thing but flesh and strong liquors, which is the case with many of those who fall into consumptions. We do not however advise those who have been accustomed to animal food and strong liquors, to leave them off all at once. This might be dangerous. It will be necessary for such to eat a little, once a day of the flesh of some young animal, or rather to use the broth made of chickens, veal, lamb, or such like. They ought likewise to drink a little wine made into negus, or diluted with twice or thrice its quantity of water, and to make it gradually weaker till they can leave it off altogether.

These must be used only as preparatives to a diet 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 gooseberry or currant tarts, apples roasted or boiled in milk, &c. The juices, conserves, and preserves, &c. of ripe subacid fruits, ought to be eaten plentifully, as the jelly of currants, conserves of roses, preserved plumbs, cherries, &c.

Wholesome air, proper exercise, and a diet consisting chiefly of these and other vegetables, with milk, is the only course that can be depended on in a beginning consumption. If the patient has strength and sufficient resolution to persist in this course, he will seldom be disappointed of a cure.

In a populous town in England,* where consumptions are very common, I have frequently seen consumptive patients, who had been sent to the country with orders to ride, and live upon milk and vegetables, return in a few months quite plump, and free from any complaint. This indeed was not always the case, especially when the disease was hereditary, or far advanced; but it was the only method in which success was to be expected: where it failed, I never knew medicine succeed.

If the patient's strength and spirits flag, he must be supported by strong broths, jellies, and such like. Some recommend shell fish in this disorder, and with some reason, as they are nourishing and restorative.† All the food and drink ought however to be taken in small quantities, lest an over charge of fresh chyle should oppress the lungs, and too much accelerate the circulation of the blood.

The patient's mind ought to be kept as easy and cheerful as possible. Consumptions are often occasioned, and always aggravated, by a melancholy cast of mind; for which reason music, cheerful company, and every thing that inspires mirth, are highly beneficial.—The patient ought seldom to be left alone, as brooding over his calamities is sure to render him worse.

MEDICINE.—Though the cure of this disease depends chiefly upon regimen and the patient's own endeavours, yet we shall mention a few things which may be of service in relieving some of the more violent symptoms.

In the first stage of a consumption, the cough may sometimes be appeased by bleeding; and the expectoration may be promoted by the following medicines. Take fresh squills, gum-ammoniac, and powdered cardamum seeds, of each a quarter of an ounce; beat them together in a mortar, and if the mass proves too hard for pills, a little of any kind of syrup may be added to it. This may be formed into pills of a moderate size, and four or five of them taken twice or thrice a-day, according as the patient's stomach will bear them.

The *lac ammoniacum*, or milk of gum-ammoniac, as it is called, is likewise a proper medicine in this stage of the disease. It may be used as directed in the pleurisy.

A mixture made of equal parts of lemon-juice, fine honey, and syrup of poppies, may likewise be used. Four ounces of each of these may be simmered together in a sauce-pan, over a gentle fire, and a table-spoonful of it taken at any time when the cough is troublesome.

* Sheffield.

† I have often known persons of a consumptive habit, where the symptoms were not violent, reap great benefit from the use of oysters. They generally eat them raw, and drink the juice along with them.

It is common in this stage of the disease to load the patient's stomach with oily and balsamic medicines. These, instead of removing the cause of the disease, tend rather to increase it by heating the blood, while they pall the appetite, relax the solids, and prove every way hurtful to the patient. Whatever is used for removing the cough, besides riding and other proper regimen, ought to be medicines of a sharp and cleansing nature; as oxymel, syrup of lemon, &c.

Acids seem to have peculiarly good effects in this disease; they both tend to quench the patient's thirst and to cool the blood. The vegetable acids, as apples, oranges, lemons, &c. appear to be the most proper. I have known patients suck the juice of several lemons every day with manifest advantage, and would for this reason recommend acid vegetables to be taken in as great quantity as the stomach will bear them.

For the patient's drink, we would recommend infusions of the bitter plants, as ground-ivy, the lesser centaury, camomile-flowers, or water-trefoil. These infusions may be drank at pleasure. They strengthen the stomach, promote digestion, and at the same time answer all the purposes of dilution, and quench thirst much better than things that are luscious or sweet. But if the patient spits blood, he ought to use for his ordinary drink, infusions or decoctions of the vulnerary roots, plants, &c.*

There are many other mucilaginous plants and seeds, of a healing and agglutinating nature, from which decoctions or infusions may be prepared with the same intention; as the others, the quince-seed, colts-foot, 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 symptoms, shew that an imposthume is formed in the lungs, we would recommend the Peruvian bark, that being the only drug which has any chance to counteract the general tendency which the humours then have to putrefaction.

An ounce of the bark in powder may be divided into eighteen or twenty doses, of which one may be taken every three hours through the day, in a little syrup, or a cup of horehound tea.

If the bark should happen to purge, it may be made into an electuary, with the conserve of roses, thus: Take old conserve of roses a quarter of a pound, Peruvian bark a quarter of an ounce, syrup of orange or lemon, as much as will make it of the consistence of honey. This quantity will serve the patient four or five days, and may be repeated as there is occasion.

Such as cannot take the bark in substance, may infuse it in cold water. This seems to be the best menstruum for extracting the virtues of

* See Appendix, *Vulnerary Decoction.*

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 collected 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 a proper time for using the Peruvian bark, which may be taken as directed above.

If the vomica or imposthume should discharge itself into the cavity of the breast, between the pleura and the lungs, there is no way of getting the matter out but by an incision, as has already been observed. As this operation must always be performed by the 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, and want of appetite, &c.

Those who are of a fretful temper, who indulge in spiritous 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.*

* See Appendix, *Chalybeate wine*.

Agreeable amusements, cheerful company, and riding about, are however preferable to all medicines in this disease. For which reason, when the patient can afford it, we would recommend a long journey of pleasure, as the most likely means to restore his health.

What is called a *symptomatic consumption*, cannot be cured without first removing the disease by which it is occasioned. Thus, when a consumption proceeds from the scrophula, or king's evil, from the scurvy, the asthma, the venereal disease, &c a due attention must be paid to the malady from whence it arises, and the regimen and medicine directed accordingly.

When *excessive evacuations* of any kind occasion a consumption, they must not only be restrained, but the patient's strength must be restored by gentle exercise, nourishing diet, and generous cordials. Young and delicate mothers often fall into consumptions, by giving suck too long. As soon as they perceive their strength and appetite begin to fail, they ought immediately to wean the child, or provide another nurse, otherwise they cannot expect a cure.

Before we quit this subject, we would earnestly recommend it to all, as they wish to avoid consumptions, to take as much exercise, without doors, as they can, to avoid unwholesome air, and to study sobriety. Consumptions owe their present increase not a little to the fashion of sitting up late, eating hot suppers, and spending every evening over a bowl of 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.

CHAP. XIX.

OF THE SLOW OR NERVOUS FEVER.

NERVOUS fevers have increased greatly of late years in this island, owing doubtless to our different manner of living, and the increase of sedentary employments; as they commonly attack persons of a weak relaxed habit, who neglect exercise, eat little solid food, study hard, or indulge in spiritous 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, 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 use of purgative medicines, or any other excessive evacuations, are most liable to this disease.

Keeping on wet clothes, lying on the damp ground, excessive fatigue, and whatever obstructs the perspiration, or causes a spasmodic stricture of the solids, may likewise occasion nervous fevers. We shall only add, frequent and great irregularities in diet. Too great abstinence, as well as excess, is hurtful. Nothing tends so much to preserve the body in a sound state as a regular diet; nor can any thing contribute more to occasion fevers of the worst kind than its opposite.

SYMPTOMS.—Low spirits, want of appetite, weakness, weariness after motion, watchfulness, deep sighing, and dejection of mind, are generally the forerunners of this disease. These are succeeded by a quick low pulse, a dry tongue without any considerable thirst, chilliness and flushing in turns, &c.

After some time the patient complains of a giddiness and pain of the head, has a nausea, with retchings and vomiting; the pulse is quick, and sometimes intermitting; the urine pale, resembling dead small beer, and the breathing is difficult, with oppression of the breast, and slight alienations of the 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 happens in one or both ears, or large pustules break out about the lips and nose, there is reason to hope for a favourable crisis.

But if there is an excessive looseness or wasting sweats, with frequent fainting fits; if the tongue, when put out, trembles excessively, and the extremities feel cold, with a fluttering or slow creeping pulse; if there is a starting of the tendons, an almost total loss of sight and hearing, and an involuntary discharge by stool, and urine, there is great reason to fear that death is approaching.

REGIMEN.—It is very necessary in this disease to keep the patient cool and quiet. The least motion would fatigue him, and will be apt to occasion weariness, and even faintings. His mind ought not only to be kept easy but soothed and comforted with the hopes of a speedy recovery. Nothing is more hurtful in low fevers of this kind than presenting to the patient's imagination gloomy or frightful ideas. These of themselves often occasion nervous fevers, and it is not to be doubted but they will likewise aggravate them.

The patient must not be kept too low. His strength and spirits ought to be supported by nourishing diet and generous cordials. For this purpose his gruel, 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 may 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

* See appendix, *Mustard-whey*.

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.—When a nausea, load, and sickness at the stomach, prevail at the beginning of the fever, it will be necessary to give the patient a gentle vomit. Fifteen or twenty grains of ipecacuanha in fine powder, or a few spoonsful of the vomiting julep,* will generally answer this purpose very well. This may be repeated any time before the third or fourth day, if the above symptoms continue. Vomits not only clean the stomach, but by the general shock which they give, promote the perspiration, and have many other excellent effects in slow fevers, where there are no signs of inflammation, and nature wants rousing.

Such as dare not venture upon a vomit may clean the bowels by a small dose of Turkey rhubarb, or an infusion of senna and manna.

In all fevers, the great point is to regulate the symptoms, so as to prevent them from going to either extreme. Thus, in fevers of the inflammatory kind, where the force of the circulation is too great, or the blood dense, and the fibres too rigid, bleeding and other evacuations are necessary. But in nervous fevers, where nature flags, where the blood is vapid and poor, and the solids relaxed, the lancet must be spared, and wine, with other cordials, plentifully administered.

It is the more necessary to caution people against bleeding in this disease, as there is generally at the beginning an universal stricture upon the vessels, and sometimes an oppression and difficulty of breathing, which suggest the idea of a plethora, or too great a quantity of blood. I have known even some of the faculty deceived by their own feelings in this respect, so far as to insist upon being bled, when it was evident from the consequences that the operation was improper.

Though bleeding is generally improper in this disease, yet blistering is highly necessary. Blistering-plasters may be applied at all times of the fever with great advantage. If the patient is delirious he ought to be blistered on the neck or head, and it will be the safest course, when the insensibility continues, as soon as the discharge occasioned by one blistering-plaster abates, to apply another to some other part of the body, and by that means 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.†

* See Appendix, *Vomiting Julep*.

† See Appendix, *White decoction*.

A miliary eruption sometimes breaks out about the ninth or tenth day. As eruptions are often critical, great care should be taken not to retard Nature's operation in this particular. The eruption ought neither to be checked by bleeding nor other evacuations, nor pushed out by a hot regimen; but the patient should be supported by gentle cordials, as wine-whey, small negus, sago-gruel with a little wine in it, and such like. He ought not to be kept too warm; yet a kindly breathing sweat should by no means be checked.

Though blistering and the use of cordial liquors are the chief things to be depended on in this kind of fever; yet for those who may chuse 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 hickup and starting of the tendons have already come on, we have sometimes seen extraordinary effects from 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.

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 observation may tend to establish this practice, we will not pretend to say; but we have reason to believe that the bark is a very universal febrifuge, and that it may be administered with advantage in most fevers where bleeding is not necessary, or where there are no symptoms of topical inflammation.

* 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 of 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

† 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 a pint of the best brandy for three or four days. Afterwards the liquor may be strained, and two tea-spoonsful of it given three or four times a-day in a glass of small wine or negus.

CHAP. XX.

OF THE MALIGNANT, PUTRID OR SPOTTED FEVER.

THIS may be called the *pestilential fever* of Europe, as in many of its symptoms it bears a great resemblance to that dreadful disease the plague. Persons of a lax habit, a melancholy disposition, and those whose vigour has been wasted by long fasting, watching, hard labour, excessive venery, frequent salivations, &c. are most liable to it.

CAUSES.—This fever is occasioned by foul air, from a number of people being confined in a narrow place, not properly ventilated: from putrid animal and vegetable effluvia, &c. Hence it prevails in camps, jails, hospitals, and infirmaries especially where such places are too much crowded, and cleanliness is neglected.

A close constitution of the air, with long rainy or foggy weather, likewise occasions putrid fevers. They often succeed great inundations in low and marshy countries, especially when these are preceded or followed by a hot and sultry season.

Living too much upon animal food, without a proper mixture of vegetables, or eating fish or flesh that has been kept too long, are likewise apt to occasion this kind of fever. Hence sailors on long voyages, and the inhabitants of besieged cities, are very often visited with putrid fevers.

Corn that has been greatly damaged by rainy seasons, or long keeping, and water which has become putrid by stagnation, &c. may likewise occasion this fever.

Dead carcasses 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 amongst 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 of the head, with a strong pulsation or throbbing of the temporal arteries; the eyes often appear red and inflamed, with a pain at the bottom of the orbit; there is a noise in the ears, the breathing is laborious, and often interrupted with a sigh; complaints of a pain about the region of the stomach, and in the back and loins; the tongue is at first white, but

afterwards it appears black and chaped; and his teeth are covered with a black crust. He sometimes passes worms both upwards and downwards, is affected with tremours 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 dejection of mind, the dissolved state of the blood, the petechiæ, or purple spots, and the putrid smell of the excrements. They may likewise be distinguished from the low or nervous fever, by the heat and thirst being greater, the urine of a higher colour, and the loss of strength, dejection of mind, and all the other symptoms more violent.

It sometimes happens, however, that the inflammatory, nervous, and putrid symptoms are so blended together, as to render it very difficult to determine to which class the fever belongs. In this case the greatest caution and skill are requisite. Attention must be paid to those symptoms which are most prevalent, and both the regimen and medicines adapted to them.

Inflammatory and nervous fevers may be converted into malignant and putrid; by too hot a regimen or improper medicines.

The duration of putrid fevers is extremely uncertain; sometimes they terminate between the seventh and fourteenth day, and at other times they are prolonged for five or six weeks. Their duration depends greatly upon the constitution of the patient, and the manner of treating the disease.

The most favourable symptoms are, a gentle looseness after the fourth or fifth day, with a warm mild sweat. These, when continued for a considerable time, often carry off the fever, and should never be imprudently stopped. Small military pustules appearing between the petechiæ or purple spots, are likewise favourable, as also hot scabby eruptions, about the mouth and nose. It is a good sign when the pulse rises upon the use of wine, or other cordials, and the nervous symptoms abate; deafness coming on towards the decline of the fever, is likewise often a favourable symptom,* as are abscesses in the groin or parotid glands.

Among the unfavourable symptoms may be reckoned an excessive looseness, with a hard swelled belly; large black or livid blotches breaking out upon the skin; apthæ in the mouth; cold clammy sweats; blindness; change of the voice; a wild starting 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,

* Deafness is not always a favourable symptom in this disease. Perhaps it is only so when occasioned by abscesses formed within the ears.

and foetid, 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 this disease, by gently promoting perspiration and the other evacuations.

It has been observed, that putrid fevers are often occasioned by unwholesome air, and of course they must be aggravated by it. Care should therefore be taken to prevent the air from stagnating in the patient's chamber, to keep it cool, and renew it frequently, by opening the doors or windows of some adjacent apartment. The breath and perspiration of persons in perfect health soon render the air of a small apartment noxious; but this will sooner happen from the perspiration and breath of a person whose whole mass of humours are in a putrid state.

Besides the frequent admission of fresh air, we would recommend the use of vinegar, verjuice, juice of lemon, Seville orange, or any kind of vegetable acid that can be most readily obtained. These ought frequently to be sprinkled on the floor, the bed, and every part of the room. They may also be evaporated with a hot iron, or by boiling, &c. The fresh skins of lemons or oranges ought likewise to be laid in different parts of the room, and they should be frequently held to the patient's nose. The use of acids in this manner would not only prove very refreshing to the patient, but would likewise tend to prevent the infection from spreading among those who attend him. Strong scented herbs, as rue, tansy, rosemary, wormwood, &c. may likewise be laid in different parts of the house, and smelled to by those who go near the patient.

The patient must not only be kept cool, but likewise quiet and easy. The least noise will affect his head, and the smallest fatigue will be apt to make him faint.

Few things are of greater importance in this disease than acids, which ought to be mixed with all the patient's food as well as drink. Orange, lemon, or vinegar-why, 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 orange or lemon. In some cases a glass of wine may now and then be allowed. The most proper wine is Rhenish, or Madeira; 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 the tea ten or fifteen drops of the elixir of vitriol.

The food must be light, as panado, or groat gruel, to which a little wine may be added, if the patient be weak and low; and they ought all to be sharpened with the juice of orange, the jelly of currants, or the like. The patient ought likewise to eat freely of ripe fruits, as roasted apples, currant or gooseberry tarts, preserved cherries, or plumbs, &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 is delirious, his feet and hands ought to be frequently fomented with a strong infusion of camomile flowers. This or an infusion of the bark; to such as can afford it, cannot fail to have a good effect. Fomentations of this kind not only relieve the head, by relaxing the vessels in the extremities, but as their contents are absorbed, and taken into the system, they may assist in preventing the putrescency of the humours.

MEDICINE.—If a vomit be given at the beginning of this fever, it will hardly fail to have a good effect; but if the fever has gone on for some days, and the symptoms are violent, vomits are not quite so safe. The body however, is always to be kept gently open by clysters, or mild laxative medicines.

Bleeding is seldom necessary in putrid fevers. If there be signs of an inflammation, it may sometimes be permitted at the first onset; but the repetition of it generally proves hurtful.

Blistering-plasters are never to be used unless in the greatest extremities. If the petechiæ or spots should 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 diseases by trifling doses of cordial or alexipharmic medicines. In consequence of this notion, the contrayerva-root, the cordial confection, the mithridate, &c. have been extolled as infallible remedies. There is reason however to believe, that these seldom do much good. Where cordials are necessary, we know none that is superior to good wine; and therefore again recommend it both as the safest and the 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 a 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 spoonful of the mixture taken every two hours, or oftener, if the stomach is able to bear it. Those who cannot take the bark in substance may infuse it in wine, as recommended in the preceding disease.

If there be a violent looseness, the bark must be boiled in red wine with a little cinnamon, and sharpened with the elixir of vitriol, as above. Nothing can be more beneficial in this kind of looseness than plenty of acids, and such things as promote a gentle perspiration.

If the patient be troubled with vomiting, a 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 the 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 funeral 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 be frequently changed, and those in health ought to avoid all unnecessary communication with him.

Any one who is apprehensive of having caught the infection, ought immediately to take a vomit, and to work it off by drinking plentifully of camomile tea. This may be repeated in a day or two, if the apprehensions still continue, or any unfavourable symptoms appear.

The person ought likewise to take an infusion of the bark and camomile flowers for his ordinary drink; and before he goes to bed, he may

* The late Sir John Pringle expressed a concern lest these cautions should prevent people from attending their friends or relations when afflicted with putrid fevers. I told him I meant only to discourage unnecessary attendance, and mentioned a number of instances where putrid fevers had proved fatal to persons, who were rather hurtful than beneficial to the sick. This sagacious physician agreed with me, in thinking that a good doctor and a careful nurse were the only necessary attendants; and that all others not only endangered themselves, but generally, by their solicitude and ill-directed care, hurt the sick.

drink a pint of pretty strong negus, or a few glasses of generous wine. I have been frequently obliged to follow this course when malignant fevers prevailed, and have likewise recommended it to others with constant success.

People generally fly to bleeding and purging as antidotes against infection; but these are so far from securing them, that they often by debilitating the body, increase the danger.

Those who wait upon the sick in putrid fevers, ought always to have a piece of sponge or a handkerchief dipt in vinegar, or juice of lemon, to smell to while near the patient. They ought likewise to wash their hands, and, if possible, to change their clothes, before they go into company.

CHAP. XXI.

OF THE MILIARY FEVER.

THIS fever takes its name from the small pustules or bladders which appear on the skin, resembling, in shape and size, the seeds of millet. The pustules are either red or white, and sometimes both are mixed together.

The whole body is sometimes covered with pustules; but they are generally more numerous where the sweat is most abundant, as on the breast, the back, &c. A gentle sweat, or moisture on the skin, greatly promotes the eruption; but when the skin is dry, the eruption is both more painful and dangerous.

Sometimes this is a primary disease; but it is much oftener only a symptom of some other malady, as the small-pox, measles, ardent, putrid, or nervous fever, &c. In all these cases it is generally the effect of too hot a regimen or medicines.

The miliary fever chiefly attacks the idle and phlegmatic, or persons of a relaxed habit. The young and the aged are more liable to it than those in the vigour and prime of life. It is also more incident to women than men, especially the delicate and the indolent, who, neglecting exercise, keep continually within doors, and live upon weak and watery diet. Such females are extremely liable to be seized with this disease in childbed, and often lose their lives by it.

CAUSES.—The miliary fever is sometimes occasioned by violent passions or affections of the mind; as excessive grief, anxiety, thoughtfulness, &c. It may likewise be occasioned by excessive watching, great evacuations, a weak watery diet, rainy seasons, eating too frequently of cold, crude, unripe fruits, as plumbs, cherries, cucumbers, melons, &c. Impure waters, or provisions which have been spoiled by rainy seasons, long keeping, &c. may likewise cause miliary fevers. They may also be occasioned by the stoppage of any customary evacuation, as issues, setons, ulcers, the bleeding piles in men, or the menstruel flux in women, &c.

This disease in childbed-women is sometimes the effect of great costiveness during pregnancy; it may likewise be occasioned by their excessive use of green trash, and other unwholesome things, in which

pregnant women are too apt to indulge. But its most general cause is indolence. Such women as lead a sedentary life, especially during pregnancy, and at the same time live grossly, can hardly escape this disease in childbed. Hence it proves extremely fatal to women of fashion, and likewise to those women in manufacturing towns, who, in order to assist their husbands, sit close within doors for almost the whole of their time. But among women who are active and laborious, who live in the country, and take sufficient exercise without doors, this disease is very little known.

SYMPTOMS.—When this is a primary disease, it makes its attack, like most other eruptive fevers, with a slight shivering, which is succeeded by heat, loss of strength, faintishness, sighing, a low quick pulse, difficulty of breathing, with great anxiety and oppression of the breast. The patient is restless, and sometimes delirious; the tongue appears white, and the hands shake, with often a burning heat in the palms; and in childbed-women the milk generally goes away, and the other discharges stop.

The patient feels an itching or pricking pain under the skin, after which innumerable small pustules of a red or white colour begin to appear. Upon this the symptoms generally abate, the pulse becomes more full and soft, the skin grows moister, and the sweat, as the disease advances, begins to have a peculiar fœtid smell; the great load on the breast, and oppression of the spirits, generally go off, and the customary evacuations gradually return. About the sixth or seventh day from the eruption, the pustules begin to dry, and fall off, which occasions a very disagreeable itching in the skin.

It is impossible to ascertain the exact time when the pustules will either appear or go off. They generally come out on the third or fourth day, when the eruption is critical; but, when symptomatical, they may appear at any time of the disease.

Sometimes the pustules appear and vanish by turns. When that is the case, there is always danger; but when they go in all of a sudden, and do not appear again, the danger is very great.

In childbed-women the pustules are commonly at first filled with clear water, afterwards they grow yellowish. Sometimes they are interspersed with pustules of a red colour. When these only appear the disease goes by the name of a *rash*.

REGIMEN.—In all eruptive fevers of whatever kind, the chief point is to prevent the sudden disappearing of the pustules, and to promote their maturation. For this purpose the patient must be kept in such 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 too 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.

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 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 toward 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 emolient 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 through 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 blistering plasters; but we would not recommend above one at a time. If however the pulse should sink remarkably, the pustules fall 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 and thighs, &c.

Bleeding is seldom necessary in this disease, and sometimes it does much hurt, as it weakens the patient, and depresses his spirits. It is therefore never to be attempted unless by the advice of a physician. We mention this, because it has been customary to treat this disease in child-bed 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 in-

* Take two ounces of the shavings of hartshorn, and the same quantity of sarsaparilla, boil them in two English quarts of water. To the strained decoction add a little white sugar, and let the patient take it for his ordinary drink.

† In the *COMMERCIIUM LITERARUM* 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 medicine proved in vain. They were seized in an instant with shivering, yawning, stretching, and pains in the back, succeeded by a most intense heat; at the same time there was a great loss of strength and appetite. On the seventh or ninth day the miliary eruptions appeared, or spots like flea-bites, with great anxiety, a delirium, restlessness and tossing in bed. Bleeding was fatal. While matters were in this unhappy situation, a midwife, of her own accord, gave to a patient, in the height of the disease, a clyster of rain water and butter without salt, and for his ordinary drink a quart of spring water, half a pint of generous wine, the juice of a lemon, and six ounces of the whitest sugar, gently boiled till a scum arose, and this with great success; for the belly was soon loosened, the grievous symptoms vanished, and the patient was restored to his senses, and snatched from the jaws of death." This practice was imitated by others with the like happy effect.

deed the disease seems often to be more of a putrid than of an inflammatory nature.

Though this fever is often occasioned in child-bed women by too hot a regimen, yet it would be dangerous to leave that off all of a sudden, and have recourse to a very cool regimen, and large evacuations. We have reason to believe, that supporting the patient's spirits, and promoting the natural evacuations, is here much safer than to have recourse to artificial ones, as these, by sinking the spirits, seldom fail to increase the danger.

If the disease proves tedious, or the recovery slow, we would recommend the Peruvian bark, which may either be taken in substance or infused in wine or water, as the patient inclines.

The miliary fever, like other eruptive diseases, requires gentle purging, which should not be neglected, as soon as the fever is gone off, and the patient's strength will permit.

To prevent this disease, a pure dry air, sufficient exercise, and wholesome food, are necessary. Pregnant women should guard against costiveness, and take daily as much exercise as they can bear, avoiding all green trashy fruits, and other unwholesome things; and when in child-bed, they ought strictly to observe a cool regimen.

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 commonly 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 intermitting, the danger is the less.

CAUSES.—Remitting fevers prevail in low marshy countries, abounding with wood and stagnating waters; 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 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 any nervous or putrid symptoms prevail, it will be necessary to support the patient with food and liquors of a more generous nature, such as are recommended in the immediately preceding fevers. We must however be very cautious in the use of things of a heating quality, as this fever is frequently changed into a *continual* by an hot regimen, and improper medicines.

Whatever the symptoms are, the patient ought to be kept cool, quiet, and clean. His apartment, if possible, should be large and frequently ventilated by letting in fresh air at the doors and windows. It ought likewise to be sprinkled with vinegar, juice of lemon, or the like. His linen, 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 ought by no means to be attempted, as it will weaken the patient and prolong the disease. A vomit however will seldom be improper, and is generally of great service. Twenty on thirty grains of ipecacuanha will answer this purpose very well; but where it can be obtained, we would rather recommend a grain or two of tartar emetic, with five or six grains of ipecacuanha, to be made into a draught, and given for a vomit. This may be repeated once or twice at proper intervals, if the sickness or nausea continues.

The body ought to be kept open either by clysters or gentle laxa-

* The ingenious Dr. Lind, of Windsor, in his inaugural dissertation concerning the putrid remitting fever of Bengal, has the following observation: "Indusia, lodices, ac stragula, sæpius sunt mutanda, ac aeri exponenda; fæces sordescque quam primum removendæ oportet etiam ut loca quibus ægri decumbent sint salubria et aceto conspersa; denique ut ægris cura quanta maxima, prospiciatur. Conpertum ego habeo, medicum hæc sedulo observantem, quique ea exequi potest multo magis ægris profuturum, quam medicum peritiorum his se commodis, destitutum."

"The patient's shirt, bed-clothes, and bedding, ought frequently to be changed and exposed to the air, and all his excrements immediately be 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 these in practice will much oftener succeed than one who is even more skilful, but has not opportunity of using these means."

tives, as weak infusions of senna and manna, small doses of the lenitive electuary, cream of tartar, tamarinds, stewed prunes, or the like; but all strong or drastic purgatives are to be carefully avoided.

By this course the fever in a few days may generally be brought to a pretty regular or distinct intermission, in which case the Peruvian bark may be administered, and it will seldom fail to perfect the cure. It is needless here to repeat the methods of giving the bark, as we have already had occasion frequently to mention them.

The most likely way to avoid this fever is to use a wholesome 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. In countries where it is endemical, the best preventative medicine which we can recommend is the best 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 the prevention of this and intermitting fevers.

CHAP. XXIII.

OF THE YELLOW FEVER.

TO enter into a minute investigation of the disputed origin of this disease, (and whether it be *imported* and *contagious*, or *domestic* and *epidemic*,) under existing circumstances, would be to assume a province, unwarrantable as it regards the present work.

So early as the year 1699, we learn the existence of Yellow Fever in this city. At that, and for some time subsequent it was considered an *infectious distemper*, and in 1743, Dr. Lining pronounced it an *imported disease* and *contagious*.—The most learned of the faculty agree, “That as most all fevers are generally epidemic, it is probable that some matter floating in the atmosphere, and applied to the bodies of men, ought to be considered as the remote cause of fevers: And these matters present in the atmosphere and thus acting upon men, may be considered either as *CONTAGIONS*, (that is, effluvia arising directly or originally from the body of a man under a particular disease, and exciting the same kind of disease in the body to whom they are applied,) or *MIASMATA*, that is effluvia arising from other substances than the bodies of men, producing a disease in the person to whom they are applied”—Hence we may infer, that this latter term embraces what is meant by *Epidemic* when applied to divers places, or *Endemic* when we speak of any one place.

It is however evident, that the terms *Epidemic* and *Contagious* are so connected, as not to be capable of an entire disjunction: The effluvia arising from other substances than the body of man, contaminating the air, and producing disease in persons predisposed,—what is the consequence? By the accumulation of disease, a combination of *Causes* proceeding from miasmata, combined with the effluvia arising from the bodies of the diseased—or in other words, *Animal* and *Vegetable* effluvia uniting—must of necessity produce a species of contagion or at least a variety.

Dr. Cullen admits the probability of a variety in contagions. Yet ob-

serves, that though they have now been observed and distinguished for many ages, and in many different parts of the world, they have been always found to retain the same general character, and to differ only in circumstances, that may be imputed to season, climate, and other external causes, or to the peculiar constitutions of the several persons affected. He rather inclines to admit the probability, that in each of these species the contagion is of one *specific* nature, which we apprehend consists in the union of the two effluvia already mentioned. Hence, whenever it can be proved, that any disease has been communicated from a combination of these, we may pronounce it *contagious*, and vice versa.

Then with respect to the *Contagious* or *Non-Contagious* nature of the Yellow Fever, as it occurred in Charleston, we need only demand, has it in any known instance been communicated from one person to another? The learned and experienced Dr. Ramsay of Charleston, in a letter to Dr. Miller of New-York, says "There is but one opinion among the physicians and inhabitants, and that is, that the disease was neither *Imported*, nor *Contagious*. This was the unanimous sentiment of the Medical Society, who in pursuance of it, gave their opinion to the government last summer" (i. e. the summer of 1800) "that the rigid enforcement of the quarantine laws was by no means necessary on account of the Yellow Fever." The doctor concludes by observing "my private opinion is, that our Yellow Fever is a *local* disease originating in the air of Charleston." Correspondent to this is the opinion of Dr. Tucker Harris, communicated to Dr. Currie: "with respect to the *contagious nature* of Yellow Fever, so far as it has occurred in this city, there is no instance, which can be cited to induce the smallest suspicion thereof. It appears, that not only Europeans and strangers from different states, who visit our city, take the disease and die, without communicating it to the physicians, nurses, or attendants, but that people from the country, strangers to our atmosphere, on coming to town, often sicken on their way home, and die in houses on the road; yet in no one instance, hath the disorder been transferred to any of the individuals of the family who received them in. This in my opinion, is an undeniable and convincing proof of the *non-contagious* nature of Yellow Fever. Indeed I strongly doubt whether any disease, originating from vegetable or marsh miasma, can be contagious, for as yet it has never been demonstrated: while, on the other hand I am inclined to believe, that *animal*, perhaps it would be more correct to say *human effluvia*, under certain modifications, prove the source of all such diseases as are of a contagious kind; and the operation of this contagion is not, as happens in the case of Yellow Fever confined to the autumnal months, but will exist at any season. This may perhaps, serve in some measure, to discriminate between *epidemic* and *contagious* disorders," &c. These facts corroborated by such high and undoubted testimonies, will establish what I have already advanced with regard to the locality of this disease, and proceed to give the

Definition.—The Yellow Fever derives its appellation from the yellow suffusion, which commonly appears in the eyes and on the skin, however, as this appearance is not universal, and frequently happening in many other cases, the term may not be strictly proper. It was during the Revolution, termed *Camp-fever*. It appears to be a fever of the Typhus kind, and by Dr. Cullen is very properly called *Typhus icterodes*. The term Yellow

Fever is most generally applied to it, and as such we presume it will continue to be handed down to the latest posterity.

CAUSE.—Authors appear to be divided as to the cause of Yellow Fever, which may be collected from what has been already said. It is however believed that a particular *idiosyncrasy*, i. e. constitution or derangement of the atmosphere, probably effected by the strong light and intense heat of the sun, depriving that portion nearest the earth of its proper quantity of vital air, leaving the *mephitic* or heavier part near to the surface of the earth, forms one not among the least of causes. The loss of a small portion of vital air renders this lower stratum very unfit for respiration, consequently very unwholesome; when this circumstance takes place, and the atmosphere seems vitiated slowly and by degrees, the effect of Yellow Fever or indeed any other, is not so considerable, in proportion to the suddenness and degree of this *idiosyncrasy* and vitiated state of the atmosphere, so is the violence of its appearance. Marsh miasma, as has been already observed, is productive of Epidemics, and none deny that contagious disorders are produced by the exhalations from putrifying animal and vegetable substances. It may also be remarked, that most climates experience an unhealthy and pestilential atmosphere, soon or immediately after the exhalations from the putrifying collections of vegetable and animal matter begin to rise, which diffusing themselves in the air, bring on diseases of different forces of malignity according to the contaminated state of the atmosphere, in conjunction with other predisposing circumstances, and that these exhalations are principally produced by heat combined with some peculiar state of the atmosphere, is an opinion backed by good authority. Dr. Harris, whose opinion I have before taken the liberty to introduce, observes, after having objected to the generally assigned causes, “ I am however decidedly of opinion, that heat combining with some unknown modification of the atmosphere of our city, has, in ten out of the last thirteen years, given existence to this dreadful disease.”

SYMPTOMS.—There is little or no difference among authors of the present day with regard to these, I have consulted eight or ten of the greatest celebrity, and observe an almost *unique* of opinion—Before the fever forms itself, the most usual sign of its approach is a sudden and universal pain of the head generally above one or both eyes, which in some remit with short intervals, causing a giddiness or vertigo, rather than sharp pain, attended with an unusual feebleness and languor of the body. Dr. Rush states among other premonitory symptoms, a sudden drying up, or breaking out of an old sore, fresh eruptions in different parts of the body; a cessation of a chronic disease, or a conversion of a periodical into a continual disease—a peculiar sallowness of the complexion—a head-ach, a decay or increase of appetite, costiveness; a diminished or increased secretion of urine, a hot and offensive breath, constant sweats, and sometimes of a foetid nature, or a dry skin; wakefulness, or a disposition to early or protracted sleep, a preternaturally frequent pulse; unusual vivacity, or depression of spirits, fatigue or sweats from light exertions; the hands when rubbed, emitting a smell like *hepar* (liver) of sulphur, and lastly a sense of burning in the mouth. The fever is commonly ushered in with alternate slight chills and heats, nausea, pains of the head, back, loins, and at the pit of the stomach. These symptoms are often followed, in less than 24 hours, with violent

retchings and vomiting of a green or yellow bile, the smell of which is very offensive.

The learned Dr. Mitchell very ingeniously arranges the *pathognomic*, (peculiar or always attendant) symptoms of this disease into the six following particulars. 1. A very great and sudden debility without any manifest cause. 2. A feverish anxiety, generally very grievous. 3. A short, quick and difficult *orthopnaic* respiration, (i. e. the patient cannot draw his breath with ease unless in an upright posture) after the fever is formed. 4. A contracted deep pulse; the artery feels tense, but the pulse is compressible, to which succeeds a depressed, or soft and low pulse, after the state of the disease, or after the yellow effusion appears. 5. A pain of the *scorbiculus cordis*, (pit of the stomach) either much complained of or to be felt on squeezing that part; and more or less severe according to the severity of the disease. 6. A yellowness in the eyes, or all over the body at the height of the disease; unless prevented by colliquative or critical discharges, to which may be added, a violent and unusual kind of pain of the head, unless it is drowned as it were in the more grievous complaint about the *præcordia*, (the vitals or particularly the heart.) The three latter are symptoms most peculiar to this fever. At other times the patient is attacked with very great anxiety, sickness and pain of the stomach, attended with an excessive convulsive vomiting, which no medicine seems likely to relieve—After the first day the surface of the body is generally either cold, or dry and parched, the head-ach and stupor often ending in a delirium which proves suddenly fatal in many cases. It is to be observed that the vomiting sometimes occurs as early as the first or second day, but more commonly on the third, when it brings on hickup, inflammation of the stomach and viscera, with a large discharge by vomit of a black *atrabilious* matter, (anciently denominated black cholera) like coffee grounds, mixed with a bloody lymph, or coagulated blood. The *atrabilious* humour is often highly acrid; sometimes viscid, in which latter case it is difficultly ejected, and hence by its great acrimony it renders this symptom violent and often fatal.

We have been thus prolix in describing the symptoms, because we think much depends thereon, and indeed much more might be said did we not presume, a due attention to these, would discover to any careful observer the premonitory as well as concomitant advances thereof—with regard to Prognostics, we decline advancing any observations, and proceed to the

REGIMEN.—It may not be amiss to describe under this particular, what are considered as preventatives of fever,—these are severally pointed out by that eminent physician, Dr. Rush. He advises first, where it is practicable, the flight of persons exposed to its attack, but where this is impracticable, safety should be sought for in such means as reduce the preternatural tone and fulness induced in the blood vessels by the stimulus of the *miasmata* and the suppression of customary secretions. These are, 1. A diet accommodated to the greater or less exposure of the body to the action of the *miasmata* and to the greater or less degree of labour or exercise, which are taken. In cases of great exposure to an infected atmosphere, with but little exercise, the diet should be simple in its quality and small in its quantity. Fresh meats and wines should be avoided. A little salted meat and Cayenne pepper with vegetables, prevent an undue languor

of the stomach, from the want of its usual cordial aliments. But where a great deal of exercise is taken, broths, a little wine or malt liquors may be used with the fruits and garden vegetables of the seasons with safety and advantage. The change from a full to a low diet should be made gradually. When made suddenly it predisposes to an attack of the disease. 2. Laxative medicines—3. A plentiful perspiration kept up by means of warm clothing and bed-clothes. The excretion which takes place by the pores is of the first necessity; as is a particular attention to clean linen or flannel; and 4. Blood-letting. All these depleting remedies, whether used separately or together, induce such an artificial debility in the system, as disposes it to vibrate more readily under the impression of the miasmata.

A second class of preventives, are such as obviate the internal action of miasmata, by exciting a general or partial determination to the external surface of the body. These are—1. The warm bath; it serves the treble purposes of keeping the skin clean, the pores open, and of defending what are called the vital organs from disease, by inviting its remote cause to the external surface of the body. This cannot be too highly recommended. 2. The cold bath. 3. Washing the body morning and evening with salt water. 4. Anointing the body with oil or fresh butter. 5. Issues, setons, and blisters.

A third class of preventives are such as excite a general action, more powerful than that which the miasmata are disposed to create in the system, or an action of a contrary nature. These are—1. Onions and garlic. The liberal use of these condiments in food hath exempted all those who used them in 1793, from yellow fever. 2. Calomel taken in such small doses as gently to affect the gums. Several other controverted or at least doubtful particulars are enumerated, which we pass over in order to point out the necessity of avoiding all its exciting causes. These are—1. Heat and cold: While the former has excited the yellow fever in thousands, the latter has excited it in ten thousands. It is not in middle latitudes only, that cold awakens this disease in the body. 2. The early morning and evening air, even in warm weather. 3. Fatigue from amusements; such as fishing, gunning, dancing, and from unusual labour or exercise. 4. Intemperance in eating and drinking. 5. Partaking of new aliments and drinks. 6. Violent emotions or passions of the mind. 7. The entire cessation of moderate labour. 8. The continuance of hard labour. These are the principal means of prevention which have been enumerated as necessary. The *Regimen* to be observed after an attack, consists in the following: The patient should abstain from animal food; the diet should consist of gruel, panado, sago, chicken-broth, and other spoon-meats: he should use cool diluting drinks, such as barley-water, toast and water, lemonade, apple-tea, tamarind-water, hop-tea, and also small quantities of ripe fruits, which tend to keep the bowels soluble. The chamber of the sick should be spacious and airy, and frequently ventilated through the day: vinegar, sprinkled on hot bricks, should be introduced into the apartment frequently, and impregnated with aromatic herbs repeatedly sprinkled over the floor, bed-clothes, &c. The passions of the mind ought also to be regularly attended to, and the excrements should not be suffered to remain a moment in the apartment. These circumstances are of infinite importance, as well to the sick, as to those who frequent them.

MEDICINE.—Here a particular necessity compels us to be minute in our observations.—This publication was originally and is now intended, as an assistant and guide to Families, and to such as are out of the reach of Physicians. Happily for mankind, where this disease prevails, there are generally a sufficient number of eminent physicians. Need we observe the importance of an early application to an honest and skillful practitioner?—Where however this highly prudent plan is neglected, or impracticable, we would recommend the following mode of treatment. In this fever the first indication is to subdue it by the most speedy means in our power. The second is to prevent the putrescent state that follows so rapidly after the febrile stage, or to oppose its progress when begun, and at the same time to support the strength of the patient. The first intention is best accomplished by bleeding and purgatives; bleeding is best performed within the first twenty-four hours from an attack, or at most within thirty-six. Some practitioners have pointed out the exact quantity of blood to be drawn, but as an implicit attention to that rule may subject us to error, we decline the insertion. In general, when the use of the lancet is indicated, one or more bleedings may be admitted, with a view to alleviate the violent pains of the head, eyes, &c. provided it be performed within the time prescribed. In order to moderate the violent determination to the head, the feet should be bathed in warm water, and an opening clyster administered immediately. As obstinate costiveness generally prevails, and the stomach is seldom long capable to retain the common purgatives, we ought to improve the time to advantage. It may be here observed that if the perspiration can be promoted soon after the attack, it may be a means to subdue the fever: with this view, if there be no inclination to vomit, and the skin is dry and parched, the following may be administered to advantage, during the first twenty-four hours. Take antimonial powder, and calomel, of each one scruple, syrup enough to make a mass, of which eight pills may be made. Four of these may be taken immediately, and two more repeated every second or third hour after, till they either procure a due discharge, or free perspiration. Should however the first dose occasion a retching or vomiting, we should immediately desist and resort to the other means hereafter laid down. If the prescription operates plentifully by sweat and stool, the patient will in all probability recover, as by this means the fever is often prevented from forming itself. Should the stomach not retain the foregoing, forty grains of jalap and twenty of calomel, or twenty of calomel with the like quantity of crabs-eyes or magnesia, may be rubbed together, and divided into ten powders; one of these may be given every two hours, in a little cold tea, or they may be formed into ten pills, one of which to be taken at the same periods, and continued during the whole of the febrile stage, or until the gums are affected. When this fortunate circumstance takes place, the medicine must be suspended, and nourishment with a little wine given. 2. As bark in substance will rarely remain on the stomach, decoctions are to be preferred, and as in this stage it is necessary to exert every effort to resist a tendency to putrefaction, four table-spoonful of the decoction of bark may be given every two hours. If the stomach should reject it, or whether it does or not, we ought not to neglect repeated clysters, of it, acidulated with vinegar or lime-juice, at least every two hours, nor would it be amiss to rub the body with vinegar or lime-juice, as

often as practicable. Some have recommended olive or sweet oil for this purpose also. Sometimes the strained juice of wood sorrel given internally and by way of clyster, has been attended with good effects in restraining the putrid tendency, and in one instance has been known to check the black vomit. Hops, being possessed of great antiseptic properties, an infusion of them may be taken in moderate draughts, at proper intervals. In case of vomiting, a blister applied to the epigastric region, particularly the pit of the stomach, is almost alone to be relied on. In this fever, an inflammation of the stomach and viscera are almost always present, and the tendency to putrescence is so great as to exclude the remedies usually applied in other cases attended with vomiting. Here it is essentially and absolutely necessary to avoid all heating medicine. Wherefore, if the gums are not already affected, frictions of strong mercurial ointment, particularly over the hypochondriac and epigastric regions, may be used; and if by this means the gums can be effected, a cure may be looked for.

From what has been said we may collect, that the general plan of treatment for this Hydra-disease, consists of such remedies, as tend to subdue the inflammatory diathesis already pointed out.—Bleeding, warm bathing, and purgatives, appear to be the most approved, to which may be added blistering and the mercurial friction. Among the purgatives, calomel appears to claim the preference, and when timely and prudently administered, seldom fails to prove successful. Hence we are again induced, earnestly to advise timely application to a professional character.

We shall now conclude with some remarks on the treatment of convalescents. They should avoid every thing which may tend to bring on a relapse; among these may be reckoned a too early exposure to improper exercise, food, and drink. They should eat but little at a time, and that little should be easy of digestion. Their exercise should be gentle, and introduction to the air gradual: morning and night air should be avoided at all events. If wine had been used in the fever, it must be now used more sparingly. Bark in substance or decoction, should be continued in moderate doses, until the debilitated system is invigorated, the digestive faculty repaired and strengthened, and the patient returns to his usual mode of living.

CHAP. XXIV;

OF THE SMALL-POX.

THIS disease which originally came from Arabia, is now become so general, that very few escape it at one time of life or another. It is a most contagious malady; and has for many years proved the scourge of Europe.

The small-pox generally 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 commonly caught by infection.—Since the disease was first brought into Europe, the infection has never been wholly extinguished, nor have any proper methods, as far as I know, been taken for that purpose: so that now it has become in a manner constitutional. Children who have over-heated themselves by running, wrestling, &c. or adults after a debauch, are most apt to be seized with the small-pox.

SYMPTOMS.—This disease is so generally known, that a minute description of it is unnecessary. Children commonly look a little dull, seem listless and drowsy for a few days before the more violent symptoms of the small-pox appear. They are likewise more inclined to drink than usual, have little appetite for solid food, complain of weariness, and, upon taking exercise, are apt to sweat. These are succeeded by slight fits of cold and heat in turns, which as the time of the eruption approaches, become more violent, and are accompanied with pains of the head and loins, vomiting, &c. The pulse is quick, with a great heat of the skin, and restlessness. When the patient drops asleep, he wakes in a kind of horror, with a sudden start, which is a very common symptom of the approaching eruption; as are also convulsion fits in very young children.

About the third or fourth day from the time of sickening, the small-pox generally begin to appear; sometimes indeed they appear sooner, but that is no favourable symptom. At first they very nearly resemble flea-bites, and are soonest discovered on the face, arms, and breast.

The most favourable symptoms are a slow eruption, and an abatement of the fever as soon as the pustules appear. In a mild distinct kind of small-pox, 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 a yellowish colour, are the best.

A livid brown colour of the pustules is an unfavourable symptom; as also when they are small and flat, with black specks in the middle. Pustules which contain a thin watery ichor are very bad. A great number of pox on the face is always attended with danger. It is likewise a very bad sign when they run into one another.

It is a most unfavourable symptom when petechiæ, or purple, brown, or black spots are interspersed among the pustules. These are signs of a putrid dissolution of the blood, and shew the danger to be very great. Bloody stools or urine, with a swelled belly, are bad symptoms; as is also a continual strangury. Pale urine and a violent throbbing of the arteries of the neck are signs of an approaching delirium, or of convulsion fits. When the face does not swell, or falls before the pox come to maturity, it is very unfavourable. If the face begins to fall about the 11th or 12th day, and at the same time the hands and feet begin to swell, the patient generally does well; but when these do not succeed to 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 luke-warm water. His food ought to be very light; and he should be as little disturbed with company as possible.

Much mischief is done at this period by confining the patient too soon to his bed, and plying him with warm cordials or sudorific medicines. Every thing that heats and inflames the blood increases the fever, and pushes out the pustules prematurely. This has numberless ill effects. It not only increases the number of pustules, but likewise tends to make them run into one another; and when they have been pushed out with too great a 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 pox rise better, and the patient is easier, than when it continues dry and parched.* But that is no reason for forcing the patient into a sweat. Sweating never relieves unless where it comes spontaneously, or is the effect of drinking weak diluting liquors.

Children are often so peevish, that they will not lie a-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 also proves feverish, which is often the case, the danger must be increased.†

* 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 the fever abated, and sometimes quite removed, after one or more convulsion-fits. This readily accounts for convulsions being a favourable symptom in the fever which precedes the eruption of the small-pox, as every thing that mitigates this fever lessens the eruption.

† I have known a nurse, who had the small-pox before, so infected by lying

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, the 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 about him; besides, the filth and sordes which adhere to the linen, being absorbed, or taken up again into the body, greatly augment the disease.

A patient should not be suffered to be dirty in an internal disease, far less in the small-pox. Cutaneous disorders are often occasioned by nastiness alone, and are always increased by it. Were the patient's linen to be changed every day, it would greatly refresh him.—Care indeed is to be taken that the linen be thoroughly dry. It ought likewise to be put on when the patient is most cool.

So strong is the vulgar prejudice in this country, notwithstanding all that has been said against the hot regimen in the small-pox, that numbers still fall a sacrifice to that error. I have seen poor women travelling in the depth of winter, and carrying their children along with them in the small-pox, and have frequently observed others begging by the way-side with infants in their arms covered with the pustules; yet I could never learn that one of these children died by this sort of treatment. This is certainly a sufficient proof of the safety, at least, of exposing patients in the small-pox to the open air. There can be no reason however for exposing them to public view. It is now very common in the environs of great towns to meet patients in the small-pox on the public walks. This practice, however well it may suit the purposes of boasting inoculators, is dangerous to the citizens, and contrary to the laws of humanity and sound policy.

The food in this disease ought to be very light, and of a cooling nature, as panado, or bread boiled with equal quantities of milk and

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 upon their guard against the danger of this virulent infection.

* This observation is likewise applicable to hospitals, work-houses, &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.

water, good apples roasted or boiled with milk, and sweetened with a little sugar and such like.

The drink may be equal parts of milk and water, clear sweet whey, barley-water, or thin gruel, &c. After the pox are full, butter milk, being of an opening and cleansing nature is a very proper drink.

MEDICINE.—This disease is generally divided into four different periods, *viz.* the fever which precedes the eruption, the eruption itself, the suppuration or maturation of the pustules, and 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 renders this operation necessary, it ought to be performed; but, unless these symptoms are urgent it is safer to let it alone; if the body is bound, emollient clysters may be thrown in.

If there is a great nausea or inclination to vomit, weak camomile tea or lukewarm water may be drank, in order to cleanse the stomach. At the beginning of a fever, Nature generally attempts a discharge, either upwards or downwards, which if promoted by gentle means, would tend greatly to abate the violence of the disease.

Though every method is to be taken during the primary fever, by a cool regimen, &c. to prevent too great an eruption; yet after the pustules have made their appearance, our business is to promote the suppuration, by diluting drink, light food, and if Nature seems to flag, by generous cordials. When a low creeping pulse, faintness, 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, or the like. Wine-whey sharpened as above, is likewise a proper drink in this case; great care however must be taken not to over-heat the patient by any of these things. This, instead of promoting, would retard the eruption.

The rising of the small-pox is often prevented by the violence of the fever; in this case the cool regimen is strictly to be observed. The patient's chamber must not only be kept cool, but he ought likewise frequently to be taken out of the bed, and to be lightly covered with clothes while in it.

Excessive restlessness, often prevents the rising and filling of the small-pox. When this happens, gentle opiates are necessary. These however ought always to be administered with a sparing hand. To an infant, a tea-spoonful of the syrup of poppies may be given every five or six hours till it has the desired effect. An adult will require a table-spoonful in order to answer the same purpose.

If the patient be troubled with a stranguary, or suppression of urine, which often happens in the small-pox, he should be frequently taken out of bed, and if he be able, should walk across the room with his feet bare. When he cannot do this he may frequently set on his knees in bed, and should endeavour to pass his urine as often as he can. When these do not succeed, a tea-spoonful of the sweet spirits of nitre may be occasionally mixed with his drink. Nothing more certainly relieves the

patient, or is more beneficial in the small-pox, than a plentiful discharge of urine.

If the mouth be foul, and the tongue dry and chapped, it ought frequently to be washed, and the throat gargled with water and honey, sharpened with a little vinegar or currant jelly.

During the rising of the small-pox, it frequently happens that the patient is eight or ten days without a stool. This not only tends to heat and inflame the blood, but the fæces, by lodging so long in the body, become acrid, and even putrid; from whence bad consequences must ensue. It will therefore be proper, when the body is bound, to throw 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, or 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 spoonful every hour. This medicine ought not to be trifled with, but must be administered as frequently as the stomach can bear it; in which case it will often produce very happy effects. I have frequently seen the petechiæ disappear, and the small-pox, which had a very threatening aspect, rise and fill with laudable matter, by the use of the bark and acids.

The patient's drink ought likewise in this case to be generous, as wine or strong negus acidulated with spirits of vitriol, vinegar, the juice of lemon, jelly of currants, or such like. His food must consist of apples, roasted or boiled, preserved cherries, plumbs, 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 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 terms it, when the small-pox *strike in*, before they have arrived at maturity, the danger is very great. In this case blistering-plasters must be immediately applied to the wrists and ancles, and the patient's spirits supported with cordials.

Sometimes bleeding has a surprising effect in raising the pustules after they have subsided; but it requires skill to know when this is proper, or to what length the patient can bear it. Sharp cataplasms however may be applied to the feet and hands, as they tend to promote the swelling of these parts, and by that means to draw the humours towards the extremities.

The most dangerous period of this disease is what we call the secondary fever. This generally comes on when the small-pox begin to blacken, or turn on the face; and most of those who die of the small-pox are carried off by this fever.

Nature generally attempts, at the turn of the small-pox, to relieve the patient by loose stools. Her endeavours this way are by no means to be counteracted, but promoted, and the patient at the same time supported by food and drink of a nourishing and cordial nature.

If at the approach of the secondary fever, the pulse be very quick, hard and strong, the heat intense, and the breathing laborious, with other symptoms of an inflammation of the breast, the patient must immediately be bled. The quantity of blood to be let must be regulated by the patient's strength, age, and the urgency of the symptoms.

But in the secondary fever, if the patient be faintish, the pustules become suddenly pale, and if there be great coldness of the extremities, blistering-plasters must be applied, and the patient must be supported with generous cordials. Wine and even spirits have sometimes been given in such cases with amazing success.

As the secondary fever is in 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 the secondary fever might always be lessened, and often wholly prevented.

The pustules should be opened when they begin to turn of a yellow colour. Very little art is necessary for this operation. They may either be opened with a lancet or a needle, and the matter absorbed by a little dry lint. As the pustules are generally first ripe on the face it will be proper to begin with opening these, and the others in course as they become ripe. The pustules generally fill again, a second or even a third time; for which cause the operation must be repeated, or rather continued as long as there is any considerable appearance of matter in the pustules.

We have reason to believe that this operation, rational as it is, has been neglected from a piece of mistaken tenderness in parents. They believe that it must give great pain to the poor child; and therefore would rather see it die than have it thus tortured. This notion however is entirely without foundation. I have frequently opened the pustules when the patient did not see me, without his being in the least sensible of it; but suppose it were attended with a little pain, that is nothing in comparison to the advantages which arise from it.

Opening the pustules not only prevents the resorption of the matter into the blood, but likewise takes off the tension of the skin and by that means greatly relieves the patient. It likewise tends to prevent the pitting, which is a matter of no small importance. Acrid matter by lodging long in the pustules, cannot fail to corrode the tender skin, by which many a handsome face becomes so deformed as hardly to bear a resemblance to the human figure.*

* Though this operation can never do harm, yet it is only necessary when the patient has a great load of small-pox, or when the matter which they contain is of so thin and acrid a nature, that there is reason to apprehend bad con-

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 open nature have been drank freely after the height of the small-pox, purging becomes less necessary; but it ought never wholly to be neglected.

For very young children, an infusion of senna and prunes with a little rhubarb, may be sweetened with coarse sugar, and given in small quantities till it operates. Those who are farther advanced must take medicines of a sharper nature. For example, a child of five or six years of age may take eight or ten grains of fine rhubarb in powder 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 a milk diet will likewise be useful in this case.

When a cough, a difficulty of breathing, or other symptoms of a consumption, succeed to the small-pox, the patient must be sent to a place where the air is good, and put upon a course of asses milk, with such exercise as he can bear. For further directions in this case, see the article *Consumption*.

Of Inoculation.

Though no disease, after it is formed, baffles the power of medicine more effectually than the small-pox, yet more may be done before-hand to render this disease favourable than any one we know, as almost all the danger from it may be prevented by inoculation. This salutary invention has been known in Europe above half a century; but, like most other useful discoveries, it has till of late made but slow progress. It must however be acknowledged, to the honour of this country, that inoculation 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. The fears, the jealousies, the prejudices, and the opposite interests of the faculty 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

sequences from its being too quickly resorbed, or taken up again into the mass of circulating humours.

* I have of late been accustomed, after the small-pox, to give one, two, three, four or five grains of calomel, according to the age of the patient, over night, to work it off next morning with a suitable dose of jalap. Or the jalap and calomel may be mixed together, and given in the morning.

taken up by men not bred to physic. These have not only rendered the practice more extensive, but likewise more safe, and by acting under less restraint than the regular practitioners, have taught them that the patient's greatest danger arose, not from the want of care, but from the excess of it.

They know very little of the matter, who impute the success of modern inoculators to any superior skill, either in preparing the patient or communicating the disease. Some of them indeed, from a sordid desire of engrossing the whole practice to themselves, pretend to have extraordinary secrets or nostrums for preparing persons for inoculation, which never fail of success. But this is only a pretence calculated to blind the ignorant and inattentive. Common sense and prudence alone are sufficient both in the choice of the subject and management of the operation. Whoever is possessed of these may perform this office for his children whenever he finds it convenient, provided they be in a good state of health.

This sentiment is not the result of theory, but of observation. Though few physicians have had more opportunities of trying inoculation in all its different forms, so little appears to me to depend on those, 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 any inconveniences that attend the other.*

The small-pox may be communicated in a great variety of ways with nearly the same degree of safety and success. In Turkey, from whence we learned the practice, the women communicate the disease to children, by opening a bit of the skin with a needle, and putting into the wound a little matter taken from a ripe pustule. On the coast of Barbary they pass a thread wet with the matter through the skin between the thumb and fore-finger; and in some of the states of Barbary, inoculation is performed by rubbing in the variolous matter between the thumb and fore-finger, or on other parts of the body. The practice of communicating the small-pox, by rubbing the variolous matter upon the skin, has been long known in many parts of Asia and Europe as well as in Barbary, and has generally gone by the name of *buying the small-pox*.

The present method of inoculating in Britain is to make two or

* A critical situation, too often to be met with, first put me upon trying this method. A gentleman who had lost all his children except one son by the natural small-pox, was determined to have him inoculated. He told me his intention, and desired I would persuade the mother and grandmother, &c. of its propriety. But that was impossible. They were not to be persuaded, and either could not get the better of their fears, or were determined against conviction. It was always a point with me not to perform the operation without the consent of the parties concerned. I therefore advised the father, after giving his son a dose or two of rhubarb, to go to a patient who had the small-pox of a good kind, to open two or three of the pustules, taking up the matter with a little cotton, and as soon as he came home to take his son apart, and give his arm a slight scratch with a pin, afterwards to rub the place well with the cotton, and take no farther notice of it. All this he punctually performed: and at the usual period the small-pox made their appearance, which were of an exceeding good kind, and so mild as not to confine the boy an hour to his bed. None of the other relations knew but the disease had come in the natural way, till the boy was well.

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 dry matter; but this is less certain, and ought never to be used unless where fresh matter cannot be obtained: when this is the case, the matter ought to be moistened by holding the lancet for some time in the steam of warm water.*

Indeed if fresh matter be applied long enough to the skin, there is no occasion for any wound at all. Let a bit of thread, about half an inch long, wet with the matter, be immediately applied to the arm, midway between the shoulder and the elbow, and covered with a piece of the common sticking plaster, and kept on for eight or ten days. This will seldom fail to communicate the disease. We mention this method, because many people are afraid of a wound; and doubtless the more easily the operation can be performed, it has the greater chance to become general. Some people imagine, that the discharge from a wound lessens the eruption; but there is no great stress to be laid upon this notion; besides, deep wounds often ulcerate, and 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 Brachmins or priests. In this country the custom is still in its infancy; we make no doubt, however, but it will soon become so familiar, that parents will think no more of inoculating their children, than at present they do of giving them a purge.

No set of men have it so much in their power to render the practice of inoculation general as the clergy, the greatest opposition to it still arising from some scruples of conscience, which they alone can remove. I would recommend it to them not only to endeavour to remove the religious objections which weak minds may have to this salutary 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 into 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'Kinzie, in his *History of Health*.† To those mentioned by the Doctor we

* 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.

† "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 unex-

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 chuse 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 happens to be seized with the small-pox upon the mother's breast, who has not had the disease herself, the scene must be distressing! If she continue to suckle the child, it is at the peril of her own life; and if she wean it, in all probability it will perish. How often is the affectionate mother forced to leave her house, and abandon her children, at the very time when her care is most necessary? Yet, should parental affection get the better of her fears, the consequences would often prove fatal. I have known the tender mother and her sucking infant laid in the same grave, both untimely victims to this dreadful malady. But these are scenes too shocking even to mention. Let parents who run away with their children to avoid the small-pox, or who refuse to inoculate them in infancy, consider to what deplorable situations they may be reduced by this mistaken tenderness!

As the small-pox is now become an epidemical disease in most parts of the known world, no other choice remains but to render the malady as mild as possible. This is the only manner of extirpation now left in our power; and though it may seem paradoxical, the artificial method of communicating the disease, could it be rendered universal, would amount to nearly the same thing as rooting it out. It is a matter of small consequence, whether a disease be entirely extirpated, or rendered so mild as

pectedly, when a dangerous sort is imprudently imported into a maritime place. It may surprise us soon after excesses committed in luxury, intemperance, or lewdness. It may likewise seize on the innocent after indispensable watchings, hard labour, or necessary journies. 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 inoculations rarely leaves any ugly marks or scars, even where the number of pustules on the face has been very considerable, and the symptoms by no means favourable. And many other grievous complaints that are frequently 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, entire villages are depopulated, markets ruined, and the face of distress spread over the whole country? From this terror it arises, that justice is frequently postponed, or discouraged, at sessions or assizes where the small-pox rages. Witnesses and juries dare not appear: and by reason of the necessary absence of some gentlemen, our honourable and useful judges are not attended with that reverence and splendour due to their office and merit. Does not inoculation, in like manner, prevent our brave sailors from being seized with this distemper on ship-board, where they must quickly spread the infection among such of the crew who never had it before, and where they have scarce any chance to escape, being half stifed with the closeness of their cabins, and but very indifferently nursed? Lastly, with regard to the soldiery, the miseries attending these poor creatures, when attacked by the small-pox on a march, are inconceivable, without attendance, without lodgings, without any accommodations; so that one of three commonly perishes."

neither to destroy life 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 of 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 practise it on their own children. Example will ever have more influence than precept.

The next thing requisite is to put it in the power of all. For this purpose we would recommend it to the faculty to inoculate the children of the poor *gratis*. It is hard that so useful a part of mankind should, by their poverty, be excluded from such a benefit.

Should this fail, it is surely in the power of any state to render the practice general, at least as far as their dominion extends. We do not mean that it ought to be enforced by law. The best way to promote it would be to employ a sufficient number of operators at the public expense to inoculate the children of the poor. This would only be necessary till the practice became general; afterwards custom, the strongest of all laws, would oblige every individual to inoculate his children to prevent reflections.

It may be objected to this scheme, that the poor would refuse to employ the inoculators; this difficulty is easily removed. A small premium to enable mothers to attend their children while under the disease, would be a sufficient inducement; besides, the success attending the operation would soon banish all objections to it. Even considerations of profit would induce the poor to embrace this plan. They often bring up their children to the age of ten or twelve, and when they come to be useful, they are snatched away by this malady, to the great loss of their parents, and detriment of the public.

The British legislature has of late years shewn great attention to the preservation of infant lives, by supporting the foundling-hospital, &c. But we will venture to say, if one tenth-part of the sums laid out in supporting that institution, had been bestowed towards promoting the practice of inoculation of the small-pox among the poor, that not only more useful lives had been saved, but the practice, ere now, rendered quite universal in this island. It is not to be imagined what effect example and a little money will have upon the poor; yet, if left to themselves, they would go on for ever in the old way, without thinking of any improvement. We only mean this as a hint to the humane and public-spirited. Should such a scheme be approved, a proper plan might easily be laid down for the execution of it.

But as the 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 purpose for which they were de-

signed; 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 expense, and it would enable every one to enjoy the benefit of this salutary invention.

Two things chiefly operate to prevent the progress of inoculation. The one is a wish to put the evil day as far off as possible. This is a principle in our nature; and as inoculation seems rather to be anticipating a future evil, it is no wonder mankind are so averse to it. But this objection is sufficiently answered by the success. Who in his senses would not prefer a lesser evil to-day to a greater to-morrow, provided they were equally certain?

The other obstacle is the fear of reflections. This has a very great weight with the bulk of mankind. Should the child die, they think the world would blame them. This they cannot bear. Here lies the difficulty; and, till that be removed, inoculation will make but small progress. Nothing however can remove it but custom. Make the practice fashionable, and all objections will soon vanish. It is fashion alone that has led the multitude since the beginning of the world, and will lead them to the end. We must therefore call upon the more enlightened part of mankind to set a pattern to the rest. Their example, though it may for some time meet with opposition, will at length prevail.

I am aware of an objection to this practice from the expense with which it may be attended: this is easily obviated. We do not mean that every parish ought to employ a Sutton or a Dimsdale as inoculators. These have by their success already recommended themselves to crowned heads, and are beyond the vulgar reach; but have not others an equal chance to succeed? They certainly have. Let them make the same trial, and the difficulties will soon vanish. There is not a parish, and hardly a village in Britain, destitute of some who can bleed. But this is a far more difficult operation, and requires both more skill and dexterity than inoculation.

The persons to whom we would chiefly recommend the performance of this operation are the clergy. Most of them know something of medicine. Almost all of them bleed, and can order a purge, which are all the qualifications necessary for the practice of inoculation. The priests among the less enlightened Indians perform this office, and why should a Christian teacher think himself above it? Surely the bodies of men, as well as their souls, merit a part of the pastor's care; at least the greatest teacher who ever appeared among men, seems to have thought so.

Should all other methods fail, we would recommend it to parents to perform the operation themselves. Let them take any method of communicating the disease they please; provided the subjects be healthy, and of a proper age, they will seldom fail to succeed to their wish. I have known many instances even of mothers performing the operation, and never so much as heard of one bad consequence. A planter in one of the West-India islands is said to have inoculated, with his own hand, in one year, three hundred of his slaves, who, notwithstanding the warmth of the climate, and other unfavourable circumstances, all did well. Common mechanics have often, to my knowledge, performed the operation

with as good success as physicians. We do not however mean to discourage those who have it in their power, from employing people of skill to inoculate their children, and attend them while under the disease; but only to shew, that where such cannot be had, the operation ought not upon that account to be neglected.

Instead of multiplying arguments to recommend this practice, I shall just beg leave to mention the method which I took with my own son, then an only child. After giving him two gentle purges, I ordered the nurse to take a bit of thread which had been previously wet with fresh matter from a pock, and to lay it upon his arm, covering it with a piece of sticking-plaster. This remained on six or seven days, till it was rubbed off by accident. At the usual time the small-pox made their appearance, and were exceedingly favourable. Surely this, which is all that is generally necessary, may be done without any skill in medicine.

We have been the more full on this subject because the benefits of inoculation cannot be extended to society by any other means than making the practice general. While it is confined to a few, it must prove hurtful to the whole. By means of it the contagion is spread, and is communicated to many who might otherwise never have had the disease. Accordingly it is found that nearly the same number die of the small-pox now as before inoculation was introduced; and this important discovery, by which alone more lives might be saved than by all the endeavours of the Faculty, is in a great measure lost by its benefits not being extended to the whole community.*

The spring and autumn have been usually reckoned the most proper seasons for inoculation, on account of the weather being then most temperate; but it ought to be considered that these are generally the most unhealthy seasons of the whole year. Undoubtedly the best preparation for the disease is a previous good state of health. I have always observed that children in particular are more sickly towards the end of spring and autumn, than at any other time of the year. On this account, as well as for the advantage of cool air, I would propose winter as the most proper season for inoculation; though on every other consideration, the spring would seem to be preferable.

The most proper age for inoculation is between three and five. Many approve of inoculating on the breast, and where no circumstances forbid this practice, I have no objection to it. Children, however, are more liable to convulsions at this time than afterwards; besides, the anxiety of the mother or nurse, should the child be in danger, would not fail to heighten it by spoiling the milk.

Children who have constitutional diseases, must nevertheless be inoculated. It will often mend the habit of body; but ought to be performed at a time when they are most healthy. Accidental diseases should always be removed before inoculation.

It is generally thought necessary to regulate the diet for some time before the disease be communicated. In children, however, great alteration in diet is seldom necessary, their food being commonly of

* By a well-laid plan for extending inoculation, more lives might be saved at a small expense, than are at present preserved by all the hospitals in England, which cost the public such an amazing sum.

the most simple and wholesome kind, as milk, water-pap, weak broths, bread, light pudding, mild roots, and white meats.

But children who have been accustomed to a richer diet, who are of a gross habit, or bound with bad humours, ought to be put upon a spare diet before they are inoculated. Their food should be of a light cooling nature, and their drink whey, butter-milk, and such like.

We would recommend no other medicinal preparation but two or three mild purges, which ought to be suited to the age and strength of the patient. The success of inoculators does not depend on the preparation of their patients, but on their management of them while under the disease. Their constant care is to keep them cool, and their bodies gently open, by which means the fever is kept low, and the eruption greatly lessened. The danger is seldom great when the pustules are few; and their number is generally in proportion to the fever which precedes and attends the eruption. Hence the chief secret of inoculation consists in regulating the eruptive fever, which generally may be kept sufficiently low by the methods mentioned above.

The regimen during the disease is in all respects the same as under the natural small-pox. The patient must be kept cool, his diet should be light, and his drink weak and diluting, &c. Should any bad symptoms appear, which is seldom the case, they must be treated in the same way as directed in the natural small-pox. Purging is not less necessary after the small-pox by inoculation than in the natural way, and ought by no means to be neglected.

CHAP. XXV. §

OF THE COW-POX, AND ITS INOCULATION.

IN the preceding chapter, the method of inoculating for the small-pox has been retained, as having hitherto been successfully practised during a number of years; but, by a fortunate discovery, it is now found, that the infection may be introduced in a manner equally successful, and the disease rendered still less considerable than by the former kind of inoculation. This is done by inoculating with matter either taken from a cow affected with the disease, or from some person who had received the infection originally derived from that animal. It may be proper here to give a general account of the manner in which so surprising a discovery has been made.

In several parts of England, where cows are kept for the purposes of the dairy, a peculiar eruptive disease has been occasionally observed among the herd, and which affects in particular the udders and teats of those animals. It has, therefore, pretty generally obtained the name of the *Cow-pox*, (*vaccinia*, or *vacciola*.)

Till within these last two years, the knowledge of this distemper has been chiefly confined to the people employed in the dairies, and to farriers and cow-doctors in the neighbourhood; but, by the latter, it appears to have been observed with particular accuracy, and they have even employed means for its removal.

It farther appears, that wherever the existence of this disease was

known, the fact was likewise ascertained, that the disorder was communicated by the touch to the milkers who handle the teats of the diseased cows, and from them again is often spread through a numerous herd: that, when affecting the human species, it is not merely confined to the local disease of the hands and arms, but also occasions a general indisposition, often severe, but never fatal, which runs a regular course; and that the person who has once undergone the disease so communicated is ever after secure against the infection of the small-pox, either in the natural way by contagion, or by inoculation.

All these circumstances, however, though known, as we are told, from time immemorial in certain parts of the kingdom, still remained in obscurity till within these three years, when Dr. Jenner, of Berkley, in Gloucestershire, conceived the important idea of employing the cow-pox to annihilate the small-pox, and published several interesting particulars concerning this disease, which works have now made it known to the public in general.

It appears, from observations made by those who are most conversant with cows, that several causes may produce sores upon the udder and teats of this animal, especially such as excite any irritation in those parts, during the season when the cows abound most in milk. The stinging of flies, or rough handling while milking, and other such external irritations, will often occasion small white blisters on the parts; which, however, never extend more than skin-deep, and are generally easy of cure.

Another, and more serious disorder in those parts, is said to be sometimes produced by suffering a cow, while in full milking, to remain for a day or two unmilked; in order to distend the udder when naturally small. This, it appears, is a common artifice practised at the fairs and cattle-markets, with the view of increasing the price of the cow, a large udder being reckoned an important circumstance in the value of that animal. By this cruel and unwarrantable artifice, the vessels that supply the udder are kept for an unusual length of time in a state of great distention, which terminates frequently in a violent inflammation of those parts, succeeded by large eruptions upon the teats and udder that sometimes leave deep and troublesome sores. The matter discharged from these ulcers will communicate a disorder, like the other, into the hands of the milkers, when the skin is broken in any part; and often produces foul and extensive ulcers, which sometimes occasion pustules on the arms and shoulders, and prove tedious and difficult of cure.

The genuine cow-pox, however, is a distinct disease from those which have been just mentioned. It generally makes its appearance in the spring, and shows itself in irregular pustules on the teats or nipples of the udder. They are at first of palish blue, or rather a livid colour, and contain a thin, watery, and sharp fluid. The surrounding parts are inflamed and hardened. These pustules, it seems are very apt to degenerate into deep corroding ulcers, which, as the cow-doctors term it, *eat into the flesh*, and constantly discharge a matter, which commonly increases in thickness, and hardens at last into a scab. Now and then the cow becomes evidently indisposed, loses her appetite, and gives less milk than usual; but it often happens, that the disorder, though severe, is entirely local.

It appears that the cow-pox never proves fatal to cows, nor is it infectious in the usual manner of contagious distempers, but can only

be communicated to them or to the human species by actually touching the matter which proceeds from the sores. Hence, the cows which are not in milk escape the disease entirely, though constantly in the same field with those that are highly infected; and it seems to be only from the circumstance of the milker handling the teats of the sound cows, after touching the diseased, that the cow-pox ever spreads among the herd.

We are informed that the cow-pox is familiar to the inhabitants of the hundred of Berkley in Gloucestershire. It has likewise been discovered in various parts of the counties of Wilts, Somerset, Buckingham, Devon, and Hants: in a few places of Suffolk and Norfolk, where it is sometimes called the *pap-pox*; and in Leicestershire and Staffordshire. Nor is it unfrequent in the very large milk-farms contiguous to the metropolis on the Middlesex side. It is here observed generally to attack first some cow newly introduced to the herd, and is supposed to originate in a sudden change from a poor to a very rich and partly unnatural diet which it is the practice to use, in order to bring the yield of milk to its highest point.

According to Dr. Jenner, the origin of the cow-pox is ascribed to a derivation from the horse. The horse is well known to be subject to an inflammation and swelling in the heel, called *the grease*, from which is discharged a very sharp matter, capable of producing irritation and ulcers in any other animal to the surface of which it is applied. It is supposed that this matter is conveyed to the cow by the men-servants of the farm, who, in several of the dairy counties, assist in milking. One of these having dressed the horse, goes immediately to his occupation of milking; and having upon his hand some particles of the discharge from *the grease*, he, of course, applies it to the udder of the cow, where, if the animal be in a state for receiving the infection, it produces that specific change in those parts which gives rise to the disease of the cow-pox.

The origin here ascribed to this disorder is principally founded on the circumstance, that wherever the cow-pox appears, *the grease* is generally found to have preceded it: and the opinion of the propagation of the disease from the horse to the cow is likewise current in some of the dairy counties where the disease is known. But this opinion requires to be ascertained by further observations.

This conjecture, respecting the origin of the cow-pox, was no sooner started by Dr. Jenner, than attempts were made repeatedly, but without success, to introduce the disease in the nipple of the cow by direct inoculation of the recent matter of *the grease* from the horse's heel. The consequence of this experiment, when it took any effect, was a slight inflammation, and the production of a small pustule or pimple, but which disappeared in a few days, without exciting the specific disease of the pox. But the failure of these experiments by no means overthrows the opinion for the ascertainment of which they were made; since it is admitted that a certain predisposition in the constitution of the cow to receive the disease is also requisite for its production.

It is remarked, that the matter discharged from the sores in the horse's heel is likewise found to occasion, at times, very troublesome ulcers on the hands of the men that dress them, attended with a very considerable degree of indisposition; both of which appear to be full as severe as in the genuine cow-pox, and in many points to resemble this latter disorder.

But the person who has been infected by the horse is not rendered thereby entirely secure from afterwards receiving the small-pox.

The pustular sores on the udder and teats of the cow, that constitute the genuine cow-pox, whatever be the way in which they are produced, are found by experience to possess the power of infecting the human species, when any part of the body, where the skin is broken, or naturally thin, comes into actual contact with the matter which they discharge. Hence it is, that with the milkers, the hands are the parts that acquire this disorder accidentally, and it there exhibits the following appearances: Inflamed spots begin to appear on the hands, wrists, and especially the joints and tips of the fingers; and these spots at first resemble the small blisters of a burn, but quickly proceed to suppuration. The pustule is quite circular, depressed in the middle, and of a blueish colour, and is surrounded with a considerable redness. The blue colour which the pustule almost invariably assumes, when the disorder is communicated directly from the cow, is one of the most characteristic marks by which the cow-pox may be distinguished from other diseases which the milkers are likewise liable to receive from the cow. The matter of the pustule is at first thin and colourless; but, as the disorder advances, it becomes yellow and more purulent. In a few days from the first eruption, a tenderness and swelling of the glands in the arm-pit come on, and soon after the whole constitution becomes disordered, the pulse is increased in quickness, shivering succeed, with a sense of weariness, and pains about the loins, vomiting, head-ach, and sometimes a slight degree of delirium.

These symptoms continue with more or less violence from one day to three or four, and, when they abate, they leave sores about the hands which heal very slowly; resembling, in this respect, the ulcers on the nipple of the cow, from which they derive their origin.

It is to be observed, that the cow-pox eruption, though very severe on the hands, and occasioning much general illness, never produces a crop of pustules over distant parts of the body, arising spontaneously, as in the small-pox. It often happens, however, that pustules are formed in various parts which accidentally come in contact with the diseased hands, as on the nostrils, lips, and other parts of the face where the skin is thin; or sometimes on the forehead, when the milker leans with that part upon the udder of an infected cow. From this account it appears, that the cow-pox as it affects the milkers, or what may be termed the *casual* cow-pox in the human species, is often a severe disorder, sometimes confining the patient to his bed during the period of fever, and generally leaving troublesome sores, but it has never been known to prove fatal; nor are these sores, if properly attended to, followed with any lasting injury of the affected parts, though they sometimes leave scars for life.

In consequence of the close investigation which this disorder has lately undergone, the following facts may be considered as fully ascertained by the fairest experiments and most accurate observations:

First.—The cow-pox, in its natural state, or when propagated immediately from an infected cow, to the hands of the milkers, is capable of affecting the human species from one to another repeatedly to an indefinite number of times; but after the first attack, it is generally much milder in its symptoms, and in particular it is much less

liable to produce the fever and general indisposition which always attend the first infection. There are instances, however, where the second and even third attack have been as severe in every respect as the first; but these are very rare.

Secondly.—The small-pox in a considerable degree secures a person from the infection of the cow-pox; and in this respect appears to act in a manner very similar to a previous attack of the latter disease; that is, to confine its operation to the forming of local pustules, but unattended with general fever. Hence it is, that where all the servants of the dairy take the infection from the cows, those of them who have previously undergone the small-pox are often the only persons among them able to go through the usual work.

Thirdly.—The cow-pox, in its genuine state, when it has been accompanied with general fever, and has run its regular course, ever after preserves the person who has been infected with it from receiving the infection of the small-pox. This assertion is, however, to be taken with exactly the same limitations as that of re-infection with the small-pox preventing a second attack of the same disease. No previous infection will entirely counteract the local effect on the arm, produced by the insertion of variolous matter in common inoculation; this may in a few cases go so far as to induce a degree of general fever, slight indeed, but perhaps equal to that of the mildest indisposition caused by a first infection with this disorder. By the inoculation of either disease, however, the small-pox is equally and completely disarmed of its virulence against any subsequent attack, which is the circumstance that so much distinguishes and so strongly recommends this operation.

Fourthly.—A comparison of the two diseases in respect of the mildness of their symptoms, and the hazard to life which they may occasion, will show a very great advantage in favour of the cow-pox. Compared with the natural small-pox, the natural or casual cow-pox is both milder and infinitely more safe; no instance having ever been known of a fatal event in the cow-pox, so far as it affects the people employed in the dairies. When both diseases are introduced by artificial inoculation, they are each rendered much less severe; and here too the superiority of the cow-pox as a safer and milder disease is extremely evident.

Fifthly.—The cow-pox, even in its most virulent state, is not communicable by the air, nor by any other of the ordinary means of contagion, but can only be propagated, by the actual contact of matter of a pustule from the cow-pox with some part of the body of the person who receives it. It is not yet ascertained, whether in all cases an insertion of specific infectious matter under the skin be necessary; but in its most active state, as it is when formed in the cow's udder, the skin which covers the lips and nostrils readily receives the infection without being broken. In this respect the contagion of the cow-pox seems to equal that of the small-pox in activity; but the striking difference between the two diseases in the cow-pox not being communicated by the air, &c. is a circumstance fully and satisfactorily ascertained. In the dairy-farms, infected servants sleep with the uninfected: infants at the breast have remained with their mothers whilst only one of the two have had the disorder upon them; and in no instance has the disease of one been communicated by contagion to the other. It is this circumstance which gives the cow-pox its decided superiority; since, by adopting this disease instead of the small-pox, all the

dread and all the mischief occasioned by the contagion of the latter are entirely removed.

The inoculated cow-pox appears to have almost as great a superiority in point of mildness and security over the ordinary inoculation of the small-pox, as this has over the natural small-pox; so that the same precautions which would be highly requisite in communicating the latter becomes less so where the disorder is to be introduced by inoculation; and still less where the cow-pox is substituted in the room of the other.

With regard to the *method of performing Inoculation in the Cow-pox*, Dr. Woodville, whose industry, judgment, and accuracy, appear to great advantage in his observations on this subject, advises "that the lancet should be held nearly at a right angle with the skin, in order that the infectious fluid may gravitate to the point of the instrument, which, in this direction, should be made to scratch the cuticle repeatedly, until it reach the true skin and become tinged with blood."

The act of inoculation having been performed, the first proof of its success is a small inflamed spot at the part where the puncture has been made, which is very distinguishable about the third day. This continues to increase in size, becomes hard, and a small circular tumour is formed, rising a little above the skin. About the sixth day the centre of the tumour shows a discoloured speck, owing to the formation of a small quantity of fluid; and this continues to increase, and the pustule or pimple to fill, till about the tenth day.

After the eighth day, when the pustule is fully formed, the effects on the constitution begin to show themselves; the general indisposition being commonly preceded by pain at the pustule and in the arm-pit, followed by head-ach, some shivering, loss of appetite, pain in the limbs, and a feverish increase of the pulse. These continue, with more or less violence, for one or two days, and always abate of their own accord, without leaving any unpleasant consequence behind them.

During, or a little after, the general indisposition, the pustule in the arm, which had been advancing in a regular manner, becomes surrounded with a broad circular inflamed margin, and this is a sign that the body in general is affected. After this period, the fluid in the pustule gradually dries up, the surrounding redness becomes fainter, and in a day or two vanishes imperceptibly; whilst the pustule no longer increases in extent, but on its surface a hard thick scab of a brown colour is formed, which, if not pulled off, remains for nearly a fortnight; till at length it falls off, leaving the skin beneath perfectly sound and uninjured.

It is a circumstance of great importance in favour of this method of inoculation, that though some attention in choosing the matter for inoculation, and performing this slight operation in such a manner as to insure success, be requisite, very little medical treatment is necessary in order to conduct the patient through it with perfect safety. In most cases it is attended with so little fever as scarcely to be detected by an attentive observer.

To conclude this account of the cow-pox with a repetition of the circumstances which gives it a decided superiority over the small-pox, Dr. Woodville affirms (and his authority is unquestionable) that of all the patients whom he inoculated with the variolous matter, after

they had passed through the cow-pox, amounting to upwards of four hundred, not one was affected with the small-pox, though purposely and repeatedly exposed to the infection of the disease; and what is not less extraordinary, nearly a fourth part of this number were so slightly affected with the cow-pox, that it neither produced any perceptible indisposition, nor pustules.

From the beginning of the world, the cow has, in all countries, been esteemed a valuable animal. Besides cultivating the ground, which her species performs, she supplies us with an aliment of her own preparing, the most wholesome as well as nourishing in nature; but never before was it known, except, as appears, in some particular districts in England, that, even from a disease to which she is liable, she can likewise be further useful, in preserving us from one of the most fatal calamities that ever infested human kind.

CHAP. XXVI.

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 preceded by alternate fits of heat and cold, with sickness and loss of appetite. The tongue is white, but generally moist. There is a short cough, 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 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.

On 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, and especially if the patient has been kept upon too hot a regimen. Petechiæ, or purple spots, may likewise be occasioned by this error.

A violent looseness sometimes succeeds the measles, in which case the patient's life is in imminent danger.

Such as die of the measles, generally expire about the ninth day from the invasion, and are commonly carried off by a peripneumony, or inflammation of the lungs.

The most favourable symptoms are a moderate looseness, a moist skin, and a plentiful discharge of urine.

When the eruption suddenly falls in, and the patient is seized with a delirium, he is in the greatest danger. If the measles turn too soon of a pale colour, it is an unfavourable symptom, as are also great weakness, vomiting, restlessness, and difficulty of swallowing. Purple or black spots appearing among the measles are very unfavourable. When a continual cough, with hoarseness, succeeds the disease, there is reason to suspect an approaching consumption of the lungs.

Our business in this disease is to assist nature, by proper cordials, in throwing out the eruption, if her efforts be too languid; but when they are too violent they must be restrained by evacuations, and cool diluting liquors, &c. We ought likewise to endeavour to appease the most urgent symptoms, as the cough, restlessness, and difficulty of breathing.

REGIMEN.—The cool regimen is necessary here as well as in the small-pox. The food too must be light, and the drink diluting. Acids, however, do not answer so well in the measles as in the small-pox, as they tend to exasperate the cough. Small beer likewise, though a good drink in the small-pox, is here improper. The most suitable liquors are decoctions of liquorice with marsh-mallow roots and sarsaparella, infusions of linseed, or of the flowers of elder, balm tea, clarified whey, barley-water, and such like. These, if the patient is costive, may be sweetened with honey; or, if that should disagree, with the stomach, a little ma-na 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.

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

* 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.

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 succeeds the measles, it may be checked by taking for some days a gentle dose of rhubarb in the morning, and an opiate over night; but if these do not remove it, bleeding will seldom fail to have that effect.

Patients recovering after the measles should be careful what they eat or drink. Their food for some time ought to be light, and in small quantities, and their drink diluting, and rather of an opening nature, as butter-milk, whey, and such like. They ought also to beware of exposing themselves too soon to the cold air, least a suffocating cartarrh, an asthma, or a consumption of the lungs, should ensue.

Should a cough, with difficulty of breathing, and other symptoms of a consumption, remain after the measles, small quantities of blood may be frequently let at proper intervals, as the patient's strength and constitution will permit. He ought likewise to drink asses milk, to remove to a free air, if in a large town, and to ride daily on horseback. He must keep close to a diet consisting of milk and vegetables; and lastly, if these do not succeed, let him remove to a warmer climate.*

* Attempts have been made to communicate the measles, as well as the small-pox, by inoculation, and we make no doubt but in time the practice may succeed. Dr. Home of Edinburgh, says, he communicated the disease by the blood. Others have tried this method, and have not found it succeed. Some think the disease would be more certainly communicated by rubbing the skin of the patient who has the measles with cotton, and afterwards applying the cotton to a wound as in the small-pox; while others recommend a bit of flannel which had been applied to the patient's skin, all the time of the disease, to be afterwards laid upon the arm or leg of the person to whom the infection is to be communicated. There is no doubt but this disease, as well as the small-pox, may be communicated various ways; the most probable, however, is either from

OF THE SCARLET FEVER.

THE scarlet fever is so called from the colour of the patient's skin, which appears as if it were tinged with red wine. It happens at any season of the year, but is most common towards the end of summer; at which time it often seizes whole families; children and young persons are most subject to it.

It begins like other fevers, with coldness and shivering, without any violent sickness. Afterwards the skin is covered with red spots, which are broader, more florid, and less uniform than the measles. They continue two or three days, and then disappear; after which the cuticle, or scarf-skin, falls off.

There is seldom any occasion for medicine in this disease. The patient ought however to keep within doors, to abstain from flesh, strong liquors, and cordials, and to drink freely of cool and 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 languor, sickness, and great oppression; to these succeed excessive heat, nausea, and vomiting, with a soreness of the throat; the pulse is extremely quick, but small and depressed; the breathing frequent and laborious; the skin hot, but not quite dry; the tongue moist, and covered with a whitish mucus; the tonsils inflamed and ulcerated. When the eruption appears, it brings no relief: on the contrary, the symptoms generally grow worse, and fresh ones come on, as purging, delirium, &c.

When this disease is mistaken for 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.†

cotton rubbed upon the skin; as mentioned above, or by introducing a little of the sharp humour which distills 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.

* Sydenham.

† 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 quinsy, and the inflammatory symptoms were so blend-

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 or mild purgatives. But if the fever should remit or intermit, bleeding will seldom be necessary. In this case a vomit may be administered, and if the body be bound, a gentle purge; after which the Peruvian bark will generally complete the cure.

In case of a violent looseness, the patient must be supported with chicken broths, jellies of hartshorn, and the like; and he may use the *white decoction* for his ordinary drink.* If a bloody flux should accompany this fever, it must be treated in the manner recommended under the article *Dysentery*.

When there is a burning heat, and the patient does not sweat, that evacuation may be promoted by giving him, three or four times a-day, a table-spoonful of Mindererus' spirit,† mixed in a cup of his ordinary drink.

If the bilious fever be attended with the nervous, malignant, or putrid symptoms, which is sometimes the case, the patient must be treated in the same manner as directed under these diseases.

After this fever, proper care is necessary to prevent a relapse. For this purpose the patient, especially towards the end of autumn, ought to continue the use of the Peruvian bark for some time after he is well. He should likewise abstain from all trashy fruits, new liquors, and every kind of flatulent aliment.

 CHAP. XXVII.

OF THE ERYSIPELAS, OR ST. ANTHONY'S FIRE.

THIS disease, which in some parts of Britain is called *the rose*, attacks persons at any period of life, but is most common between the age of thirty and forty. Persons of a sanguine or plethoric

ed with others of a putrid nature, as to render the treatment of the disease very difficult. Many of the patients, towards the decline of the fever, were afflicted with large swellings of the submaxillary glands, and not a few had a suppuration in one or both ears.

* See Appendix, *white decoction*.

† See Appendix, *Spirit of Mindererus*.

habit are most liable to it. It often attacks young people, and pregnant women; and such as have once been afflicted with it are very liable to have it again. Sometimes it is a primary disease, and at other times only a symptom of some other malady. Every part of the body is liable to be attacked by an erysipelas, but it most frequently seizes the legs or face, especially the latter. It is most common in autumn, or when hot weather is succeeded by cold and wet.

CAUSES.—The erysipelas may be occasioned by violent passions or affections of the mind; as fear, anger, &c. When the body has been heated to a great degree, and is immediately exposed to the cold air, so that the 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 shivering, thirst, loss of strength, pain in the head and back, heat, restlessness, and a quick pulse; to which may be added vomiting, and sometimes a delirium. On the second, third, or fourth day, the part swells, becomes red, and small pustules appear; at which time the fever generally abates.

When the erysipelas seizes the foot, the parts contiguous swell, the skin shines; and, if the pain be violent, it will ascend to the leg, and will not bear to be touched.

When it attacks the face, it swells, appears red, and the skin is covered with small pustules filled with clear water. One or both eyes are generally closed with the swelling; and there is a difficulty of breathing. If the mouth and nostrils be very dry, and the patient drowsy, there is reason to suspect an inflammation of the brain.

If the erysipelas affects the breast, it swells and becomes exceedingly hard, with great pain, and is apt to suppurate. There is a violent pain in the arm-pit, on the side affected, where an abscess is often formed.

If in a day or two the swelling subsides, the heat and pain abate, the colour of the part turns yellow, and the cuticle breaks and falls off in scales, the danger is over.

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 gangrene, or mortification, often ensue.

Such as die of this disease are commonly carried off by the fever, which is attended with difficulty of breathing, and sometimes with a delirium and great drowsiness. They generally die about the seventh or eighth day.

* 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.

REGIMEN.—In the erysipelas the patient must neither be kept too hot nor 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 luke-warm water, when the disease attacks the face or brain, has an excellent effect. It tends to make a derivation from the head, and seldom fails to relieve the patient. When bathing proves ineffectual, poultices, or sharp sinapisms, may be applied to the soles of the feet, for the same purpose.

In cases where bleeding is requisite, it is likewise necessary to keep the body open. This may be effected by emollient clysters, or small doses of nitre and rhubarb. Some indeed recommend very large doses of nitre in the erysipelas; but nitre seldom sits easy on the stomach when taken in large doses. It is however one of the best medicines when the fever and inflammation run high. Half a drachm of it, with four or five grains of rhubarb, may be taken in the patient's ordinary drink, four times a-day.

When the erysipelas leaves the extremities, and seizes the head so

as to occasion a delirium or stupor, it is absolutely necessary to open the body. If clysters and milk 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.

CHAP. XXVIII.

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

* See Appendix, *Decoction of Woods*.

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, ringing 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 some times 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 matter, it is hard. A remarkable quickness of hearing is a common symptom of this disease, but that seldom continues long. Another usual symptom is a great throbbing or pulsation in the arteries of the neck and temples. Though the tongue is often black and dry, yet the patient seldom complains of thirst, and even refuses drink. The mind chiefly runs upon such objects as have before made a deep impression on it; and sometimes from a sullen silence, the patient becomes all of a sudden quite outrageous.

A constant trembling and starting of the tendons is an unfavourable symptom, as are also a suppression of urine; a total want of sleep; a constant spitting; a grinding of the teeth; which last may be considered as a kind of 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 repellents in all inflammatory diseases.

The favourable symptoms are, a free perspiration, a copious discharge of blood from the nose, the bleeding piles, a plentiful discharge of urine which lets fall a copious sediment. Sometimes the disease is carried off by a looseness, and in women by an excessive flow of the menses.

As this disease often proves fatal in a few days, it requires the most speedy applications. When it is prolonged, or improperly treated, it sometimes ends in madness, or a kind of stupidity which continues for life.

In the cure, two things are chiefly to be attended to, viz. to lessen the quantity of blood in the brain, and to retard the circulation towards the head.

REGIMEN.—The patient ought to be kept very quiet. Company, noise, and every thing that affects the senses, or disturbs the imagination increases the disease. Even too much light is hurtful; for which reason the patient's chamber ought to be a little darkened, and he should neither be kept too hot nor cold. It is not however necessary to exclude the company of an agreeable friend, as this has a tendency to

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 too often the consequence of this disease.

The patient must, as far as possible, be soothed and humoured in every thing. Contradiction will ruffle his mind, and 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. Boerhaave proposes several mechanical experiments for this purpose; as the soft noise of water distilling by drops into a bason, and the patient trying to reckon them, &c. Any uniform sound if low and continued; has a tendency to procure sleep, and consequently may be of service.

The aliment ought to be light, consisting chiefly of farinaceous substances; as panado and water gruel, sharpened with jelly of currants, or juice of lemons, ripe fruits roasted or boiled, jellies, pre.erves, &c. The drink small, diluting, and cooling as whey, barley water, or decoctions of barley and tamarinds, which latter not only renders the liquor more palatable, but likewise more beneficial, as they are of an opening nature.

MEDICINE.—In an inflammation of the brain, nothing more certainly relieves the patient than a free discharge of blood from the nose. When this comes of its own accord, it is by no means to be stopped, but rather promoted, by applying cloths dipped in warm water to the part. When bleeding at the nose does not happen spontaneously, it may be provoked, by putting a straw or any other sharp body up the nostril.

Bleeding in the temporal arteries greatly relieves the head: but as this operation cannot always be performed, we would recommend in its stead, bleeding in the jugular veins. When the patient's pulse and spirits are so low that he cannot bear bleeding with the lancet, leeches may be applied to the temples. These not only draw off the blood more gradually but by being applied nearer to the part affected, generally give more immediate relief.

A discharge of blood from the hæmorrhoidal veins is likewise of great service, and ought by all means to be promoted. If the patient has been subject to the bleeding piles, and that a 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, aloe, 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 bated in lukewarm 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.

CHAP. XXIX.

OF THE OPHTHALMIA, OR INFLAMMATION OF THE EYES.

THIS disease may be occasioned by external injuries as blows, burns, bruises, and the like. It may likewise proceed from dust, quick-lime, or other substances, getting into the eyes, It is often caused by the stoppage of customary evacuations; as the healing of old sores, drying up of issues, the suppressing of gentle morning sweats, or of the sweating of the feet, &c. Long exposure to the night air, especially in cold northerly winds, or whatever suddenly checks the perspiration, especially after the body has been much heated, is very apt to cause an inflammation of the eyes—Viewing snow or other white bodies for a long time, or looking stedfastly at the sun, a clear fire, or any bright object, will likewise occasion this malady. A sudden transition from darkness to very bright light will often have the same effect.

Nothing more certainly occasions an inflammation of the eyes than night-watching, especially reading or writing by candle-light.—Drinking spirituous liquors, and excess of venery are likewise very hurtful to the eyes. The acrid fumes of metals, and of several kinds of fuel, are also pernicious. Sometimes an inflammation of the eyes proceed from a venereal taint, and often from a scrophulous or gouty habit. It may likewise be occasioned by hairs in the eyelids 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 succeeds 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 total blindness.

If the patient be seized with a looseness, it has a good effect; and when the inflammation passes from one eye to another as it were by infection, it is no unfavourable symptom. But when the disease is accompanied with a violent pain of 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 vegetables, weak broths, and gruels. His drink may be barley-water, balm-tea, common whey, and such like.

The patient's chamber must be darkened, or his eyes shaded by a cover so as to exclude the light, but not to press upon the eyes. He should not look at a candle, the fire or any luminous object; and ought to avoid all smoke, as the fumes of tobacco, or any thing that may cause coughing, sneezing, or vomiting. He should be kept quiet, avoiding all violent efforts, either of body or mind, and encouraging sleep as much as possible.

MEDICINE.—This is one of those diseases wherein great hurt is often done by external applications. Almost every person pretends to be possessed of a remedy for the cure of sore eyes. These remedies generally consist of eye-waters and ointments, with other external applications, which do mischief twenty times for once they do good. People ought therefore to be very cautious how they use such things, as even the pressure upon the eyes often increases the malady.

Bleeding, in a violent inflammation of the eyes, is always necessary. This should be performed as near the part affected as possible. An adult may loose ten or twelve ounces of blood from the jugular vein, and the operation may be repeated according to the urgency of the symptoms. If it should not be convenient to bleed in the neck, the same quantity may be let from the arm, or any other part of the body.

Leeches are often applied to the temples, or under the eyes, with good effect. The wounds must be suffered to bleed for some hours, and if the bleeding stop soon, it may be promoted by the application of cloths dipt in warm water. In obstinate cases, it will be necessary to repeat this operation several times.

Opening and diluting medicines are by no means to be neglected. The patient may take a small dose of Glauber's salts, and cream of tartar, every second or third day, or a decoction of tamarinds with senna. If these be not agreeable, gentle doses of rhubarb and nitre, a little of the lenitive electuary, or any other mild purgative, will answer the same end. The patient at the same time must drink freely of water-gruel, tea, whey, or any other weak diluting liquor.—He ought likewise to take, at bed-time, a large draught of very weak wine-whey, in order to promote perspiration. His feet and legs must frequently be bathed in

lukewarm water, and his head twice or thrice a-week, and afterwards, washed in cold water. This has often a remarkable good effect.

If the inflammation does not yield to these evacuations, blistering-plasters must be applied to the temples, behind the ears, or upon the neck, and kept open for some time by the mild blistering ointment. I have seldom known these, if long enough kept open, fail to remove the most obstinate inflammation of the eyes; but for this purpose it is often necessary to continue the discharge for several weeks.

When the disease has been of long standing, I have seen very extraordinary effects from a seton in the neck, or between the shoulders, especially the latter. It should be put upwards and downwards, or in the direction of the spine, and in the middle between the shoulder-blades. It may be dressed twice a day with yellow basilicon. I have known patients, who had been blind for a considerable time, recover sight by means of a seton placed as above. When the seton is put across the neck, it soon wears out, and is both more painful and troublesome than between the shoulders; besides, it leaves a disagreeable mark; and does not discharge so freely.

When the heat and pain of the eyes are very great, a poultice of bread and milk, softened with sweet oil or fresh butter, may be applied to them, at least all night; and they may be bathed with lukewarm milk and water in the morning.

If the patient cannot sleep, which is sometimes the case, he may take twenty or thirty drops of laudanum, or two spoonsful of the syrup of poppies, over night, more or less according to his age, or the violence of the symptoms.

After the inflammation is gone off, if the eyes still remain weak and tender, they may be bathed every night and morning with cold water and a little brandy, six parts of the former to one of the latter.

A method should be contrived by which the eye can be quite immersed in the brandy and water, where it should be kept for some time. I have generally found this, or cold water and vinegar, as good a strengthener of the eyes as any of the most celebrated collyriums.

When an inflammation of the eyes proceeds from a 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 either be 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-spoonsful, 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 Æthiops's mineral never fails in obstinate inflammations of the eyes, even scrophulous ones, if given in a sufficient dose, and duly persisted in." There is no doubt but this and other preparations of mercury may be of singular service in ophthalmias of long continuance, but they ought always to be administered with the greatest caution, or by persons of skill in physic,

It will be proper frequently to look into the eyes, to see if any hairs be turned upwards, or pressing upon them.* These ought to be removed by plucking them out with a pair of small pincers.

Those who are liable to frequent returns of this disease, ought constantly to have an issue in one or both arms. Bleeding or purging in the spring and autumn, will be very beneficial to such persons. They ought likewise to live with the greatest regularity, avoiding strong liquors, and every thing of a heating quality. Above all let them avoid the night air and late studies.†

CHAP. XXX.

OF THE QUINSEY, OR INFLAMMATION OF THE THROAT.

THIS disease is very common in Britain, and is frequently attended with great danger. It prevails in the winter and spring, and is most fatal to young people of a sanguine temperament.

CAUSES.—In general it proceeds from the same causes as other inflammatory disorders, viz. an obstructed perspiration, or whatever heats or inflames the blood. An inflammation of the throat is often occasioned by omitting some part of the covering usually worn about the neck, by drinking cold liquor when the body is warm, by riding or walking against a cold northerly wind, or any thing that greatly cools the throat, and parts adj.cent. It may likewise proceed from the neglect of bleeding, purging, or any customary evacuation.

Singing, speaking loud and long, or whatever strains the throat, may likewise cause an inflammation of that organ. I have often known the quinsey prove fatal to jovial companions, who after sitting long in a warm room, drinking warm 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 epidemic and infectious.

SYMPTOMS.—The inflammation of the throat is evident from inspection, the parts appearing red and swelled; besides, the patient

* Any foreign body lodged in the eye may be expeditiously removed by passing a small hair pencil between the eye-lid, and the ball of the eye. In some places, the peasants do this very effectually, by using their tongue in the same manner.

† 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.

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 straightness 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 quinsy is the consequence of some other disease, which has already weakened the patient, his situation is dangerous. A frothing at the mouth, with a swelled tongue, a pale, ghastly countenance, and coldness of the extremities, are fatal symptoms.

REGIMEN.—The regimen in this disease is in all respects the same as in the pleurisy, or peripneumony. The food must be light, and in small quantity, and the drink plentiful, weak, and diluting, mixed with acids.

It is highly necessary that the patient be kept easy and quiet. Violent affections of the mind, or great efforts of the body, may prove fatal. He should not even attempt to speak but in a low voice. Such a degree of warmth as to promote a constant gentle sweat, is proper. When the patient is in bed, his head ought to be raised a little higher than usual.

It is peculiarly necessary that the neck be kept warm; for which purpose several folds of soft flannel may be wrapt round it. That alone will often remove a slight complaint of the throat, especially if applied in due time. We cannot here omit observing the propriety of a custom which prevails among the peasants of Scotland. When they feel any uneasiness of the throat, they wrap a stocking about it all night. So effectual is this remedy, that in many places it passes for a charm, and the stocking is applied with 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 kept about it till the inflammation be removed.

The jelly of black currants is a medicine very much in esteem for complaints of the throat; and indeed it is of some use. It should be almost constantly kept in the mouth, and swallowed down leisurely. It may likewise be mixed in the patient's drink, or taken any other way. When it cannot be obtained, the jelly of red currants, or of mulberries, may be used in its stead.

Gargles for the throat are very beneficial. They may be made of sage-tea, with a little vinegar and honey, or by adding to half a pint of the pectoral decoction, two or three spoonsful of honey, and the same quantity of currant jelly. This may be used three or four times a-day; and if the patient be troubled with tough viscid phlegm, the

gargle may be rendered more sharp and cleansing, by adding to it a tea-spoonful of the spirit of *sal ammoniac*. Some recommend gargles made of a decoction of the leaves or bark of the black currant bush; but where the jelly can be had these are unnecessary.

There is no disease wherein the benefit of hathing the feet and legs in lukewarm water is more apparent: that practice ought therefore never to be neglected. If people were careful to keep warm, to wrap up their throats with flannel, to bathe their feet and legs in warm water, and to use a spare diet, with diluting liquors, at the beginning of this disease, it would seldom proceed to a great height, or be attended with any danger; but when these precautions are neglected, and the disease becomes violent, more powerful medicines are necessary.

MEDICINE.—An inflammation of the throat being a most acute and dangerous distemper, which sometimes takes off the patient very suddenly, it will be proper, as soon as the symptoms appear, to bleed in the arm, or rather in the jugular vein, and to repeat the operation if circumstances require.

The body should likewise be kept gently open. This may either be done by giving the patient for his ordinary drink a decoction of figs and tamarinds, or small doses of rhubarb and nitre, as recommended in the *crispelas*. 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 pruncl*, or putrified nitre, held in the mouth, and swallowed down as it melted. This promotes the discharge of *saliva*, by which means it answers the end of a gargle, while at the same time it abates the fever, by promoting the discharge of urine, &c.

The throat ought likewise to be rubbed twice or thrice a-day with a little of the volatile liniment. This seldom fails to produce some good effects. At the same time the neck ought to be carefully covered with wool or flannel, to prevent the cold from penetrating the skin, as this application renders it very tender. Many other external applications are recommended in this disease, as a swallow's nest, poultices made of the fungus called Jew's ears, album Græcum, &c. But as we do not look upon any of these to be preferable to a common poultice of bread and milk, we shall take no farther notice of them.

Some recommend the gum-guaiacum as a specific in this disease. Half a 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

* Dr. Home.

a tunnel or the like. Soft poultices ought likewise to be applied outwardly, and the patient may keep a roasted fig constantly in his mouth.

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 broken; and afterwards they have recovered.

Not only the swallowing, but the breathing, is often prevented by the tumour. In this case nothing can save the patient's life, but opening the *trachea* or wind-pipe. As that has been often done with success, no person, in such desperate circumstances, ought to hesitate a moment about the operation; but as it can only be performed by a surgeon, it is not necessary here to give any directions about it.

When a difficulty of swallowing is not attended with an acute pain or inflammation, it is generally owing to an obstruction of the glands about the throat, and only requires that the part be kept warm, and the throat frequently gargled with something that may gently stimulate the glands, as a decoction of figs with vinegar and honey; to which may be added a little mustard, or a small quantity of spirits. But this gargle is never to be used where there are signs of an inflammation. This species of *angina* has various names among the common people, as *the pap of the throat*, the falling down of the *almonds of the ears*, &c. Accordingly, to remove it, they lift the patient up by the hair of the head, and thrust their fingers under his jaws, &c. all which practices are at best useless, and often hurtful.

Those who are subject to inflammations of the throat, in order to avoid that disease, ought to live temperate. Such as do not choose to observe this rule, must have frequent recourse to purging and other evacuations, to discharge the superfluous humours. They ought likewise to beware of catching cold, and should abstain from aliment or medicines of an astringent or stimulating nature.

Violent exercise, by increasing the motion and force of the blood, is apt to occasion an inflammation of the throat, especially if cold liquor be drank immediately after it, or the body suffered suddenly to cool. Those who would avoid this disease, ought therefore, after speaking aloud, singing, running, drinking warm liquor, or doing any thing that may strain the throat, or increase the circulation of the blood towards it, to take care to cool gradually, and to wrap some additional covering about their necks.

I have often known persons who had been subject to sore throats entirely free from that complaint by only wearing a ribband, or bit of flannel, constantly round their necks, or by wearing thicker shoes, a flannel waistcoat or the like. These may seem trifling, but they have great effect. There is danger indeed in leaving them off after persons have been accustomed to them; but surely the inconveniency of using such things for life, is not to be compared with the danger which may attend the neglect of them.

Sometimes, after an inflammation, the glands of the throat continue swelled, and become hard and callous. This complaint is not easily removed, and is often rendered dangerous by the too frequent application of strong stimulating and styptic medicines. The best method is to keep

it warm, and to gargle it twice a day with a decoction of figs, sharpened a little with the elixir or spirit of vitriol.

OF THE MALIGNANT QUINSEY, OR PUTRID ULCER- OUS 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 countries. 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 efflorescence, or eruption upon the neck, arms, breast, and fingers, about the second or third day, is a common symptom of this disease. When it appears, the purging and vomiting generally cease.

There is often a slight degree of delirium, and the face frequently appears bloated, and the inside of the nostrils red and inflamed.—The patient complains, of a disagreeable putrid smell, and his breath is very offensive.

The putrid ulcerous sore throat may be distinguished from the inflammatory, by the vomiting and looseness with which it is generally ushered in; the foul ulcers in the throat covered with a white or livid coat; and by the excessive weakness of the patient; with other symptoms of a putrid fever.

Unfavourable symptoms are, an obstinate purging, extreme weakness, dimness of the sight; a livid or black colour of the spots, and frequent shiverings, with a weak fluttering pulse. If the eruption upon the skin suddenly disappears, or becomes of a livid colour with

a discharge of blood from the nose or mouth, the danger is very great.

If a gentle sweat break out about the third or fourth day, and continue with a slow, firm, and equal pulse; if the sloughs cast off in a kindly manner, and appear clean and florid at the bottom; and if the breathing is soft and free, with a lively colour of the eyes, there is reason to hope for a salutary crisis.

REGIMEN.—The patient must be kept quiet, and for the most part in bed, as he will be apt to faint when taken out of it.—His food must be nourishing and restorative; as sago-gruel with red wine, jellies, strong broths, &c. His drink ought to be generous, and of antiseptic quality: as red wine negus, white wine whey, and such like.

MEDICINE.—The medicine in this kind of quinsey is entirely different from that which is proper in the inflammatory. All evacuations, as bleeding, purging, &c. which weaken the patient, must be avoided. Cooling medicines, as nitre and cream of tartar, are likewise hurtful. Strengthening cordials alone can be used with safety; and these ought never to be neglected.

If at the beginning, there is a great nausea, or inclination to vomit, the patient must take an infusion of green tea, camomile flowers, or *carduus benedictus*, in order to cleanse the stomach. If these are not sufficient, he may take a few grains of the powder of ipecacuanha, or any other gentle vomit.

If the disease is mild, the throat may be gargled with an infusion of sage and rose leaves, to a gill of which may be added a spoonful or two of honey; and as much vinegar as will make it agreeably acid; but when the symptoms are urgent, the sloughs large and thick, and the breath very offensive, the following gargle may be used:

To six or seven ounces of the pectoral decoction, when boiling, add half an ounce of contrayerva-root; let it boil for some time, and afterwards strain the liquor; to which add two ounces of white wine vinegar, an ounce of fine honey, and an ounce of the tincture of myrrh. This ought not only to be used as a gargle, but a little of it should frequently be injected with a syringe to clean the throat, before the patient takes any meat or drink. This method is peculiarly necessary for children who cannot use a gargle.

It will be of great benefit if the patient frequently receives into his mouth, through an inverted funnel, the steams of warm vinegar, myrrh, and honey.

But when the putrid symptoms run high, and the disease is attended with danger, the only medicine that can be depended upon is the Peruvian bark. It may be taken in substance, if the patient's stomach will bear it. If not, an ounce of bark grossly powdered, with two drachms of Virginian snake root, may be boiled in an English pint and a half of water to half a pint; to which a tea-spoonful of the elixir of vitriol may be added, and an ordinary tea-cupful of it taken every three or four hours. Blistering-plasters are very beneficial in this disease, especially when the patient's pulse and spirits are low. They may be applied to the throat, behind the ears, or upon the back part of the neck.

Should the vomiting prove troublesome, it will be proper to give the patient two table spoonful of the saline julep every hour. Tea made

of mint and a little cinnamon will be very proper for his ordinary drink, especially if an equal quantity of red wine be mixed with it.

In case of a violent looseness, the size of a nutmeg of *diascordium*, or the japonic confection, may be taken two or three times a day, or oftener if necessary.

If a discharge of blood from the nose happens, the steams of warm vinegar may be received up the nostrils frequently; and the drink must be sharpened with spirits of vitriol, or tincture of roses.

In case of a strangury, the body must be fomented with warm water, and emollient clysters given three or four times a-day.

After the violence of the disease is over, the body should still be kept open with mild purgatives; as manna, senna, rhubarb, or the like.

If great weakness and dejection of spirits, or night-sweats, with other symptoms of a consumption should ensue, we would advise the patient to continue the use of the Peruvian bark, with the elixir of vitriol, and to take frequently a glass of generous wine. These together with a milk diet, and riding on horseback, are the most likely means for recovering his strength.

CHAP. XXXI.

OF COLDS AND COUGHS.

IT has already been observed, that colds are the effect of an obstructed perspiration; the common causes of which we have likewise endeavoured to point out, and shall not here repeat them. Neither shall we spend time in enumerating all the various symptoms of colds, as they are pretty generally known. It may not however be amiss to observe, that almost every cold is a kind of fever, which only differs in degree from some of those that have already been treated of.

No age, sex, or constitution, is exempted from this disease; neither is it in the power of any medicine or regimen to prevent it. The inhabitants of every climate are liable to catch cold, nor can even the greatest circumspection defend them at all times from its attacks. Indeed, if the human body could be kept constantly in an uniform degree of warmth, such a thing as catching cold would be impossible; but as that cannot be effected by any means, the perspiration must be liable to many changes. Such changes, however, when small, do not affect the health; but, when great, they must prove hurtful.

When oppression of the breast, a stuffing of the nose, unusual weariness, pain of the head, &c. give ground to believe that the perspiration is obstructed, or, in other words, that the person has caught cold, he ought immediately to lessen his diet, at least the usual quantity of his solid food, and to abstain from all strong liquors. Instead of flesh, fish, eggs, milk, and other nourishing diet, he may eat light bread pudding, veal or chicken broth, panado, gruels, and such like. His drink may be water gruel sweetened with a little honey; an

infusion of balm or linseed, sharpened with the juice of orange or lemon; a decoction of barley and liquorice, with tamarinds, or any other cool, diluting, acid liquor.

Above all, his supper should be light; as small posset, or water-gruel sweetened with honey, and a little toasted bread in it. If honey should disagree with his stomach, the gruel may be sweetened with treacle or course sugar; and sharpened with the jelly of currants. Those who have been accustomed to generous liquors may take wine-whey instead of gruel, which may be sweetened as above.

The patient ought to lie longer than usual a-bed, and to encourage a gentle sweat, which is easily brought on towards morning, by drinking tea, or any kind of warm diluting liquor. I have often known this practice carry off a cold in one day, which, in all probability, had it been neglected, would have cost the patient his life, or have confined him for some months. Would people sacrifice a little time to ease and warmth, and practice a moderate degree of abstinence when the first symptoms of a cold appear, we have reason to believe that most of the bad effects which flow from an obstructed perspiration might be prevented. But, after the disease has gathered strength by delay, all attempts to remove it often prove vain. A pleurisy, a peripneumony, or a fatal consumption of the lungs, are the common effects of colds which have either been totally neglected or treated improperly.

Many attempt to cure a cold, by getting drunk. But this, to say no worse of it, is a very hazardous experiment. No doubt it may sometimes succeed, by suddenly restoring the perspiration; but when there is any degree of inflammation, which is frequently the case, strong liquors, instead of removing the malady, will increase it. By this means a common cold may be converted into an inflammatory fever.

When those who labour for their daily bread have the misfortune to catch cold, they cannot afford to lose a day or two, in order to keep themselves warm, and take a little medicine; by which means the disorder is often so aggravated as to confine them for a long time, or even to render them ever after unable to sustain hard labour. But even such of the labouring poor as can afford to take care of themselves, are often too hardy to do it; they affect to despise colds, and as long as they can crawl about, scorn to be confined by what they call a *common cold*. Hence it is, that colds destroy such numbers of mankind. Like an enemy despised, they gather strength from delay, till at length they become invincible. We often see this verified in travellers, who, rather than lose a day in the prosecution of their business, throw away their lives by pursuing their journey, even in the severest weather, with this disease upon them.

It is certain however, that colds may be too much indulged—When a person, for every slight cold, shuts himself up in a warm room, and drinks great quantities of warm liquor, it may occasion such a general relaxation of the solids as will not be easily removed. It will therefore be proper, when the disease will permit, and the weather is mild, to join to the regimen mentioned above gentle exercise; as walking, riding on horseback, or in a carriage, &c. An obstinate cold which no medicine can remove, will yield to gentle exercise and a proper regimen of the diet.

Batling the feet and legs in warm water has a great tendency to restore the perspiration. But care must be taken that the water be not

too warm, otherwise it will do hurt. It should never be much warmer than the blood, and the patient should go immediately to bed after using it. Bathing the feet in warm water, lying in bed, and drinking warm water-gruel, or other weak liquors, will sooner take off a spasm, and restore the perspiration, than all the hot sudorific medicines in the world. This is all that is necessary for removing a common cold; and if this course be taken at the beginning, it will seldom fail.

But when the symptoms do not yield to abstinence, warmth, and diuting liquors, there is reason to fear the approach of some other disease, as an inflammation of the breast, an ardent fever, or the like. If the pulse therefore be hard and frequent, the skin hot and dry, and the patient complains of his head or breast, it will be necessary to bleed, and to give the cooling powders recommended in the scarlet fever every three or four hours, till they give a stool.

It will likewise be proper to put a blistering-plaster on the back, to give two table-spoonsful of the saline mixture every two hours, and in short to treat the patient in all respects, as for a slight fever. I have often seen this course, when observed at the beginning, remove the complaints in two or three days, when the patient had all the symptoms of an approaching ardent fever, or an inflammation of the breast.

The chief secret of preventing colds lies in avoiding, as far as possible, all extremes either of heat or cold, and in taking care, when the body is heated, to let it cool gradually. These and other circumstances relating to this important subject, are so fully treated of under the article *Obstructed Perspiration*, that it is needless here to resume the consideration of them.

OF A COMMON COUGH.

A COUGH is generally the effect of a cold, which has either been improperly treated, or entirely neglected. When it proves obstinate, there is always reason to fear the consequences, as this shews a weak state of the lungs, and is often the forerunner of a consumption.

If the cough be violent, and the patient young and strong, with a hard quick pulse, bleeding will be proper; but in weak and relaxed habits, bleeding rather prolongs the disease. When the patient spits freely, bleeding is unnecessary, and sometimes hurtful, as it tends to lessen that discharge.

When the cough is not attended with any degree of fever, and the spittle is viscid and tough, sharp pectoral medicines are to be administered, as gum ammoniac, squils, &c. Two table-spoonsful of the solution of gum ammoniac may be taken three or four times a-day, more or less, according to the age and constitution of the patient—Squills may be given various ways: two ounces of the vinegar, the oxymel, or the syrup, may be mixed with the same quantity of simple cinnamon water, to which may be added an ounce of common water and an ounce of balsamic syrup. Two table-spoonsful of this mixture may be taken three or four times a-day.

A syrup made of equal parts lemon-juice, honey, and sugar-candy, is likewise very proper in this kind of cough. A table-spoonful of it may be taken at pleasure.

But when the defluxion is sharp and thin, these medicines rather do hurt. In this case gentle opiates, oils, and mucilages are more proper. A cup of an infusion of wild poppy leaves, and marsh-mallow roots or the flowers of colts-foot, may be taken frequently; or a tea-spoonful of the paregoric elixir may be put into the patient's drink twice a day. Fuller's Spanish infusion is also a very proper medicine in this case, and may be taken in the quantity of a tea-cupful three or four times a-day.*

When a cough is occasioned by acrid humours tickling the throat and *fauces*, the patient should keep some soft pectoral lozenges, almost constantly in his mouth; as the Pontrefact liquorice cakes, barley-sugar, the common balsamic lozenges, Spanish juice, &c. These blunt the acrimony of the humours, and by taking off their stimulating quality, help to appease the cough.†

In obstinate coughs, proceeding from a flux of humours upon the lungs, it will often be necessary, besides expectorating medicines, to have recourse to issues, setons, or some other drain. In this case I have often observed the most happy effects from a Burgundy-pitch plaster applied between the shoulders. I have ordered this simple remedy in the most obstinate coughs, in a great number of cases, and in many different constitutions, without ever knowing it fail to give relief, unless where there were evident signs of an ulcer in the lungs.

About the bulk of a nutmeg of Burgundy-pitch may be spread thin upon a piece of soft leather, about the size of the hand, and laid between the shoulder-blades. It may be taken off and wiped every three or four days, and ought to be renewed once a fortnight or three weeks. This is indeed a cheap and simple medicine, and consequently apt to be despised; but we will venture to affirm, that the whole *materia medica* does not afford an application more efficacious in almost every kind of cough. It has not indeed always an immediate effect; but, if kept on for some time, it will succeed where most other medicines fail.

The only inconvenience attending this plaster is the itching which it occasions; but surely this may be dispensed with, considering the advantage which the patient may expect to reap from the application; besides, when the itching becomes very uneasy, the plaster may be taken off, and the part rubbed with a dry cloth, or washed with a little warm milk and water. Some caution indeed is necessary in discontinuing the use of such a plaster; this however may be safely done by making it smaller by degrees, and at length quitting it altogether in a warm season.‡

* See Appendix, *Spanish infusion*.

† In a former edition of this book I recommended, for an obstinate tickling cough, an oily emulsion, made with the paregoric elixir of the Edinburgh Dispensatory, instead of the common alkaline spirit. I have since been told by several practitioners, that they found it to be an excellent medicine in this disorder, and every way deserving of the character which I had given it. Where this elixir is not kept, its place may be supplied by adding to the common oily emulsion, an adequate proportion of the *Thebaic tincture*, or liquid laudanum.

‡ Some complain that the pitch plaster adheres too fast, while others find difficulty in keeping it on. This proceeds from the different kinds of pitch made use of, and likewise from the manner of making it. I generally find it answers best when mixed with a little bees-wax, and spread as cool as possible. The clear, hard, transparent pitch answers the purpose best.

But coughs proceed from many other causes besides defluxions upon the lungs. In these cases, the cure is not to be attempted by pectoral medicines. Thus, in a cough proceeding from a foulness and debility of the stomach, syrups, oils, mucilages, and all kinds of balsamic medicines do hurt. The *stomach cough* may be known from one that is owing to a fault in the lungs by this, that in the latter the patient coughs whenever he inspires, or draws in his breath fully; but in the former that does not happen.

The cure of this cough depends chiefly upon cleansing and strengthening the stomach; for which purpose gentle vomits and bitter purgatives are most proper. Thus, after a vomit or two, the sacred tincture, as it is called, may be taken for a considerable time in the dose of one or two table-spoonsful twice a-day, or as often as it is found necessary, to keep the body gently open. People may make this tincture themselves, by infusing an ounce of *hiera picra** in an English pint of white wine, letting it stand a few days and then straining it.

In coughs which proceed from a debility of the stomach, the Peruvian bark is likewise of considerable service. It may either be chewed, taken in powder, or made into a tincture along with other stomachic bitters.

A *nervous cough* can only be removed by change of air and proper exercise; to which may be added the use of gentle opiates.—Instead of the saponaceous pill, the pægoric elixir, &c. which are only opium disguised, ten, fifteen, twenty, or twenty-five drops of liquid laudanum, more or less, as circumstances require, may be taken at bedtime, or when the cough is most troublesome. Immersing the feet and hands in warm water will often appease the violence of a nervous cough.

When a cough is only the symptom of some other malady, it is in vain to attempt to remove it without first curing the disease from which it proceeds. Thus when a cough is occasioned by *teething*, keeping the body open, scarifying the gums, or whatever facilitates the cutting of the teeth, likewise appeases the cough. In like manner when *worms* occasion a cough, such medicines as remove these vermin will generally cure the cough; as bitter purgatives, oily clysters, and such like.

Women, during the last months of pregnancy, are often greatly afflicted with a cough, which is generally relieved by bleeding, and keeping the body gently open. They ought to avoid all flatulent food, and to wear a loose easy dress.

A cough is not only a symptom, but is often likewise the forerunner of diseases. Thus, the gout is frequently ushered in by a very troublesome cough, which affects the patient for some days before the coming on of the fit. This cough is generally removed by a paroxysm of the gout, which should therefore be promoted, by keeping the extremities warm, drinking warm liquors, and bathing the feet and legs frequently in lukewarm water.

OF THE HOOPING-COUGH, OR CHIN-COUGH.

THIS cough seldom affects adults but proves often fatal to children. Such children as live upon thin watery diet, who breathe un-

* See Appendix, *Hiera Picra*.

wholesome air, and have two little exercise, are most liable to this disease, and generally suffer most from it.

The chin-cough is so well known, even to nurses, that a description of it is unnecessary. Whatever hurts the digestion, obstructs the perspiration, or relaxes the solids, disposes to this disease; consequently its cure must depend upon cleansing and strengthening the stomach, bracing the solids, and at the same time promoting perspiration, and the different secretions.

The diet must be light and of easy digestion; for children, good bread made into pap or pudding, chicken-broth, with other light spoon-meats, are proper; but those who are farther advanced, may be allowed sago-gnuel, and if the fever be not high, a little boilded chicken, or other white meats. The drink may be hysop, or penny-royal tea, sweetened with honey or sugar-candy, small white-whey; or if the patient be weak, he may sometimes be allowed a little negus.

One of the most effectual remedies in the chin-cough is change of air. This often removes the malady, even when the change seems to be from a purer to a less wholesome air. This may in some measure depend on the patient's being removed from the place where the infection prevails. Most of the diseases of children are infectious; nor is it at all uncommon to find the chin-cough prevailing in one town or village, when another at a very small distance, is quite free from it. But whatever be the cause, we are sure of the fact. No time ought therefore to be lost in removing the patient at some distance from the place where he caught the disease, and, if possible, into a more pure and warm air.*

When the disease proves violent, and the patient is in danger of being suffocated by the cough, he ought to be bled, especially if there be a fever with a hard full pulse. But as the chief intention of bleeding is to prevent an inflammation of the lungs, and to render it more safe to give vomits, it will seldom be necessary to repeat the operation; yet if there are symptoms of an inflammation of the lungs, a second or even a third bleeding may be requisite.

It is generally reckoned a favourable symptom when a fit of coughing makes the patient vomit. This cleanses the stomach, and greatly relieves the cough. It will therefore be proper to promote this discharge, either by small doses of ipecacuanha, or the vomiting julep recommended in the Appendix.†

It is very difficult to make children drink after a vomit. I have often seen them happily deceived by infusing a scruple or half a drachm of the powder of ipecacuanha in a tea-pot, with half a pint of boiling water. If this be disguised with a few drops of milk and a little sugar, they will imagine it tea, and drink it very greedily. A small tea-cupful of this may be given every quarter of an hour, or rather every ten minutes, till it operates.

When the child begins to puke, there will be no occasion for drinking any more, as the water already on the stomach, will be sufficient.

* Some think the air ought not to be changed till the disease is on the decline; but there seems to be no sufficient reason for this opinion, as patients have been known to reap benefit from a change of air at all periods of the disease. It is not sufficient to take the patient out daily in a carriage. This seldom answers any good purpose; but often does hurt by giving him cold.

† See Appendix, *Vomiting julep*.

Vomits not only cleanse the stomach, which in this disease is generally loaded with viscid phlegm, but they likewise promote the perspiration and other secretions, and ought therefore to be repeated according to the obstinacy of the disease. They should not however be strong; gentle vomits frequently repeated are both less dangerous, and more beneficial than strong ones.

The body ought to be kept gently open. The best medicines for this purpose are rhubarb and its preparations, as the syrup, tincture, &c. Of these a tea-spoonful or two may be given to an infant twice or thrice a-day, as there is occasion. To such as are farther advanced, the dose must be proportionally increased, and repeated till it has the desired effect. Those who cannot be brought to take the bitter tincture, may have an infusion of senna and prunes, sweetened with manna, coarse sugar, or honey; or a few grains of rhubarb mixed with a tea-spoonful or two of syrup, or currant jelly, so as to disguise the taste. Most children are fond of syrups and jellies, and seldom refuse even a disagreeable medicine when mixed with them.

Many people believe that oily pectoral, and balsamic medicines possess wonderful virtues for the cure of the chin-cough, and accordingly exhibit them plentifully to patients of every age and constitution, without considering that every thing of this nature must load the stomach, hurt the digestion, and of course aggravate the disorder.*

The *millepedes*, or wood-lice, are greatly recommended for the cure of a chin-cough. Those who chuse to make use of these insects, may infuse two ounces of them bruised in a pint of small white wine for one night. Afterwards the liquor may be strained through a cloth, and a table-spoonful of it given to the patient three or four times a-day.

Opiates are sometimes necessary to allay the violence of the cough. For this purpose a little of the syrup of poppies, or five, six, or seven drops of laudanum, according to the age of the patient, may be taken in a cup of hyssop or penny-royal tea, and repeated occasionally.†

The garlic ointment is a well-known remedy in North-Britain for the chin-cough. It is made, by beating in a mortar, garlic, with an equal quantity of hog's lard. With this the soles of the feet may be rubbed twice or thrice a-day; but the best method is to spread it upon a rag, and apply it in the form of a plaster. It should be renewed every night and morning at least, as the garlic soon loses its virtue. This is an exceeding good medicine both in the chin-cough,‡ and in most other coughs of an obstinate nature. It ought not however to be used when the patient is very hot or feverish, lest it should increase these symptoms.

The feet should be bathed once every two or three days in lukewarm

* Dr. DUPLANIL says, he has seen many good effects from the kermes mineral in this complaint, the cough being frequently alleviated even by the first dose. The dose for a child of one year old, is a quarter of a grain dissolved in a cup of any liquid, repeated two or three times a-day. For a child of two years, the dose is half a grain; and the quantity must be thus increased in proportion to the age of the patient.

† Some recommend the extract of hemlock as an extraordinary remedy in the hooping-cough; but so far as I have been able to observe, it is no way superior to opium, which, when properly administered, will often relieve some of the most troublesome symptoms of this disorder.

‡ As this disease is evidently spasmodic, I am inclined to think that tonic medicines will in time be found the most proper for its cure.

water; and a Burgundy-pitch plaster kept constantly between the shoulders. But when the disease proves very violent, it will be necessary, instead of it, to apply a blistering-plaster, and to keep the part open for some time with issue-ointment.

When the disease is prolonged, and the patient is free from a fever, the Peruvian bark, and other bitters, are the most proper medicines. The bark may either be taken in substance, or in a decoction or infusion, as is most agreeable. For a child, ten, fifteen, or twenty grains, according to the age of the patient, may be given three or four times a-day. For an adult, half a drachm or two scruples will be proper. Some give the extract of the bark with cantharides; but to manage this requires considerable attention. It is more safe to give a few grains of castor along with the bark. A child of six or seven years of age may take seven or eight grains of castor, with fifteen grains of powdered bark, for a dose. This may be made into a mixture with two or three ounces of any simple distilled water, and a little syrup, and taken three or four times a-day.

CHAP. XXXII.

INFLAMMATION OF THE STOMACH, AND OTHER VISCERA.

ALL inflammations of the bowels are dangerous, and require the most speedy assistance; as they frequently end in a suppuration, and sometimes in a mortification, which is certain death.

CAUSES.—An inflammation of the stomach may proceed from any of the causes which produce an inflammatory fever; as cold liquor drank while the body is warm, obstructed perspiration, or the sudden striking in of any eruption. It may likewise proceed from the acrimony of the bile, or from acrid and stimulating substances taken into the stomach; as strong vomits or purges, corrosive poisons, and such like. When the gout has been repelled from the extremities, either by cold or improper applications, it often occasions an inflammation of the stomach. Hard or indigestible substances taken into the stomach, as bones, the stones of fruit, &c. may likewise have that effect.

SYMPTOMS.—It is attended with a fixed pain and burning heat in the stomach; great restlessness and anxiety; a small, quick, and hard pulse; vomiting, or, at least, a nausea and sickness; excessive thirst; coldness of the extremities; difficulty of breathing; cold clammy sweats; and sometimes convulsions and fainting fits. The stomach is swelled, and often feels hard to the touch. One of the most certain signs of this disease, is the sense of pain which the patient feels upon taking any kind of food or drink, especially if it be either too hot or too cold.

When the patient vomits every thing he eats or drinks, is extremely restless, has a hiccup, with an intermitting pulse, and frequent fainting fits, the danger is very great.

REGIMEN.—All acrimonious, heating and irritating food and drink, are carefully to be avoided. The weakness of the patient may deceive the bystanders, and induce them to give wines, spirits, or other cordials;

but these never fail to increase the disease, and often occasion sudden death. The inclination to vomit may likewise impose on the attendants, and make them think a vomit necessary; but that too is almost certain death.

The food must be light, thin, cool, and easy of digestion. It must be given in small quantities, and should neither be quite cold, nor too hot. This gruel made of barley or oatmeal, light toasted bread dissolved in boiling water, or very weak chicken broth, are the most proper. The drink should be clear whey, barley-water, water in which toasted bread has been boiled, or decoctions of emollient vegetables, as liquorice and marsh-mallow roots, sarsaparilla, or the like.

MEDICINE.—Bleeding in this disease is absolutely necessary, and is almost the only thing that can be depended on. When the disease proves obstinate, it will often be proper to repeat this operation several times, nor must the low state of the pulse deter us from doing so. The pulse indeed generally rises upon bleeding, and as long as that is the case, the operation is safe.

Frequent fomentations with luke-warm water, or a decoction of emollient vegetables, are likewise beneficial. Flannel cloths dipped in these must be applied to the region of the stomach, and removed as they grow cool. They must neither be applied too warm, nor be suffered to continue till they become quite cold, as either of these extremes would aggravate the disease.

The feet and legs ought likewise to be frequently bathed in luke-warm water, and warm bricks or poultices may be applied to the soles of the feet. The warm bath, if it can be conveniently used, will be of great service.

In this, and all other inflammations of the bowels, an epispastic, or blistering-plaster, applied over the part affected, is one of the best remedies I know. I have often used it, and do not recollect one instance wherein it did not give relief to the patient.

The only internal medicines which we shall venture to recommend in this disease, are mild clysters. These may be made of warm water, or thin water-gruel; and if the patient is costive, a little sweet oil, honey, or manna, may be added. Clysters answer the purpose of an internal fomentation, while they keep the body open, and at the same time nourish the patient, who is often in this disease unable to retain any food upon his stomach. For these reasons they must not be neglected, as the patient's life may depend on them.

INFLAMMATION OF THE INTESTINES.

THIS is one of the most painful and dangerous diseases that mankind is liable to. It generally proceeds from the same *cause* as the inflammation of the stomach; to which may be added costiveness, worms, eating unripe fruits; or great quantities of nuts, drinking hard windy malt liquors, as stale bottled beer or ale, sour wine, cyder, &c. It may likewise be occasioned by a rupture, by schirrous tumours of the intestines, or by their opposite sides growing together.

The inflammation of the intestines is denominated *Iliac passion*, *Enteritis*, &c. according to the name of the parts affected. The treatment however is nearly the same whatever part of the intestinal

canal be the seat of the disease; we shall therefore omit these distinctions, lest they should perplex the reader.

The *symptoms* here are nearly the same as in the foregoing disease; only the pain, if possible, is not so acute, and is situated lower. The vomiting is likewise more violent, and sometimes even the excrements, together with the clysters are discharged by the mouth. The patient is continually belching up wind, and has often an obstruction of his urine.

While the pain shifts, and the vomiting only turns at certain intervals, and while the clysters pass downwards, there is ground for hope; but when the clysters and *faeces* are vomited, and the patient is exceeding weak, with a low fluttering pulse, a pale countenance, and a disagreeable or stinking breath, there is great reason to fear that the consequences will prove fatal. Clammy sweat, black foetid stools, with a small intermitting pulse, and a total cessation of pain, are signs of a mortification already begun, and of an approaching death.

REGIMEN.—The regimen in this disease is in general the same as in an inflammation of the stomach. The patient must be kept quiet, avoiding cold, and all violent passions of the mind. His food ought to be very light, and given in small quantities; his drink weak and diluting; as clear whey, barley-water, and such like.

MEDICINE.—Bleeding in this, as well as in the inflammation of the stomach, is of the greatest importance. It should be performed as soon as the symptoms appear, and must be repeated according to the strength of the patient, and the violence of the disease.

A blistering plaster is here likewise to be applied immediately over the part where the most violent pain is. This not only relieves the pain of the bowels, but even clysters and purgative medicines, which before had no effect, will operate when the blister begins to rise.

Fomentations and laxative clysters are by no means to be omitted. The patient's feet and legs should frequently be bathed in warm water; and clothes dipped into it applied to his belly. Bladders filled with warm water may likewise be applied to the region of the navel, and warm bricks, or bottles filled with warm water, to the soles of the feet. The clysters may be made of barley-water or thin gruel with salt, and softened with sweet oil or fresh butter. These may be administered every two or three hours, or oftener, if the patient continues costive.

If the disease does not yield to clysters and fomentations, recourse must be had to pretty strong purgatives: but as these, by irritating the bowels, often increase their contraction, and by that means frustrate their own intention, it will be necessary to join them with opiates, which by allaying the pain, and relaxing the spasmodic contractions of the guts, greatly assist the operation of purgatives in this case.

What answers the purpose of opening the body very well, is a solution of the bitter purging salts. Two ounces of these may be dissolved in an English pint of warm water, or thin gruel, and a tea-spoonful of it taken every half hour till it operates. At the same time fifteen, twenty, or twenty-five drops of laudanum may be given in a glass of peppermint or simple cinnamon-water, to appease the irritation and prevent the vomiting, &c.

Acids have often a very happy effect in staying the vomiting, and appeasing the other violent symptoms of this disease. It will therefore be

of use to sharpen the patient's drink with cream of tartar, juice of lemon; or, when these cannot be obtained, with vinegar.

But it often happens that no liquid whatever will stay on the stomach. In this case the patient must take purging pills. I have generally found the following answer very well: Take jalap in powder, and vitriolated tartar, of each half a drachm, opium one grain, Castile soap as much as will make the mass fit for pills. These must be taken at one dose, and if they do not operate in a few hours, the dose may be repeated.

If a stool cannot be procured by any of the above means, it will be necessary to immerse the patient in warm water up to the breast. I have often seen this succeed when other means had been tried in vain. The patient must continue in the water as long as he can easily bear it without fainting, and if one immersion has not the desired effect, it may be repeated as soon as the patient's strength and spirits are recruited. It is more safe for him to go frequently into the bath, than to continue too long at a time, and it is often necessary to repeat it several times before it has the desired effect.

It has sometimes happened, after all other means of procuring a stool had been tried to no purpose, that this was brought about by immersing the patient's lower extremities in cold water, or making him walk on a wet pavement, and dashing his legs and thighs with the cold water. This method, when others fail, at least merits a trial. It is indeed attended with some danger; but a doubtful remedy is better than none.

In desperate cases it is common to give quicksilver. This may be given to the quantity of several ounces, or even a pound, but should not exceed that.* When there is reason to suspect a mortification of the guts, this medicine ought not to be tried. In that case it cannot cure the patient, and will only hasten his death. But when the obstruction is occasioned by any cause that can be removed by force, quicksilver is not only a proper medicine, but the best that can be administered, as it is the fittest body we know for making its way through the intestinal canal.

If the disease proceeds from a rupture, the patient must be laid with his head very low, and the intestines returned by gentle pressure with the hand. If this, with fomentations and clysters, should not succeed, recourse might be had to a surgical operation, which may give the patient relief.

Such as would avoid this excruciating and dangerous disease, must take care never to be too long without a stool. Some who have died of it had several pounds of hard dry *faeces* taken out of their guts. They should likewise, beware of eating too freely of sour or unripe fruits, or drinking stale windy liquors, &c. I have known it brought on by living too much on baked fruits, which are seldom good. It likewise proceeds frequently from cold caught by wet clothes, &c. but especially from wet feet.

* When quicksilver is given in too large quantities, it defeats its own intention, as it drags down the bottom of the stomach, which prevents its getting over the Pylorus. In this case the patient should be hung up by the heels, in order that the quicksilver may be discharged by his mouth.

OF THE COLIC.

THE colic has a great resemblance to the two preceding diseases, both in its symptoms and method of cure. It is generally attended with costiveness and acute pain of the bowels; and requires diluting diet, evacuations, fomentations, &c.

Colics are variously denominated according to their causes, as the *flatulent*, the *bilious*, the *hysterical*, the *nervous*, &c. As each of these requires a particular method of treatment, we shall point out their most general symptoms, and the means to be used for their relief.

The *flatulent*, or wind-colic, is generally occasioned by an indiscreet use of unripe fruits, meats of hard digestion, windy vegetables, fermenting liquors, and such like. It may likewise proceed from an obstructed perspiration, or catching cold. Delicate people, whose digestive powers are weak, are most liable to this kind of colic.

The flatulent colic may either affect the stomach or intestines. It is attended with a painful stretching of the affected part. The patient feels a rumbling in his guts, and is generally relieved by a discharge of wind, either upwards or downwards. The pain is seldom confined to any particular part, as the vapour wanders from one division of the bowels to another till it finds a vent.

When the disease proceeds from windy liquor, green fruit, sour herbs, or the like, the best medicine on the first appearance of the symptom is a dram of brandy, gin, or any good spirits. The patient should likewise sit with his feet upon a warm hearth-stone, or apply warm bricks to them; and warm cloths may be applied to his stomach and bowels.

This is the only colic wherein ardent spirits, spicerics, or any thing of a hot nature may be ventured upon. Nor indeed are they to be used here unless at the very beginning, before any symptoms of inflammation appear. We have reason to believe, that a colic occasioned by wind or flatulent food, might always be cured by spirits and warm liquors, if they were taken immediately upon perceiving the first uneasiness; but when the pain has continued for a considerable time, and there is reason to fear an inflammation of the bowels is already begun, all hot things are to be avoided as poison, and the patient is to be treated in the same manner as for the inflammation of the intestines.

Several kinds of food, as honey, eggs, &c. occasion colics in some particular constitutions. I have generally found the best method of cure for these, was to drink plentifully of small diluting liquors, as water-gruel, small posset, water with toasted bread soaked in it, &c.

Colics which proceed from excess and indigestion generally cure themselves by occasioning vomiting or purging. These discharges are by no means to be stopped, but promoted by drinking plentifully of warm water, or weak posset. When their violence is over, the patient may take a dose of rhubarb, or any other gentle purge, to carry off the dregs of his debauch.

Colics which are occasioned by wet feet, or catching cold, may generally be removed at the beginning, by bathing the feet and legs in warm water, and drinking such diluting liquors as will promote the perspiration, as weak whey, or water gruel, with a small quantity of spirits in it.

Those flatulent colics, which prevail so much among country people, might generally be prevented, were they careful to change their clothes

when they get wet. They ought likewise to take a dram, or to drink some warm liquor after eating any kind of green trash. We do not mean to recommend the practice of dram drinking, but in this case ardent spirits prove a real medicine, and indeed the best that can be administered. A glass of good peppermint-water will have nearly the same effect as a glass of brandy, and in some cases is rather to be preferred.

The *bilious* colic is attended with very acute pains about the region of the naval. The patient complains of great thirst, and is generally costive. He vomits a hot, bitter, yellow coloured bile, which being discharged, seems to afford some relief, but is quickly followed by the same violent pain as before. As the distemper advances, the propensity to vomit sometimes increases so as to become almost continual, and the proper motion of the intestines is so far perverted, that there are all the symptoms of impending iliac passion.

If the patient be young and strong, and the pulse full and frequent, it will be proper to bleed, after which clysters may be administered. Clear whey or gruel, sharpened with the juice of lemon, or cream of tartar, must be drank freely. Small chicken broth, with a little mauna dissolved in it, or a slight decoction of tamarinds, are likewise very proper, or any other thin, acid, opening liquor.

Besides bleeding and plentiful dilution, it will be necessary to foment the belly with cloths dipped in warm water, and if this should not succeed, the patient must be immersed up to the breast in warm water.

In the *bilious* colic the vomiting is often very difficult to restrain. When this happens, the patient may drink a decoction of toasted bread, or an infusion of garden mint in boiling water. Should these not have the desired effect, the saline draught, with a few drops of laudanum in it, may be given, and repeated according to the urgency of the symptoms. A small quantity of Venice treacle may be spread in form of a cataplasm, and applied to the pit of the stomach. Clysters, with a proper quantity of Venice treacle or liquid laudanum in them, may likewise be frequently administered.

The *hysteric* colic bears a great resemblance to the bilious. It is attended with acute pains about the region of the stomach, vomiting, &c. What the patient vomits in this case is commonly of a greenish colour. There is a great sinking of the spirits, with dejection of mind and difficulty of breathing, which are the characteristic symptoms of this disorder. Sometimes it is accompanied with the jaundice, but this generally goes off of its own accord in a few days.

In this colic, all evacuations, as bleeding, purging, vomiting, &c. do hurt. Every thing that weakens the patient, or sinks the spirits, is to be avoided. If however the vomiting should prove violent, luke-warm water, or small posset, may be drank to cleanse the stomach. Afterwards the patient may take fifteen, twenty, or twenty-five drops of liquid laudanum in a glass of cinnamon-water. This may be repeated every ten or twelve hours till the symptoms abate.

The patient may likewise take four or five of the foetid pills every six hours, and drink a cup of penny-royal tea after them. If asafoetida should prove disagreeable, which is sometimes the case, a teaspoonful of the tincture of castor in a cup of penny-royal tea, or thirty or forty drops of the balsam of Peru dropped upon a bit of loaf-

sugar, may be taken in its stead. The anti-hysteric plaster may also be used, which has often a good effect.*

The *nervous* colic prevails among miners, smelters of lead, plumbers, the manufacturers of white lead, &c. It is very common in the cyder counties of England, and is supposed to be occasioned by the leaden vessels used in preparing that liquor. It is likewise a frequent disease in the West-Indies, where it is termed the dry belly-ache.

No disease of the bowels is attended with more excruciating pain than this. Nor is it soon at an end. I have known it continue eight or ten days with very little intermission, the body all the while continuing bound in spite of medicine, yet at length yield, and the patient recover.† It generally however, leaves the patient weak, and often ends in a palsy.

The general treatment of this disease is so nearly the same with that of the iliac passion, or inflammation of the 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.‡

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 remains 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 palsey, the Bath-waters are found to be extremely proper.

To avoid this kind of colic, people must shun all sour fruits, acids, and austere liquors, &c. Those who work in lead ought never to go to their business fasting, and their food should be oily or fat. They may take a glass of salad oil, with a little brandy or rum, every morning, but should never take spirits alone. Liquid aliment is best for them; as fat broths, &c. but low living is bad. They should frequently go a little out of the tainted air; and should never suffer themselves to be costive. In the West-Indies and on the coast of Guinea, it has been found of great use for preventing this colic, to wear a piece of flannel round the waist and to drink an infusion of ginger by way of tea.

Sundry other kinds of this disease might be mentioned, but too many distinctions would tend only to perplex the reader. Those already mentioned are the most material, and should indeed be attended to, as their treatment is very different. But even persons who are not in a condition to distinguish very accurately in these matters, may nevertheless be

* See Appendix. *Anti-Hysteric plaster.*

† As the smoke of tobacco thrown into the bowels will often procure a stool when all other means have failed, an apparatus for this purpose ought to be kept by every surgeon. It may be purchased at a small expense, and will be of service in several other cases, as the recovery of drowned persons, &c.

‡ The dose is from one table-spoonful to two or three, if necessary to open the body.

of great service to patients in colics of every kind, by only observing the following general rules, viz. To bathe the feet and legs in warm water, to apply bladders filled with warm water, or cloths wrung out of it, to the stomach and bowels; to make the patient drink freely of diluting mucilaginous liquors; and to give him an emollient clyster every two or three hours. Should these not succeed, the patient ought to be immersed in warm water.

INFLAMMATION OF THE KIDNEYS.

CAUSES.—This disease may proceed from any of those causes which produce an inflammatory fever. It may likewise be occasioned by wounds or bruises of the kidneys; small stones or gravel lodging within them; by strong diuretic medicines, as spirits of turpentine, tincture of cantharides, &c. Violent motion, as hard riding or walking, especially in hot weather, or whatever drives the blood too forcibly into the kidneys, may occasion the 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 most ease on the affected side, and has generally a nausea or vomiting, resembling that which happens in the colic.

This disease however may be distinguished from the colic by the pain being seated farther back, and by the difficulty of passing urine with which it is constantly attended.

REGIMEN.—Every thing of a heating or stimulating nature is to be avoided. The food must be thin and light; as panado, small broths, with mild vegetables, and the like. Emollient and thin liquors must be plentifully drank; as clear whey, or balm-tea sweetened with honey, decoction 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 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 kidney, but when the gravel or stone is separated from the kidney, and lodges in the Ureter,* it will be proper, besides the fomentations, to rub the small of the back with sweet oil, and to give gentle diuretics; as juniper-water, sweetened with the syrup of marsh-mallows: a tea-spoonful of the sweet spirits of nitre, with a few drops of laudanum, may now and then be put in a cup of the patient's drink.—He ought likewise to take exercise on horse-back, or in a carriage, if he be able to bear it.

When the disease is protracted beyond the seventh or eighth day, and the patient complains of a stupor and heaviness of the part, has frequent returns of chilliness, shivering, &c. there is reason to suspect that matter is forming in the kidney, and that an abscess will ensue.

When matter in the urine shews that an ulcer is already formed in the kidney, the patient must be careful to abstain from all acrid, sour and salted provisions, and to live chiefly upon mild mucilaginous herbs and fruits, together with the broth of young animals, made with barley, and common pot-herbs, &c. His drink may be whey, and butter-milk that is not sour. The latter is by some reckoned a specific remedy in ulcers of the kidneys. To answer this character however, it must be drank for a considerable time. Chalybeate waters have likewise been found beneficial in this disease. This medicine is easily obtained, as it is found in every part of Great-Britain. It must likewise be used for a considerable time, in order to produce any salutary 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 of easy digestion. They should use moderate exercise, and should 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

* 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 pieces of gravel falling down from the kidneys, and lodging in them.

and stimulating quality, and should live entirely upon small broths, gruels, or mild vegetables.

A stoppage of urine may proceed from other causes besides an inflammation of the bladder; as a swelling of the hæmorrhoidal veins, hard *fecis* lodged in the *rectum*, a stone in the bladder, excrescences in the urinary passages, a palsy of the bladder, hysteric affections, &c. Each of these requires a particular treatment, which does not fall under our present consideration. We shall only observe, that in all of them mild and gentle applications are the safest, as strong diuretic medicines, or things of an irritating nature, generally increase the danger. I have known some persons kill themselves by introducing probes into the urinary passages, to remove, as they thought, somewhat that obstructed the discharge of urine, and others bring on a violent inflammation of the bladder, by using strong diuretics, as oil of turpentine, &c. for that purpose.

INFLAMMATION OF THE LIVER.

THE liver is less subject to inflammation than most of the other viscera, as in it the circulation is slower; but when an inflammation does happen, it is with difficulty removed, and often ends in a suppuration or scirrhus.

CAUSES.—Besides the common causes of inflammation, we may here reckon the following, viz. excessive fatness, a scirrhus of the liver itself, violent shocks from strong vomits when the liver was before unsound, an adust or atrabiliarian state of the blood, any thing that suddenly cools the liver after it has been greatly heated, stones obstructing the course of the bile, drinking strong wines and spirituous liquors, using hot spicy aliment, obstinate hypochondriacal affections, &c.

SYMPTOMS.—This disease is known by a painful tension of the right side under the false ribs, attended with some degree of fever, a sense of weight or fulness of the part, difficulty of breathing, loathing of food, great thirst, with a pale or yellowish colour of the skin and eyes.

The *symptoms* here are various, according to the degree of inflammation, and likewise according to the particular part of the liver where the inflammation happens. Sometimes the pain is so inconsiderable, that an inflammation is not so much as suspected; but when it happens in the upper or convex part of the liver, the pain is more acute, the pulse quicker, and the patient is often troubled with a dry cough, a hickup, and a pain extending to the shoulder, with difficulty of lying on the left side, &c.

This disease may be distinguished from the pleurisy, by the pain being less violent, seated under the false ribs, the pulse not so hard, and by the difficulty of lying on the left side. It may be distinguished from the hysteric and hypochondriac disorders by the degree of fever with which it is always attended.

This disease if properly treated, is seldom mortal. A constant hickuping, 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 indulges in 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 as 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 any 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 disease. Mild laxative clysters should be frequently administered; and, if the pain should notwithstanding continue violent, a blistering plaster may be applied over the part affected; or rather a plaster made of gum ammoniac and vinegar of squills.

Medicines which promote the secretion of urine have a very good effect here. For this purpose half a drachm of purified nitre, or a teaspoonful 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 sodorifics. The only thing to be used for that purpose, is plenty of diluting liquors drank about the warmth of human blood. Indeed the patient in this case, as well as in all other topical inflammations, ought to drink nothing that is colder than the blood.

If the stools should be loose, and even streaked with blood, no means must be used to stop them, unless they be so frequent as to weaken the patient. Loose stools often prove critical, and carry off the disease.

If an abscess or imposthume is formed in the liver, all methods should be tried to make it break and discharge itself outwardly, as fomentations, the application of poultices, ripening cataplasms, &c.—Sometimes indeed the matter of an abscess comes away in the urine, and sometimes it is discharged by stool, but these are efforts of nature which no means can promote. When the abscess bursts into the cavity of the *abdomen* at large, death must ensue, nor will the event be more favourable when the abscess is opened by an incision, unless in cases where the liver adheres to the *peritonæum*, so as to form a bag for the matter, and prevent it from falling into the cavity of the *abdomen*; in which case opening the abscess by a sufficiently large incision will probably save the patient's life.*

If the disorder, in spite of all endeavours to the contrary, should end in a 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.

* I know a gentleman who has had several abscesses of the liver opened, and is now a strong and healthy man, though above eighty years of age.

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 parts affected, and to cause the patient to drink a sufficient quantity of warm diluting liquors.

CHAP. XXXIII.

OF THE CHOLERA MORBUS, AND OTHER EXCESSIVE DISCHARGES FROM THE STOMACH AND BOWELS.

THE *cholera morbus* is a violent purging and vomiting, attended with gripes, sickness, and a constant desire to go to stool. It comes on suddenly, and is most common in autumn. There is hardly any disease that kills more quickly than this, when proper means are not used in due time for removing it.

CAUSES.—It is occasioned by a redundancy and putrid acrimony of the bile; cold, food that easily turns rancid or sour on the stomach; as butter, bacon, sweet-meats, cucumbers, melons, cherries, and other cold fruits.* It is sometimes the effect of strong acrid purges or vomits, or of poisonous substances taken into the stomach. It may likewise proceed from violent passions or affections of the mind; as fear, anger, &c.

SYMPTOMS.—It is generally preceded by a *cardialgia*, or heart burn, sour belchings, and flatulencies, with pain of the stomach and intestines. To these succeed excessive vomiting and purging of green, yellow, or blackish coloured bile, with a distention of the stomach, and violent griping pains. There is likewise a great thirst, with a very quick unequal pulse, and often a fixed acute pain about the region of the navel. As the disease advances, the pulse often sinks so low as to become quite imperceptible, the extremities grow cold or cramped, and are often covered with a clammy sweat, the urine is obstructed, and there is a palpitation of the heart. Violent hickuping, 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 oat meal well toasted, may be used in its stead. If this does not put

* I have been twice brought to the gates of death by this disease, and both times it was occasioned by eating rancid bacon.

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. Warm negus, or strong wine-whey, will likewise be necessary to support the patient's spirits, and promote the perspiration. His legs should be bathed in warm water, and afterwards rubbed with flannel cloths, or wrapped in warm blankets, and warm bricks applied to the soles of his feet. Flannels wrung out of warm spirituous fomentations should likewise be applied to the region of the stomach.

When the violence of the disease is over, to prevent a relapse, it will be necessary for some time to continue the use of small doses of laudanum. Ten or twelve drops may be taken in a glass of wine, at least twice a-day, for eight or ten days. The patient's food ought to be nourishing, but taken in small quantities, and he should use moderate exercise. As the stomach and intestines are generally much weakened, an infusion of the bark, or other bitters, in small wine, sharpened with the elixir of vitriol, may be drank for some time.

Though physicians are seldom called in due time in this disease, they ought not to despair of relieving the patient even in the most desperate circumstances. Of this I lately saw a very striking proof in an old man and his son, who had been both seized with it about the middle of the night. I did not see them till next morning, when they had much more the appearance of dead than of living men. No pulse could be felt; the extremities were cold and rigid, the countenance was ghastly, and the strength almost quite exhausted. Yet from this deplorable condition they were both recovered by the use of opiates and cordial medicines.

OF A DIARRHOEA, OR LOOSENESS.

A LOOSENESS, in many cases, is not to be considered as a disease, but rather as a salutary evacuation. It ought therefore never to be stopped, unless when it continues too long, or evidently weakens the patient. As this however sometimes happens, we shall point out the most common causes of a looseness, with the proper method of treatment.

When a looseness is occasioned by catching cold, or an obstructed perspiration, the patient ought to keep warm, to drink freely of weak diluting liquors, to bathe his feet and legs frequently in 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-spoonful of magnesia alba, with four or five grains of rhubarb, may be given to the child in a little panado, or any other food. This, if repeated three or four times, will generally correct the acidity, and carry off the griping stools.

A diarrhœa, or looseness, which proceeds from violent passions or affections of the mind, must be treated with the greatest caution. Vomits in this case are highly improper. Nor are purges safe, unless they be very mild, and given in small quantities. Opiates, and other antispasmodic medicines are most proper. Ten or twelve drops of liquid laudanum may be taken in a cup of valerian or penny-royal tea every eight or ten hours, till the symptoms abate. Ease, cheerfulness, and tranquillity of mind are here of the greatest importance.

When a looseness proceeds from acrid or poisonous substances taken into the stomach, the patient must drink large quantities of diluting liquors, with oil or fat broths, to promote vomiting and purging. Afterwards, if there be reason to suspect that the bowels are inflamed, bleeding will be necessary. Small doses of laudanum may likewise be taken to remove their irritation.

When the gout, repelled from the extremities, occasions a looseness, it ought to be promoted by gentle doses of rhubarb, or other mild purgatives. The gouty matter is likewise to be solicited towards the extremities by warm fomentations, cataplasms, &c. The perspiration ought at the same time to be promoted by warm diluting liquors; as wine whey with spirits of hartshorn, or a few drops of liquid laudanum in it.

When a looseness proceeds from worms, which may be known from the sliminess of the stools, mixed with pieces of decayed worms, &c. medicines must be given to kill and carry off these vermin, as the powder of tin with purges of rhubarb and calomel. Afterwards lime-water, either alone, or with a small quantity of rhubarb infused, will be proper to strengthen the bowels, and prevent the new generation of worms.

A looseness is often occasioned by drinking bad water. When this is the case, the disease generally proves epidemical. When there is reason to believe that this or any other disease proceeds from the use of unwholesome water, it ought immediately to be changed, or, if that cannot be done, it may be corrected by mixing with it quick lime, chalk, or the like:

In people whose stomachs are weak, violent exercise immediately after eating will occasion a looseness. Though the cure of this is obvious, yet it will be proper, besides avoiding violent exercise, to use such medicines as tend to brace and strengthen the stomach, as infusions of the bark, with other bitter and astringent ingredients, in white wine. Such persons ought likewise to take frequently a glass or two of old red port, or good claret.

From whatever cause a looseness proceeds, when it is found necessary to check it, the diet ought to consist of rice boiled with milk, and flavoured with cinnamon; rice-jelly, sago with red port; and the lighter sorts of flesh-meat roasted. The drink may be thin water-gruel, rice-water, or weak broth made from lean veal, or with a sheep's head, as being more gelatinous than mutton, beef, or chicken-broth.

Persons who, from a peculiar weakness, or too great an irritability of the bowels, are liable to frequent returns of this disease, should live temperately, avoiding crude summer fruits, all unwholesome foods, and meats of hard digestion. They ought likewise to beware of cold, moisture, or whatever may obstruct the perspiration, and should wear flannel next the skin. All violent passions, as fear, anger, &c. are likewise care, fully 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 morbid matter of ulcers, of the gout, the erysipelas, or other diseases, to the stomach. It may likewise proceed from a looseness having been too suddenly stopped; from the stoppage of any customary evacuation, as the bleeding piles, the *menses*, &c. from a weakness of the stomach, the colic, the iliac passion, a rupture, a fit of the gravel, worms; or from any kind of poison taken into the stomach. It is an usual symptom of injuries done to the brain; as contusions, compressions, &c. It is likewise a symptom of wounds or inflammations of the diaphragm, intestines, spleen, liver, kidneys, &c.

Vomiting may be occasioned by unusual motions, as sailing, being drawn backwards in a carriage, &c. It may likewise be excited by violent passions, or by the idea of nauseous or disagreeable objects, especially of such things as have formerly produced vomiting.—Sometimes it proceeds from a regurgitation of the bile into the stomach: in this case, what the patient vomits is generally of a yellow or greenish colour, and has a bitter taste. Persons who are subject to nervous affections are often suddenly seized with violent fits of vomiting. Lastly, vomiting is a common symptom of pregnancy.—In this case it generally comes on about two weeks after the stoppage of the *menses*, and continues during the first three or four months.

When vomiting proceeds from a foul stomach or indigestion, it is not to be considered as a disease, but as the cure of a disease. It ought therefore to be promoted by drinking lukewarm water, or thin gruel. If this does not put a stop to the vomiting, a dose of ipecacuanha may be taken, and worked off with weak camomile-tea.

When the retrocession of the gout, or the obstruction of custom,

ary evacuations, occasion vomiting, all means must be used to restore these discharges; or, if that cannot be effected, their place must be supplied by others, as bleeding, purging, bathing the extremities in warm water, opening issues, setons, perpetual blisters, &c.

When vomiting is the effect of pregnancy, it may generally be mitigated by bleeding, and keeping the body gently open. The bleeding however ought to be in small quantities at a time, and the purgatives should be of the mildest kind, as figs, stewed prunes, manna, or senna. Pregnant women are most apt to vomit in the morning immediately after getting out of bed, which is owing partly to the change of posture, but more to the emptiness of the stomach.—It may generally be prevented by taking a dish of coffee, tea, or some light breakfast in bed. Pregnant women who are afflicted with vomiting, ought to be kept easy both in body and mind. They should neither allow their stomachs to be quite empty, nor should they eat much at once. Cold water is a very proper drink in this case; if the stomach be weak, a little brandy may be added to it. If the spirits are low, and the person apt to faint, a spoonful of cinnamon-water, with a little marmalade of quinces or oranges, may be taken.

If vomiting proceeds from weakness of the stomach, bitters will be of service. Peruvian bark infused in wine or brandy, with as much rhubarb as will keep the body gently open, is an excellent medicine in this case. The elixir of vitriol is also a good medicine.—It may be taken in the dose of fifteen or twenty drops, twice or thrice a-day, in a glass of wine or water. Habitual vomitings are sometimes alleviated by making oysters a principal part of diet.

A vomiting which proceeds from acidities in the stomach, is relieved by alkaline purges. The best medicine of this kind is the magnesia alba, a tea-spoonful of which may be taken in a dish of tea or a little milk, three or four times a-day, or oftener if necessary, to keep the body open.

When vomiting proceeds from violent passions, or affections of the mind, all evacuations 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 soo'ed, and to take some gentle cordial, as negus, or a little brandy and water, to which a few drops of laudanum may occasionally be added.

When vomiting proceeds from spasmodic affections of the stomach, musk, castor, and other antispasmodic medicines are of use. Warm and aromatic plasters have likewise a good effect. The stomach-plaster of the London or Edinburgh dispensatory may be applied to the pit of the stomach, or a plaster of *theriaca*, which will answer rather better. Aromatic medicines may likewise be taken inwardly, as cinnamon or mint tea, wine with 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 of vomiting, from whatever cause it proceeded. These may be prepared by dissolving a drachm of the salt of tartar in an ounce and a half of fresh lemon juice, and adding to it an ounce of pepper-mint water, the same quantity of simple cinnamon water, and a little white sugar. This draught must be swal-

lowed before the effervescence is quite over, and may be repeated every two hours, or oftener, if the vomiting be violent. A violent vomiting has sometimes been stopped by cupping on the region of the stomach after all other means had failed.

As the least motion will often bring on the vomiting again, even after it has been stopped, the patient must avoid all manner of action. The diet must be so regulated as to sit easy upon the stomach, and nothing should be taken that is hard of digestion. We do not however mean that the patient should live entirely upon slops. Solid food, in this case, often sits easier on the stomach than liquids.

CHAP. XXXIV.

OF THE DIABETES, AND OTHER DISORDERS OF THE KIDNEYS AND BLADDER.

THE diabetes is a frequent and excessive discharge of urine. It is seldom to be met with among young people; but often attacks persons in the decline of life, especially those who follow the more violent employments, or have been hard drinkers in their youth.

CAUSES.—A diabetes is often the consequence of acute diseases, as fevers, fluxes, &c. where the patient has suffered by excessive evacuations; it may also be occasioned by great fatigue, as riding long journies upon a hard trotting horse, carrying heavy burdens, &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 a laxity of the organ, 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 continued 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, 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

ous vegetables, as rice, sago, and salop, with milk, are the most proper food. Of animal substances, shell-fish are to be preferred; as oysters, crabs, &c.

The drink may be Bristol-water. When that cannot be obtained, lime-water, in which a due proportion of oak-bark has been macerated, may be used. The white decoction,* with isinglass dissolved in it, is likewise a very proper drink.

The patient ought daily to take exercise, but it should be so gentle as not to fatigue him. He should lie upon a hard bed or matrass. Nothing hurts the kidneys more than lying too soft. A warm, dry air, the use of the flesh-brush, and every thing that promotes perspiration, is of service. For this reason the patient ought to wear flannel next his skin. A large strengthening plaster may be applied to the back; or, what will answer better, a great part of the body may be wrapped in plaster.

MEDICINE.—Gentle purges, if the patient be not too much weakened by the disease, have a good effect. They may consist of rhubarb, with cardamum seeds, or any other spiceries, infused in wine, and may be taken in such quantities as to keep the body gently open.

The patient must next have recourse to astringents and corroborants. Half a 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, they may be made of it, and taken in the dose of a tea-cupful three or four times a-day. The alum whey is prepared by boiling two English quarts of milk over a slow fire, with three 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 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 *INCONTINENCY OF URINE*. But this is very different from a diabetes, as the water passes off involuntarily by drops, and does not exceed the usual quantity. This disease is rather troublesome than dangerous. It is owing to a relaxation of the sphincter of the bladder, and is often the effect of a palsy. Sometimes it proceeds from hurts or injuries occasioned by blows, bruises, preternatural labours, &c. Sometimes it is the effect of a fever. It may likewise be occa-

* See Appendix, *White Decoction*.

† See Appendix, *Tincture of Roses*.

sioned by 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 *faeces* 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 bougie 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 evacuations. 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 structure upon the vessels which occasioned the obstruction.

After bleedings, 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 tempe-

* A bottle made of the Indian rubber, and properly applied, answers this purpose best.

rate. Their diet should be light, and their liquor diluting. They should avoid all acids 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 happens 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 rheumatism, are most liable to it.

SYMPTOMS.—Small stones or gravel in the kidneys occasion pain in the loin; sickness, and sometimes bloody urine. When the stone descends into the *ureter*, and is too large to pass along with ease, all the above symptoms are increased; the pain extends towards the bladder; the thigh and leg of the affected side are benumbed; the testicles are drawn upwards; and the urine is obstructed.

A stone in the bladder is known from a pain, at the time, as well as before and after making water; from the urine coming away by drops, or stopping suddenly, when it was running in a full stream; by a violent pain in the neck of the bladder upon motion, especially on horseback, or in a carriage on a rough road, 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 a 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, spinnage, 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 person has been accustomed to generous liquors, he may drink gin and water not too strong.

Gentle exercise is proper; but violent motion is apt to occasion bloody urine. We would therefore advise that it should be taken in moderation. Persons, afflicted with gravel often pass a great number of stones, after riding on horseback, or in a carriage; but those who have a stone in the bladder are seldom able to bear these kinds of

exercise. Where there is a hereditary tendency to this disease, a sedentary life ought never to be indulged. Were people careful, upon the first symptoms of gravel, to observe a proper regimen of diet, and to take sufficient exercise, it might often be carried off, or at least prevented from increasing; but if the same course which occasioned the disease is persisted in, it must be aggravated.

MEDICINE.—In what is called a fit of the gravel, which is commonly occasioned by a stone sticking in the *ureter*, or some part of the urinary passages, the patient must be bled, warm fomentations should likewise be applied to the part affected, emollient clysters administered, and diluting mucilaginous liquors drank, &c. The treatment of this case has been fully pointed out under the articles, *inflammation of the kidneys and bladder*, to which we refer.

Dr. Whyte advises patients who are subject to frequent fits of gravel in the kidneys, but have no stone in the bladder, to drink every morning, two or three hours before breakfast, an English pint of oyster or cockle-shell lime-water. The Doctor very justly observes, that though this quantity might be too small to have any sensible effect in dissolving a stone in the bladder, yet it may very probably prevent its growth.

When a stone is formed in the bladder, the Doctor recommends Alicant 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 the lime-water; the remainder of which he may take any time betwixt dinner and supper, instead of other liquors.

The patient should begin with a smaller quantity of the lime-water and soap than that mentioned above; at first an English pint of the former, and three 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 complaint, 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 liquors; as veal broth, new-milk, linseed-tea, a solution of gum-arabic, or a decoction of marsh-mallow roots. The patient must begin with small doses of the lees, as thirty or forty drops, and increase by degrees, as far as the stomach can bear it.†

* See Appendix, *Lime-water*.

† 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 formed, which

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.

CHAP. XXXV.

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 effects of Nature to relieve herself; and fatal diseases have often been the consequence of obstructing them. It may indeed be sometimes necessary to check the violence of such discharges; but even this requires the greatest caution. Instances might be given where the stopping of a small periodical flux of blood, from one of the fingers, has proved fatal to the health.

In the early period of life, bleeding at the nose is very common. Those who are farther advanced in years are more liable to hæmoptoe, or discharge of blood from the lungs. After the middle period

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.

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 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 structure 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 medicine, which tend to dissolve the blood, as cantarides, 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 acid 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 mucilaginous diet. The patient may likewise take frequently about the bulk of a nutmeg of Locatelli's balsam, or the same quantity of spermaceti.

When an obstructed perspiration, or a stricture upon any part of the system, is the cause of an hæmorrhage, it may be removed by drinking warm diluting liquors, lying a-bed, bathing the extremities in warm water, &c.

OF BLEEDING AT THE NOSE.

BLEEDING at the nose is commonly preceded by some degree of quickness of the pulse, flushing in the face, pulsation of the temporal arteries, heaviness in the head, dimness of the sight, heat and itching of the nostrils, &c.

To persons who abound with blood this discharge is very salutary. It often cures a vertigo, the head-ache, a phrenzy, and even an epilepsy. In fevers, where there is a great determination of blood towards the head, it is of the utmost service. It is likewise beneficial in inflammations of the liver and spleen, and often in the gout and rheumatism. In all diseases where bleeding is necessary, a spontaneous discharge of blood from the nose is of much more service than the same quantity let with a lancet.

In a discharge of blood from the nose, the great point is to determine whether it ought to be stopped or not. It is a common practice to stop the bleeding, without considering whether it be a disease, or the cure of a disease. This conduct proceeds from fear; but it has often bad, and sometimes fatal consequences.

When a discharge of blood from the nose happens in an inflammatory disease, there is always reason to believe that it may prove salutary; and therefore it should be suffered to go on, at least as long as the patient is not weakened by it.

When it happens to persons in perfect health, who are full of blood, it ought not to be suddenly stopped, especially if the symptoms of plethora, mentioned above, have preceded it. In this case it cannot be stopped without risking the patient's life.

In fine, whenever bleeding at the nose relieves any bad symptom, and does not proceed so far as to endanger the patient's life, it ought not to be stopped. But when it returns frequently, or continues till the pulse becomes low, the extremities begin to grow cold, the lips pale, or the patient complains of being sick or faint, it must immediately be stopped.

For this purpose the patient should be set nearly upright, with his head reclining a little, and his legs immersed in water about the warmth of new milk. His hands ought likewise to be put in lukewarm water, and his garters may be tied a little tighter than usual. Ligatures may be applied to the arms, about the place where they are usually made for bleeding, and with nearly the same degree of tightness. These must be gradually slackened as the blood begins to stop and removed entirely as soon as it gives over.

Sometimes dry lint put up the nostrils will stop the bleeding. When this does not succeed, dossils of lint dipped in strong spirits of wine, may be put up the nostrils, or if that cannot be had, they 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 nostril from whence the blood issues.

Internal medicines can hardly be of use here, as they have seldom time to operate. It may not however be amiss to give the patient half an ounce of Glauber's salt, and the same quantity of manna, dissolved in four or five ounces of barley-water. This may be taken at a draught, and repeated, if it does not operate, in a few hours. Ten or twelve grains of nitre may be taken in a glass of cold water and vinegar every hour, or oftener, if the stomach will bear it. If a stronger medicine be necessary, a tea-cupful of the tincture of roses, with twenty or thirty drops of the weak spirit of vitriol, may be taken every hour. When these things cannot be had, the patient may

drink water, with a little common salt in it, or equal parts of water and vinegar.*

If the genitals be immersed for some time in cold water, it will generally stop a bleeding at the nose. I have not known this fail.

Sometimes when the bleeding is stopped outwardly, it continues inwardly. This is very troublesome, and requires particular attention, as the patient is apt to be suffocated with the blood, especially if he falls asleep, which he is very ready to do after losing a great quantity of blood.

When the patient is in danger of suffocation from the blood getting into his throat, the passages may be stopped by drawing threads up the nostrils, and bringing them out at the mouth, then fastening pieces of sponge, or small rolls of linen cloth to their extremities; afterwards drawing them back, and tying them outside with a sufficient degree of tightness.

After the bleeding is stopped, the patient ought to be kept as easy and quiet as possible. He should not pick his nose, nor take away the tents or clotted blood, till they fall off of their own accord, and should not lie with his head low.

Those who are affected with frequent bleeding at the nose ought to bathe their feet often in warm water, and to keep them warm and dry. They ought to wear nothing tight about their necks, to keep their 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. Where this is the case, it attacks persons more early in life than when it is accidental. Men are more liable to it than women, especially those of a sanguine, plethoric, or 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, as 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

* From ten to twenty drops of the oil of turpentine in a little water given frequently, seldom fails to stop a bleeding at the nose, or from any other part.

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 complaint and often proves critical in colics, and inflammatory fevers.

In the management of the patient, regard must be had to his habit of body, his age, strength, and manner of living. A discharge which might be excessive and prove hurtful to one, may be very moderate, and even salutary to another. That only is to be esteemed dangerous, which continues too long, and is in such quantity as to waste the patient's strength, hurt the digestion, nutrition, and other functions necessary to life.

When this is the case, the discharge must be checked by a proper regimen, and astringent medicines. The DIET must be cool but nourishing, consisting chiefly of bread, milk, cooling vegetables, and broths. The drink may be chalybeate water, orange-whey, decoctions or infusions of the astringent and mucilaginous plants, as the tormentil root, bistort, the marshmallow-roots, &c.

Old conserve of roses is a very good medicine in this case. It may be mixed in new milk, and may be 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-spoonful of which may be taken about an hour after every dose of the conserve.

The Peruvian bark is likewise proper in this case, both as a strengthener and astringent. Half a drachm of it may be taken in a glass of red wine, sharpened with a few drops of the elixir of vitriol, three or four times a-day.

The bleeding piles are sometimes periodical, and return regularly once a month, or once in three weeks. In this case they are always to be considered as a salutary discharge, and by no means to be stopped. Some have entirely ruined their health by stopping a periodical discharge of blood from the hæmorrhoidal veins.

In the *blind piles* bleeding is generally of use. The diet must be light and thin, and the drink cool and diluting. It is likewise necessary that the body be kept gently open. This may be done by small doses of the flour of the brimstone and cream of tartar. These may be mixed in equal quantities, and a tea-spoonful taken two or three times a-day, or oftener if necessary. Or an ounce of the flour of brimstone and half an ounce of purified nitre may be mixed with three or four ounces of the lenitive electuary, and a tea-spoonful of it taken three or four times a-day.

Emollient clysters are here likewise beneficial; but there is sometimes such an astriction of the *anus*, that they cannot be thrown up. In this case I have known a vomit have a very good effect.

When the piles are exceeding painful and swelled, but discharge nothing, the patient must sit over the steams of warm water. He may likewise apply a linen cloth dipped in warm spirits of wine to the part, or poultices made of bread and milk, or of leeks fried with

butter. If these do not produce a discharge, and the piles appear large, leeches must be applied as near them as possible, or, if they will fix upon the piles themselves so much the better. When leeches will not fix, the piles may be opened with a lancet. The operation is very easy, and is attended with no danger. Various ointments, and other external applications are recommended in the piles; but I do not remember to have seen any effects from these worth mentioning. Their principal use is to keep the part moist, which may be done as well by a soft poultice, or an emollient cataplasm. When the pain however is very great, a liniment made of two ounces of emollient ointment, and half an ounce of liquid laudanum, beat up with the yolk of an egg, may be applied.

SPITTING OF BLOOD.

WE mean here to treat of that discharge of blood from the lungs only which is called an *hæmoptoe* or *spitting of blood*. Persons of a slender make, and a lax fibre, who have long necks and strait breasts are most liable to this disease. It is most common in the spring and generally attacks people before they are at the prime or middle period of life. It is a common observation, that those who have been subject to bleeding at the nose when young, are afterwards most liable to an hæmoptoe.

CAUSES.—An hæmoptoe may proceed from excess of blood, from a peculiar weakness of the lungs, or a bad conformation of the breast. It is often occasioned by excessive drinking, running, wrestling, singing, or speaking aloud. Such as have weak lungs ought to avoid all violent exertions of that organ, as they value life. They should likewise guard against violent passions, excessive drinking, and every thing that occasions a rapid circulation of the blood.

This disease may likewise proceed from wounds of the lungs.—These may either be received from without, or they may be occasioned by hard bodies getting into the wind-pipe, and so falling down upon the lungs, and hurting that tender organ. The obstruction of any customary evacuation may occasion a spitting of blood; as neglect of bleeding or purging at the usual seasons, the stoppage of the bleeding piles in men, or the menses in women, &c. It may likewise proceed from a polypus, 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 a

sense of weight, and oppression of the breast, a dry tickling cough, hoarseness, and a difficulty of breathing. Sometimes it is ushered in with shivering, coldness of the extremities, costiveness, great lassitude, flatulence, pain of the back and loins, &c. As these shew a general stricture upon the vessels, and a tendency of the blood to inflammation, they are commonly the forerunners of a very copious discharge. The above symptoms do not attend a discharge of blood from the gums or fauces, by which means 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 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 body or quickens the circulation, increases the danger. The mind ought likewise to be soothed, and every occasion of exciting the passions avoided. The diet should be soft, cooling, and slender; as rice boiled with milk, small broths, barley-gruels, panado, &c. The diet in this case, can scarce 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 cold, and in small quantities at a time. He should observe the strictest silence, or at least speak with a very low voice.

MEDICINE.—This, like the other involuntary discharges of blood, ought not to be suddenly stopped by astringent medicines.—More mischief is often done by these than if it were suffered to go on. It may however proceed so far as to weaken the patient, and even endanger his life; in which case proper means must be used for restraining it.

The body should be kept gently open by laxative diet; as roasted apples, stewed prunes and such like. If these should not have the desired effect, a tea-spoonful of the lenative electuary may be taken twice or thrice a day, as is found necessary. If the bleeding proves violent, ligatures may be applied to the extremities, as directed, for a bleeding at the nose. If the patient be hot or feverish, bleeding, and small doses of nitre will be of use; a scruple or half a 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 lukewarm water has likewise a very good effect in this disease. Opiates, too, are sometimes beneficial; but these must be administered with caution. Ten or twelve drops

of laudanum may be given in a cup of barley water twice a-day, and continued for some time, provided they be found beneficial.

The conserve of roses is likewise a very good medicine in this case, provided it be taken in sufficient quantity, and long enough persisted in. It may be taken to the quantity of three or four unces a-day; and, if the patient be troubled with a cough, it should be made into an electuary with balsamic syrup, and a little of the syrup of poppies.

If stronger astringents be necessary, fifteen or twenty drops of the elixir of vitriol may be given in a glass of water three or four times a-day.

Those who are subject to frequent returns of this disease should avoid all excess. Their diet should be light and cool, consisting chiefly of milk and vegetables. Above all, let them beware of vigorous efforts of the body, and violent agitations of the mind.

VOMITING OF BLOOD.

THIS is not so common as the other discharges of blood which have already been mentioned; but it is very dangerous, and requires particular attention.

Vomiting of blood is generally preceded by pain of the stomach, sickness, and nausea; and is accompanied with great anxiety, and frequent fainting-fits.

This disease is sometimes periodical; in which case it is less dangerous. It often proceeds from an obstruction of the menses in women; and sometimes from the stoppage of the hæmorrhoidal flux in men. It may be occasioned by any thing that greatly stimulates or wounds the stomach, as strong vomits or purges, acrid poison, sharp or hard substances taken into the stomach, &c. It is often the effect of obstructions in the liver, the spleen, or some of the other viscera.

It may likewise proceed from external violence, as blows, bruises, or from any of the causes which produced 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 arise 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 the 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 lodged in the intestines, gentle purges will be necessary.

OF BLOODY URINE.

THIS is a discharge of blood from the vessels of the kidneys or bladder, occasioned by their being either enlarged, broken, or eroded. It is more or less dangerous according to the different circumstances which attend it.

When pure blood is voided suddenly without interruption and without pain, it proceeds from the kidneys; but if the blood be in small quantity, of a dark colour, and emitted with heat and pain about the bottom of the belly, it proceeds from the bladder. When bloody urine is occasioned by a rough stone descending from the kidneys to the bladder, which wounds the *ureters*, it is attended with a sharp pain in the back, and difficulty of making water. If the coats of the bladder are hurt by a stone, and the bloody urine follows, it is attended with the most acute pain, and a previous stoppage of urine.

Bloody urine may likewise be occasioned by falls, blows, the lifting or carrying of heavy burdens, hard riding, or any violent motion. It may also proceed from ulcers of the bladder, from a stone lodged in the kidneys, or from violent purges, or sharp diuretic medicines, especially cantharides.

Bloody urine is always attended with some degree of danger: but it is peculiarly so when mixed with purulent matter, as this shews an ulcer somewhere in the urinary passages. Sometimes this discharge proceeds from excess of blood, in which case it is rather to be considered as a salutary evacuation than a disease. If the discharge however be very great, it may waste the patient's strength, and occasion an ill habit of body, a dropsy or a consumption.

The treatment of this disorder must be varied according to the different causes from which it proceeds.

When it is owing to a stone in the bladder, the cure 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 on the liberal use of the Peruvian bark and acids, as has already been shewn.

When there is reason to suspect an ulcer in the kidneys or bladder, the patient's diet must be cool, and his drink of a soft healing, balsamic quality, as decoctions of marsh-mallow roots with liquorice, solutions of gum-arabic, &c. Three ounces of marsh-mallow roots, and half an ounce of liquorice, may be boiled in two English quarts of water to one; two ounces gum-arabic, and half an ounce of purified nitre may be dissolved in the strained liquor, and a tea-cupful of it taken four or five times a-day.

The early use of astringents in this disease has often bad consequences. When the flux is stopped too soon, the grumous blood, by being confined in the vessels, may produce inflammations, abscess, and ulcers. If however the case be urgent, or the patient seems to suffer from the loss of blood, gentle astringents may be necessary.

In this case the patient may take three or four ounces of lime-water, with half an ounce of the tincture of Peruvian bark, three times a-day.

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 shipboard, in jails, hospitals, and such like places.

CAUSES.—The dysentery may be occasioned by any thing that obstructs the perspiration, or renders the humours putrid; as damp beds, wet clothes, unwholesome diet, bad air, &c. But it is most frequently communicated by infection. This ought to make people extremely cautious in going near such persons as labour under the disease. Even the smell of the patient's excrements has been known to communicate the infection.

SYMPTOMS.—It is known by a flux of the belly, attended by violent pains 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 hickuping are bad signs, as they shew an inflammation of the stomach. When the stools are green, black, or have an exceeding disagreeable cadaverous smell, the danger is very great, as it shews the disease to be of the putrid kind. It is an unfavourable symptom when the 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 excrements should never be

suffered to continue in his chamber, but removed immediately and buried under ground. A constant stream of fresh air should be admitted into 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 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 spoonsful 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.†

* 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. A clyster of it may likewise be given twice 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 injures the medicine. It is not our business here to reason upon the nature and qualities of medicine, otherwise this might be shewn to possess virtues every way suited to the cure of a dysentery which does not proceed from a putrid state of the humours. One thing we know, which is preferable to all reasoning, that whole families have often been cured by it, after they had used many other medicines in vain. It will, however, be proper that the patient take a vomit, and a dose or two of rhubarb, before he begins to use the broth. It will likewise be necessary to continue the use of it for a considerable time, and to make it the principal food.

† The learned and humane Dr. Rutherford, late professor of medicine in the university of Edinburgh, used to mention this food in his public lectures with great encomiums. He directed it to be made by tying a pound or two of the finest flour, as tight as possible, in a linen rag, afterwards to dip it frequently in water, and to dredge the outside with flour, till a cake or crust was formed around it, which prevents the water from soaking into it while boiling.

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, straw-berries, &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 show, that good fruit is one of the best medicines, both for the prevention and cure of the dysentery. Good fruit is in every respect calculated to counteract that tendency to putrefaction, from whence the most dangerous kind of dysentery proceeds. The patient in such a case ought therefore to be allowed to eat as much fruit as he pleases, provided it be ripe.*

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 its by 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 scrupel, 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 an half of Epsom salt. 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

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 for his relief, but to no purpose. At length tired out with disappointments 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 trust entirely to a diet of milk and fruits, with gentle exercise. Strawberries were 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.

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-spoonful of the decoction of logwood.*

Persons who have been cured of this disease are very liable to suffer a relapse; to prevent which, great circumspection with respect to diet is necessary. The patient must abstain from all fermented liquors, except now and then a glass of good wine; but he must drink no kind of malt liquor. He should likewise abstain from animal food, as fish and flesh, and live principally on milk and vegetables.

Gentle exercise and wholesome air are likewise of importance.—The patient should go to the country as soon as his strength will permit, and should take exercise daily on horseback, or in a carriage. He may likewise use bitters infused in wine or brandy, and may drink twice a-day a gill of lime-water mixed with an equal quantity of new milk.

When dysenteries prevail, we would recommend a strict attention to cleanliness, a spare use of animal food, and the free use of sound ripe fruits, and other vegetables. The night air is to be carefully avoided, and all 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 LIENTERY and COELIAC PASSION, which though less dangerous than the dysentery, yet merit consideration. These diseases generally proceed from a relaxed state of the stomach and intestines, which is sometimes so great, that the food passes through them with hardly any sensible alteration; and the patient dies merely from the want of nourishment.

When the lientery or coeliac 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.

See appendix, *Decoction of Logwood.*

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. XXXVI.

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 *cephalalgia*; when the whole head is affected, *cephalœa*; and when on one side only, *hemicrania*. A fixed pain in the forehead, which may be covered with the end of the thumb, is called the *clavis hystericus*.

There are also other distinctions. Sometimes the pain is internal, sometimes external; sometimes it is an original disease, and at other times only symptomatic. When the head-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 a 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, a new hat or the like.

When a head-ach proceeds from a 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 scarce 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 a *hemicrania* generally proceeds from crudities or indigestion. Inanition, or emptiness, will often also occasion head-achs. 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 cool regimen in general is to be observed. The diet ought to consist of such emollient substances as will correct the acrimony of the humours, and keep the body open; as apples boiled in milk, spinage, turnips, and such like. The drink ought to be diluting; as barley-water, infusions of mild mucilaginous vegetables, decoctions of the sudorific woods, &c. The feet and legs ought to be kept warm, and frequently bathed in luke-warm 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 an hot bilious constitution, bleeding is necessary. The patient may be bled in the jugular vein, and the operation repeated if there be occasion. Cupping also, or the application of leeches to the temples, and behind the ears, will be of service. Afterwards a blistering-plaster may be applied to the neck behind the ears, or to any part of the head that is most affected. In some cases it will be proper to blister the whole head. In persons of a gross habit, issues or perpetual blisters will be of service. The body ought likewise to be kept open by gentle laxatives.

But when the head-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 should frequently smell to a bottle of volatile salts; he may likewise take snuff, or any thing that will irritate the nose, so as to promote a discharge from it; as the herb mastich, ground ivy, &c.

A *hemisrania*, especially a periodical one, is generally owing to a foulness of the stomach, for which gentle vomits must be administered, as also purges of rhubarb. After the bowels have been sufficiently cleared, chalybeate waters, and such bitters as strengthen the stomach, will be necessary. A periodical head-ach has been cured by wearing a piece of flannel over the forehead during the night.

When the head-ach arises from a vitiated state of the humours, as in the scurvy and venereal diseases, 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 done in case of extreme pain. Proper evacuations ought always to accompany and follow the use of opiates.†

When the patient cannot bear the loss of blood, his feet ought frequently to be bathed in lukewarm water, and well rubbed with a coarse cloth. Cataplasms with mustard or horse-radish, ought likewise to be applied to them. This course is peculiarly necessary when the pain proceeds from a gouty humour affecting the head.

When the head-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 æther, dropt into the palm of the hand, and applied to the forehead, will sometimes remove a violent head-ach.

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 coverings of the head, by sitting with the head bare near an open window, or exposing it to a draught of cold air. Food or drink taken either too hot or too cold is very hurtful to the teeth. Great quantities of sugar, or other sweetmeats, are likewise hurtful. Nothing is more destructive to the teeth than cracking nuts, or chewing any kind of hard substances; picking the teeth with pins, needles, or any thing that may hurt the enamel with which they are covered, does great mischief, as the tooth is sure to be spoiled whenever the air gets into it. Breeding women are very subject to the tooth-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

* See Appendix, *Decoction of Sarsaparilla*.

† 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.

the flux of humours to the part affected. This may be done by mild purgatives, scarifying the gums; or applying leeches to them, and bathing the feet frequently with warm water. The perspiration ought likewise to be promoted, by drinking freely of weak wine-whey, or other diluting liquors, with small doses of nitre. Vomits too have often an exceeding good effect in the tooth-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 often effect the cure.

If this fails, and the pain and inflammation still increase, a suppuration may be expected; to promote which a toasted fig should be held between the gum and the cheek; bags filled with boiled camomile-flowers, flowers of elder, or the like may be applied near the part affected, with as great a degree of warmth as the patient can bear, and renewed as they grow cool: the patient may likewise receive the steams of warm water into his mouth, through an inverted funnel, or by holding his head over the mouth of a porringer filled with warm water, &c.

Such things as promote the discharge of saliva, or cause the patient to spit, are generally of service. For this purpose, bitter, hot, or pungent vegetables may be chewed; as gentian, calamus aromaticus, or pellitory of Spain. Allen recommends the root of *yellow water flower-de-luce* in this case. This root may either be rubbed upon the tooth, or a little of it chewed. Brookes says he hardly ever knew it fail to 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 greater 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 of 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 mastic, wax, lead, 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.

After all, when a tooth is carious, it is often impossible to remove the pain without extracting it; and, as a spoilt 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 dan-

ger 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 only in particular cases, it certainly deserves a trial, as it is attended with no expense, and cannot do any harm. Electricity has likewise been recommended, and particular instruments have been invented for sending a shock through the affected tooth.

Persons who have returns of the tooth-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 mischief.

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 cold when covered with sweat. It may also be occasioned by worms, or other insects getting into the ear, or being bred there; or from any hard body sticking in the ear. Sometimes it proceeds from the translation of morbid 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 should be made to sneeze, by taking snuff, or some strong sternutatory. If this should not force out the body, it must be extracted by art. I have seen insects, which had got into the ear, come out of their own accord upon pouring in oil.

When the pain of the ear proceeds from inflammation, it must be treated like other topical inflammations, by a cooling regimen, and opening medicines. Bleeding at the beginning, either in the arm or jugular vein, or cupping in the neck, will be proper. The ear may likewise be fomented with steams of warm water; or flannel bags filled with boiled mallows and camomile-flowers may be applied to it warm; or bladders filled with warm milk and water. An exceeding good method of fomenting the ear, is to apply it close to the mouth of a jug filled with warm water, or a strong decoction of camomile-flowers.

* 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.

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 a decoction of barley and liquorice, with figs or raisins. The parts behind the ear ought frequently to be rubbed with camphorated oil, or a little of the volatile liniment.

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; a translocation 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 distention of the stomach after meals. This is a most deplorable disease, and is seldom thoroughly cured. In general, the patient ought to avoid all windy diet, and every thing that sours on the stomach, as greens, roots, &c. This rule however, admits of some exceptions. There are many instances of persons very much troubled with wind, who have received great benefit from eating parched pease, though that grain is generally supposed to be of a windy nature.*

This complaint may likewise be greatly relieved by 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, to turn gardener; which he did, and has ever since enjoyed good health.

* These are prepared by steeping or soaking pease in water, and afterwards drying them in a pot or kiln, till they be quite hard. They may be used at pleasure.

When a pain of the stomach is occasioned by the swallowing of acrid or poisonous substances, they must be discharged by vomit; this may be excited by butter, oils, or other soft things, which sheath and defend the stomach from the acrimony of its contents.

When a pain of the stomach proceeds from a translation of gouty matter, warm cordials are necessary, as generous wines, French brandy, &c. Some have drank a whole bottle of brandy or rum, in this case, in a few hours, without being in the least intoxicated, or even feeling the stomach warmed by it. It is impossible to ascertain the quantity necessary upon these occasions. This must be left to the feelings and discretion of the patient. The safer way however, is not to go too far. When there is an inclination to vomit, it may be promoted by drinking an infusion of camomile-flowers, or *carduus benedictus*.

If a pain of the stomach proceed from the stoppage of customary evacuations, bleeding will be necessary, especially in sanguine and very full habits. It will likewise be of use to keep the body gently open by mild purgatives; as rhubarb or senna. When this disease affects women in the decline of life, after the stoppage of the *menses*, making an issue in the leg or arm will be of peculiar service.

When the disease is occasioned by worms, they must be destroyed, or expelled by such means as are recommended in the following section.

When the stomach is greatly relaxed, and the digestion bad, which often occasion flatulencies, the elixir of vitriol will be of singular service. Fifteen or twenty drops of it may be taken in a glass of wine or water twice or thrice a-day.

Persons afflicted with flatulency are generally unhappy unless they be taking some purgative medicines; these, though they may give immediate ease, tend to weaken and relax the stomach and bowels, and consequently increase the disorder. Their best method is to mix purgatives and stomachics together. Equal parts of Peruvian bark and rhubarb may be infused in brandy or wine, and taken in such quantity as to keep the body gently open.

CHAP. XXXVII.

OF WORMS.

THESSE are chiefly of three kinds, viz. the *tænia*, or tape-worm; the *tercs*, 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 intestines. The round and long worm is likewise bred in the small guts, and sometimes in the stomach. The round and short worms, commonly lodge in the *rectum*, or what is called the end gut, and occasion a disagreeable itching about the seat.

The long round worms occasion squeamishness, vomiting, a disagreeable breath, gripes, looseness, swelling of the belly, swoonings, loathing of food, and at other times a voracious appetite; a dry cough, convulsions, epileptic fits, and sometimes a privation of speech. These worms have been known to perforate the intestines, and get into the cavity of the belly. The effects of the tape-worm are nearly the same with those of the long and round, but rather more violent.

Andry says, the following symptoms particularly attend the *solium*, which is a species of the tape-worm, *viz.* swoonings, privation of speech, and a voracious appetite. The round worms called *ascarides*, besides an itching of the *anus*, cause swoonings, and tenesmus, or an inclination to go to stool.

CAUSE.—Worms may proceed from various causes; but they are seldom found except in weak and relaxed stomachs, where the digestion is bad. Sedentary persons are more liable to them than the active and laborious. Those who eat great quantities of unripe fruit, or who live much on raw herbs and roots, are generally subject to worms. There seems to be an hereditary disposition in some persons to this disease. I have often seen all the children of a family subject to worms of a particular kind. They seem likewise frequently to be owing to the nurse. Children of the same family, nursed by one woman, have often worms, when those nursed by another have none.

SYMPTOMS.—The common symptoms of worms are paleness of the countenance, and at other times, an universal flushing of the face; itching of the nose; this however is doubtful, as children pick their noses in all diseases: starting, and grinding of the teeth in sleep; swelling of the upper lip; the appetite sometimes bad, at other times quite voracious; looseness; a sour or stinking breath; a hard swelled belly; great thirst; the urine frothy, and sometimes of a whitish colour; griping, or colic pains; an involuntary discharge of *saliva*, especially when asleep; frequent pains of the side, with a dry cough, and unequal pulse; palpitations of the heart; swoonings; cold sweats; palsy; epileptic fits, with many other unaccountable nervous symptoms, which were formerly attributed to witch-craft, or the influence of evil spirits. Small bodies in the excrements resembling melon or cucumber seed are symptoms of the tape-worm.

I lately saw some very surprising effects of worms in a girl about five years of age, who use 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 *intus susceptio*, or involving of one part of the gut within another, had taken place in no less than four different parts of the intestinal canal.*

* That worms exist in the human body there can be no doubt; and that they must sometimes be considered as a disease, is equally certain; but this is not the case so often as people imagine. The idea that worms occasion many diseases, give an opportunity to the professed worm doctors of imposing 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.

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, stomach bitters, with now and then a glass of good wine.

The best purge for an adult is jalap and calomel. Five and twenty or thirty grains of the former with six or seven of the latter, mixed in syrup, may be taken early in the morning, for a dose. It will be proper that the patient keep the house all day, and drink nothing cold. The dose may be repeated once or twice a week for a fortnight or three weeks. On the intermediate days the patient may take a drachm of the powder of tin, twice or thrice a-day, mixed with syrup, honey, or treacle.

Those who do not chuse to take calomel, may make use of the bitter purgatives; as aloes, hiera picra, tincture of senna, and rhubarb, &c.

Oily medicines are sometimes found beneficial for expelling worms. An ounce of salad oil and a table spoonful of common salt may be taken in a glass of red port wine thrice a-day, or oftener, if the stomach will bear it. But the more common form of using oil is in clysters. Oily clysters sweetened with sugar or honey, are very efficacious in bringing away the short round worms called *ascarides*, and likewise the *teres*.

The Harrowgate water is an excellent medicine for expelling worms, especially the *ascarides*. As this water is impregnated with sulphur, we may hence infer, that sulphur alone must be a good medicine in this case; which is found to be a fact. Many practitioners give flour of 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 remains 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 wormwood, the lesser centaury, &c.

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.

* A medical writer of the present age has enumerated upwards of fifty British plants, all celebrated for killing and expelling worms.

Bisset says, the great bastard black hellebore, or *bear's foot*, is a most powerful vermifuge for the long round worms. He orders the decoction of about a 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 tea-spoonful at bed time, and one or two next morning.

I have frequently known those big bellies, which in children are commonly reckoned a sign of worms, quite removed by giving them white soap in their pottage, or other food. Tansy, garlic, and rue, are all good against worms, and may be used various ways. We might here mention many other plants, both for external and internal use, as the cabbage-bark, &c. but think the powder of tin with athiops mineral, and the purges of the rhubarb and calomel, are more to be depended on.

Ball's purging vermifuge powder is a very powerful medicine. It is made of equal parts of rhubarb, scammony, and calomel, with as much double refined sugar as is equal to the weight of all the other ingredients. These must be well mixed together, and reduced to a fine powder. The dose for a child is from ten grains to twenty, once or twice a week. An adult may take a 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 be wholesome and sufficiently solid; and as far as possible, to prevent their eating raw herbs, roots, or green trashy fruits. It will not be amiss to allow a child who is subject to worms, a glass of red wine after meals; as every thing that braces and strengthens the stomach is good both for preventing and expelling these vermin.†

CHAP. XXXVIII.

OF THE JAUNDICE.

THIS disease is first observable in the white of the eye, which appears yellow. Afterwards the whole skin puts on a yellow appearance. The urine too is of a saffron hue, and dyes a white cloth

* A powder for the tape-worm 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 the danger of this conduct. A girl who had taken a dose of worm powder, bought of a travelling quack, went out, and perhaps was so imprudent as to drink cold water during the operation. She immediately swelled, and died on the following day with all the symptoms of having been poisoned.

of the same colour. There is likewise a species of this disease called the Black Jaundice.

CAUSES.—The immediate cause of the jaundice is an obstruction of the bile. The remote or occasional causes are, the bites of poisonous animals, as the viper, mad dog, &c. the bilious or hysteric colic; violent passions, as grief, anger, &c. Strong purges or vomits will likewise occasion the jaundice. Sometimes it proceeds from obstinate agues, or from that disease being prematurely stopped by astringent medicines. In infants it is often occasioned by the *meconium* not being sufficiently purged off. Pregnant women are very subject to it. It is likewise a symptom in several kinds of fever. Catching cold, or the stoppage of customary evacuations, as the *menses*, the bleeding piles, issues, &c. will occasion the jaundice.

SYMPTOMS.—The patient at first complains of excessive weariness, and has great aversion to every kind of motion. His skin is dry, and he generally feels a kind of itching or pricking pain over the whole body. The stools are of a whitish or clay colour, and the urine, as was observed above, is yellow. The breathing is difficult, and the patient complains of an unusual load or oppression on his breast. There is a heat in his nostrils, a bitter taste in the mouth, loathing of food, sickness of the stomach, vomiting, flatulency, and other symptoms of indigestion.

If the patient be young, and the disease complicated with no other malady, it is seldom dangerous; but in old people, where it continues long, returns frequently, or is complicated with the dropsy or hypochondriac symptoms, it generally proves fatal. The black jaundice is more dangerous than the yellow.

REGIMEN.—The diet should be cool, light, and diluting, consisting chiefly of ripe fruits and mild vegetables; as apples boiled or roasted, stewed prunes, preserved plumbs, boiled spinnage, &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; or marsh-mallow roots, with liquorice, &c.

The patient should take as much exercise as he can bear, either on horseback, or in a carriage; walking, running, and even jumping, are likewise proper, provided he can bear them without pain, and there be no symptoms of inflammation. Patients have been often cured of this disease by a long journey, after medicines had proved ineffectual.

Amusements are likewise of great use in the jaundice. The disease is often occasioned by a sedentary life, joined to a dull 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 prove 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 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 it as long as his strength will permit.

Many dirty things are recommended for the cure of the jaundice; as lice, millepedes, &c. But these do more harm than good, as people trust to them, and neglect more valuable medicines; besides they are seldom taken in sufficient quantity to produce any effects. People always expect that such *things* should act as charms, and consequently seldom persists 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 scirrhus liver, or other chronic complaints, it is hardly to be cured by any means.

Numberless British herbs are extolled for the cure of this disease. The author of the *Medicina Britannica* mentions near a hundred, all famous for curing the jaundice. The fact is, the disease often goes off of its own accord; in which case the last medicine is always said to have performed the cure. I have sometimes, however, seen considerable benefit, in a very obstinate jaundice, from a decoction of hempseed. Four ounces of the seed may be boiled in two English quarts of ale, and sweetened with coarse sugar. The dose is half an English pint every morning. It may be continued for eight or nine days.

I have likewise known Harrowgate sulphur water cure a 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.

CHAP. XXXIX.

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 collection of water under the skin; the *ascites*, or 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 the 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 bleeding, strong purges often repeated, frequent salivations, &c. The sudden stoppage of customary or necessary evacuations, as the *menses*, the hæmorrhoids, fluxes of the belly, &c. may likewise cause a dropsy.

I have known the dropsy occasioned by drinking large quantities of cold, weak, watery liquor, when the body was heated by violent exercise. A low, damp, or marshy situation is likewise a frequent cause of it. Hence it is a common disease in moist, flat, fenny countries. It may also be brought on by a long use of poor watery diet, or of visciduous 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, a diarrhœa, dysentary, 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 ankles towards night, which for some time disappears in the morning. In the evening the parts, if pressed with the finger, will pit. The swelling gradually ascends, and occupies the trunk of the body, the arms, and the head. Afterwards the breathing becomes difficult, the urine is in small quantity, and the thirst great; the body is bound, and the perspiration is greatly obstructed. To these succeed torpor, heaviness, a slow wasting fever, and a troublesome cough. This last is generally a fatal symptom, as it shews that the lungs are affected.

In an *ascites*, besides the above symptoms, there is a swelling of the belly, and often a fluctuation, which may be perceived by striking the belly on one side, and laying the palm of the hand on the opposite. This may be distinguished from a *tympany* of 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, however, 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 dipt in wine or a little brandy. This is not only nourishing, but tends to quench thirst. Some have been actually cured of a dropsy by a total abstinence from all liquids, and living entirely upon such things as are mentioned above. If the patient

must have drink, the Spa-water, or Rhenish wine, with diuretic medicines infused in it, are the best.

Exercise is of the greatest importance in a dropsy. If the patient be able to walk, dig, or the like, he ought to continue these exercises as long as he can. If he is not able to walk or labour, he must ride on horseback, or in a carriage, and the more violent the motion so much the better, provided he can bear it. His bed ought to be hard, and the air of his 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 oxy-mel of squills, will be a proper vomit. This may be repeated as often as is 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 bed-time, the following bolus: To four or five grains of camphor add one grain of opium, and as much syrup of orange-peel as is sufficient to make them into a bolus. This will generally promote a gentle sweat, which should be encouraged by drinking now and then a small cup of wine-whey, with a tea-spoonful of the spirits of hartshorn in it. A tea-cupful of the following diuretic infusion may likewise be taken every four or five hours through the day,

Take juniper berries, mustard-seed, and horse-radish, of each half an ounce, ashes of broom, half a pound; infuse them in a quart of Rhenish wine or strong ale for a few days, and afterwards strain off the liquor. Such as cannot take this infusion, may use the decoction of seneka-root, which is both diuretic and sudorific. I have known an obstinate *anasarca* cured by an infusion of the ashes of broom in wine.

The above course will often cure an incidental dropsy, if the constitution be good; but when the disease proceeds from a bad habit, or an unsound state of the viscera, strong purges and vomits are not to be ventured upon. In this case, the safer course is to palliate the symptoms by the use of such medicines as promote the secretions, and to support the patient's strength by warm and nourishing cordials.

The secretion of urine may be greatly promoted by nitre. Brookes says, he knew a young woman who was cured of a dropsy by taking a 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 even to three ounces, if the stomach will bear it. This quantity is not however to be taken at once, but divided into three or four doses.

To promote perspiration, the patient may use the decoction of seneka-root, as directed above; or he may take two table spoonful of Minde-
rerus' spirit in a cup of wine-why 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 worm-wood, a drachm and a half; infuse in an English pint and a half of old hock wine, and when fit for use, filter the liquor. A wine-glass of it may be taken three or four times a-day.

In the *anasarca* it is usual to scarify the feet and legs. By this means the water is often discharged; but the operator must be cautious not to make the incisions too deep; they ought barely to pierce through the skin, and especial care must be taken, by spirituous fomentations and proper digestives, to prevent a gangrene.

In an *ascites*, when the disease does not evidently and speedily give way to purgative and diuretic medicines, the water ought to be let off by tapping. This is a very simple and safe operation, and would often succeed, if it were performed in due time; but if it be delayed till the humours are vitiated, or the bowels spoiled, by long soaking in water, it can hardly be expected that any permanent relief will be procured.*

After the evacuation of the water, the patient is to be put on a course of strengthening medicines; as the Peruvian bark; the elixir of vitriol; warm aromatics, with a due proportion of rhubarb, infused in wine, and such like. His diet ought to be dry and nourishing, such as is recommended in the beginning of the chapter; and he should take as much exercise as he can bear without fatigue. He should wear flannel next his skin, and make daily use of the flesh-brush.

* 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.

CHAP. XL.

OF THE GOUT.

THERE is no disease which shews the imperfection of medicine, or sets the advantages of temperance and exercise in a stronger light, than the gout. Excess and idleness are the true sources from whence it originally sprung, and all who would avoid it must be *active* and *temperate*.

Though idleness and intemperance are the principal causes of the gout, yet many other things may contribute to bring on the disorder in those who are not, and to induce a paroxysm in those who are subject to it; as intense study; 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 frequently an involuntary shedding of tears. Sometimes these symptoms are much more violent, especially upon the near approach of the fit; and it has been observed, that as is the fever which ushers in the gout, so will the fit be; if the fever be short and sharp, the fit will be so likewise; if it be feeble, long, and lingering, the fit will be such also. But this observation can only hold with respect to very regular fits of the gout.

The regular gout generally makes its attack in the spring or beginning of winter, in the following manner: About two or three in the morning, the patient is seized with a pain in his great toe, sometimes in the heel, and at other times in the ankle 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 to 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, appear red, and is covered with a little moisture. Towards morning he drops asleep, and generally falls into a gentle breathing sweat. This terminates the first paroxysm, a number of which constitutes a fit of the gout; which is longer or shorter, according to the patient's age, strength, the season of the year, and the disposition of the body to this disease.

The patient is always worse towards night, and easier in the morning. The paroxysms however generally grow milder every day, till at length the disease is carried off by perspiration, urine and the

other evacuations. In some patients this happens in a few days; in others it requires weeks, and in some months, to finish the fit.—Those whom age and frequent fits of the gout have greatly debilitated, seldom get free from it before the approach of summer, and sometimes not till it be pretty far advanced.

REGIMEN.—As there are no medicines yet known that will cure the gout, we shall confine our observations chiefly to regimen, both in and out of the fit.

In the fit if the patient be young and strong, his diet ought to be thin and cooling, and he should drink of a diluting nature; but when 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-why 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 in 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-why. This will greatly promote perspiration through the night.

As the most safe and efficacious method of discharging the gouty matter, is by perspiration, this ought to be kept up by all means, especially in the affected part. For this purpose the leg and foot should be wrapt in soft flannel, fur, or wool. The last is most readily obtained, and seems to answer the purpose better than any thing else. The people of Lancashire look upon wool as a kind of specific in the gout. They wrap a great quantity of it about the leg and foot affected, and cover it with a skin of soft dressed leather. This they suffer to continue for eight or ten days, and sometimes for a fortnight or three weeks, or longer, if the pain does not cease. I never knew any external application answer so well in the gout. I have often seen it applied when the swelling and inflammation were very great, with violent pain, and have found all these symptoms relieved by it in a few days. The wool which they use is generally greased, and carded or combed. They choose the softest which can be had, and seldom or never remove it till the fit be entirely gone off.

The patient ought likewise to be kept quiet and easy during the fit. Every thing that affects the mind disturbs the paroxysm, and tends to throw the gout upon the nobler parts. All external applications that repel the matter are to be avoided as death. They do not cure the disease, but remove it from a safer to a more dangerous part of the body, where it often proves fatal. A fit of the gout is to be considered as nature's method of removing something that might prove destructive to the body, and all that we can do with safety, is to promote her intentions, and to assist her in expelling the enemy in her own way. Evacuation by bleeding, stool, &c. are likewise to be used with caution, they do not remove the cause of the disease, and sometimes by weakening the patient, prolong the fit; but where the constitution is able to bear it, it will be of use to keep the body gently open by diet, or very mild laxative medicines.

Many things will indeed shorten a fit of the gout, and some will drive it off altogether: but nothing has yet been found which will do this with

safety to the patient. In pain we eagerly grasp at any thing that promises immediate ease, and even hazard life itself for a temporary relief. This is the true reason why so many infallible remedies have been proposed for the gout, and why such numbers have lost their lives by the use of them. It would be as prudent to stop the small-pox from rising, and to drive them into the blood, as to attempt to repel the gouty matter after it has been thrown upon the extremities. The latter is as much an effort of nature to free herself from an offending cause as the former, and ought equally to be promoted.

When the pain however is very great, and the patient is restless, thirty or forty drops of laudanum, more or less according to the violence of the symptoms, may be taken at bed-time. This will ease the pain, procure rest, promote perspiration, and forward the crisis of the disease.

After the fit is over the patient ought to take a gentle dose or two of the bitter tincture of rhubarb, or some other worm stomachic purge. He should also drink a weak infusion of stomachic bitters in small wine or ale, as the Peruvian bark, with cinnamon, Virginia snake-root, and orange-peel. The diet at this time should be light but nourishing, and gentle exercise ought to be taken on horseback, or in a carriage.

Out of the fit, it is in the patient's power to do many things towards preventing a return of the disorder, or rendering the fit, if it should return, less severe. This, however, is not to be attempted by medicine, I have frequently known the gout kept off for several years, by the Peruvian bark and other astringent medicines; but in all the cases where I had occasion to see this tried, the persons died suddenly, and to all appearance, for want of a regular fit of the gout. One would be apt, from hence, to conclude, that a fit of the gout to some constitutions, in the decline of life, is rather salutary than hurtful.

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 all intense thought. The supper should be light, and taken early. All strong liquors, especially generous wines and sour punch, are to be avoided.

We would likewise recommend some doses of *magnesia alba*, and rhubarb to be taken every spring and autumn; and afterwards a course of stomachic bitters, as tansy or water-trefoil tea, an infusion

* Some make a secret of curing the gout by MUSCULAR EXERCISE. This secret, however, is as old as Celsus, who strongly recommends that mode of cure; and whoever will submit to it, in the fullest extent, may expect to reap solid and permanent advantages.

of gentian and camomile flowers, or a decoction of burdock root, &c. Any of these, or an infusion of any wholesome bitter that is more agreeable to the patient, may be drank for two or three weeks in March and October twice a-day. An issue or perpetual blister has a great tendency to prevent the gout. If these were more generally used in the decline of life, they would not only often prevent the gout, but also other chronic maladies. Such as can afford to go to Bath, will find great benefit from bathing and drinking the water. It both promotes digestion and invigorates the habit.

Though there is little room for medicine during a regular fit of the gout, yet when it leaves the extremities, and falls on some of the internal parts, proper applications to 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 severe 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 acrid cataplasms applied to the soles. Blistering plasters ought likewise to be applied to the ancles or calves of the legs. Bleeding in the feet or ancles is also necessary, and warm stomachic purges. The patient ought to keep in bed for the most part, if there be any signs of inflammation, and should be very careful not to catch cold.

If it 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 the decoction.

Persons who have had the gout should be very attentive to any complaints that may happen to them about the time when they have reason to expect a return of the fit. The gout imitates many other disorders, and by being mistaken for them, and treated improperly, is often diverted from its regular course, to the great danger of the patient's life.

Those who never had the gout, but who, from their constitution or manner of living, have reason to expect it, ought likewise to be very circumspect with regard to its first approach. If the disease, by wrong conduct or improper medicines, be diverted from its regular course, the miserable patient has a chance to be ever after tormented with head-aches, coughs, pains of the stomach and intestines;

* Æther is found to be an efficacious remedy in this case.

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 or without a fever.

CAUSES.—The causes of a rheumatism are frequently the same as those of an inflammatory fever, viz. an obstructed perspiration, the immoderate use of strong liquors, and the like. Sudden changes of the weather, and all quick transitions from heat to cold, are very apt to occasion the rheumatism. The most extraordinary case of a rheumatism that I ever saw, where almost every joint of the body was distorted, was a man who used to work one part of the day by fire, and the other part of it in 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 continues, the patient must keep his bed, and take such things as promote perspiration, as wine-whey, with *spiritus Mindereri*, &c. He may likewise take, for a few nights, at bed-time, in a cup of wine-whey, a drachm of the cream of tartar, and half a drachm of gum guaiacum in powder.

Warm bathing, after proper evacuations, has often an exceeding

* A late French writer (M. Cadet de Vaux) of some celebrity, for the cure of this disease prescribes forty-eight glasses of warm water in twelve hours, a glass every quarter, abstaining from every thing else during the time. This practice is already generally adopted in France.

good effect. The patient may either be put into a bath of warm water, or have cloths wrung out of it applied to the parts affected. Great care must be taken that he do not catch cold after bathing.

The *chronic* rheumatism is seldom attended with any considerable degree of fever, and is generally confined to some particular part of the body, as the shoulders, the back, or the loins. There is seldom any inflammation or swelling in this case. Persons in the decline of life are most subject to the chronic rheumatism. In such patients it often proves extremely obstinate and sometimes incurable.

In this kind of rheumatism the regimen should be nearly the same as in the acute. Cool and diluting diet, consisting chiefly of vegetable substances, as stewed prunes, 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 part affected, with tincture of cantharides. When the common tincture did not succeed, he used it of a double or treble strength. Cupping upon the part affected, is likewise often very beneficial, and so is the application of leeches.

Though this disease may not seem to yield to medicines for some time, yet they ought still to be persisted in. Persons who are subject to frequent returns of the rheumatism, will often find their account in using medicines, whether they be immediately affected with the disease or not. The chronic rheumatism is similar to the gout in this respect, that the most proper time for using medicines to extirpate it, is when the patient is most free from the disorder.

To those who can afford the expense, I would recommend the warm baths of Buxton or Matlock in Derbyshire. These have, often, to my knowledge, cured very obstinate rheumatisms, and are always safe either in or out of the fit. When the rheumatism is complicated with scorbutic complaints, which is not seldom the case, the Harrowgate waters, and those of Moffat, are proper. They should both be drank and used as a warm bath.

There are several of our own domestic plants which may be used with advantage in the rheumatism. One of the best is the white *mustard*.

* See Appendix, *Warm Plaster*.

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 watertrefoil is likewise of great use in this complaint. It may be infused in wine or ale, or drank in form of tea. The ground-ivy, camomile, and several other bitters, are also beneficial, and may be used in the same manner. No benefit however is to be expected from these unless they be taken for a considerable time. Excellent medicines are often despised in this disease, because they do not perform an immediate cure; whereas nothing would be more certain than their effect, were they duly persisted in. Want of perseverance in the use of medicines, is one reason why chronic diseases are so seldom cured.

Cold bathing, especially in salt water, often cures the rheumatism. We would also recommend riding on horseback, and wearing flannel next the skin. Issues are likewise very proper, especially in chronic cases. If the pain affects the shoulders, an issue may be made in the arm; but if it affects the loins, it should be put into the leg or thigh.

Persons afflicted with the scurvy are very subject to rheumatic complaints. The best medicines in this case are bitters and mild purgatives. These may either be taken separately or together, as the patient inclines. An ounce of Peruvian bark, and half an ounce of rhubarb in powder, may be infused in a bottle of wine; and one, two, or three wine-glasses of it taken daily, as shall be found necessary for keeping the body gently open. In cases where the bark itself proves sufficiently purgative, the rhubarb may be omitted.

Such as are subject to frequent attacks of the rheumatism, ought to make choice of a dry, warm situation, to avoid the night air, wet clothes, and wet feet, as much as possible. Their clothing should be warm, and they should wear flannel next their skin, and make frequent use of the flesh-brush.

CHAP. XLI.

OF THE SCURVY.

THIS disease prevails chiefly in cold northern countries, especially in low damp situations, near large marshes, or great quantities of stagnating water. Sedentary people, of a dull melancholy disposition, are most subject to it. It proves often fatal to sailors on long voyages, particularly in ships that are not properly ventilated, have many people on board, or where cleanliness is neglected.

It is not necessary to mention the different species into which this disease has been divided, as they differ from one another chiefly in degree. What is called the *land scurvy*, however, is seldom attended with those highly putrid symptoms which appear in patients who have been long at sea, and which, we presume, are rather owing to confined air, want of exercise, and the unwholesome food eaten by sailors on long voyages, than to any specific difference in the disease.

CAUSES.—The scurvy is occasioned by cold moist air; by the long use of salted or smoke dried provisions, or any kind of food that is hard of digestion, and affords little nourishment. It may also proceed from the suppression of customary evacuations; as the

menses, hæmorrhoidal flux, &c. It is sometimes owing to an hereditary taint, in which case a very small cause will excite the latent disorder. Grief, fear, and other depressing passions, have a great tendency both to excite and aggravate this disease. The same observation holds with regard to neglect of cleanliness; bad clothing; the want of proper exercise; confined air; unwholesome food; or any disease which greatly weakens the body, or vitiates the humours.

SYMPTOMS.—This disease may be known by unusual weariness, heaviness; and difficulty of breathing, especially after motion; rottenness of the gums, which are apt to bleed on the slightest touch; a stinking breath; frequent bleeding at the nose; crackling of the joints; difficulty of walking; sometimes a swelling and sometimes a falling away of the legs, on which there are livid, yellow, or violet coloured spots; the face is generally of a pale leaden colour. As the disease advances, other symptoms come on; as rottenness of the teeth, hæmorrhages or discharges of blood from different parts of the body, foul obstinate ulcers, pains in various parts, especially about the breast, dry scaly eruptions all over the body, &c. At last a wasting or hectic fever comes on, and the miserable patient is often carried off by a dysentery, a diarrhœa, a dropsy, the palsy, fainting fits, or a mortification of some of the bowels.

CURE.—We know no way of curing this disease but by pursuing a plan directly opposite to that which brings it on. It proceeds from a vitiated state of the humours, occasioned by errors in diet, air, or exercise; and this cannot be removed but by a proper attention to these important articles.

If the patient has been obliged to breathe a cold, damp, or confined air, he should be removed, as soon as possible to a dry, open, and moderately warm one. If there is reason to believe that the disease proceeds from a sedentary life, or depressing passions, as grief, fear, &c. the patient must take daily as much exercise in the open air as he can bear, and his mind should be diverted by cheerful company and other amusements. Nothing has a greater tendency either to prevent or remove this disease than constant cheerfulness and good humour. But this, alas! is seldom the lot of persons afflicted with the scurvy; they are generally surly, peevish and morose.

When the scurvy has been brought on by a long use of salted provisions, the proper medicine is a diet consisting chiefly of fresh vegetables; as oranges, apples, lemons, limes, tamarinds, water-cresses, scurvy-grass, brook-lime, &c. The use of these, with milk, pot-herbs, new bread, and fresh beer or cyder, will seldom fail to remove a scurvy of this kind, if taken before it be too far advanced, but to have this effect they must be persisted in a considerable time. When fresh vegetables cannot be obtained, pickled or preserved ones may be used; and where these are wanting, recourse must be had to the chymical acids. All the patient's food and drink should in this case be sharpened with cream of tartar, elixir of vitriol, vinegar, or the spirit of sea-salt.

These things however will more certainly prevent than cure the scurvy, for which reason sea-faring people, especially on long voyages, ought to lay in plenty of them. Cabbages, onions, gooseberries, and many other vegetables, may be kept a long time *pickling*, *preserving*, &c. and when these fail the chymical acids, recommended above, which will keep for any length of time, may be used. We have reason to believe, if ships

were well ventilated, had got 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 seldom 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 employer to make it for them; and no man ought to engage in a long voyage without having these articles secured.

I have often seen very extraordinary effects in that laud scurvy from a milk diet. This preparation of nature is a mixture of animal and vegetable properties, which of all others is the most fit for restoring a decayed constitution, and removing that particular, acrimony of the humours, which seems to constitute the very essence of the scurvy, and many other diseases. But people despise this wholesome and nourishing food, because it is cheap, and devour with greediness, flesh and fermented liquors, while milk is only deemed fit for their hogs!

The most proper drink in the scurvy, is whey or butter-milk.— When these cannot be had, sound cyder, perry, or spruce-beer, may be used. Wort has likewise been found to be a proper drink in the scurvy, and may be used at sea, as malt will keep during the longest voyage. A decoction of the tops of the spruce fir is likewise proper. It may be drank in the quantity of an English pint twice a-day. Tar-water may be used for the same purpose, or decoctions of any of the mild mucilaginous vegetables; as sarsaparilla, marsh-mallow roots, &c. Infusions of the bitter plants, as ground-ivy, the lesser centaury, marsh-trefoil, &c. are likewise beneficial. I have seen 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 have 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 lemon. When the disease affects the gums only, this practice, if continued for some time, will generally carry it off. We would however recommend the bitter orange as greatly preferable to lemon, it seems to be as good a medicine, and is not near so hurtful to the stomach. Perhaps our own sorrel may be little inferior to either of them.

All kinds of salad are good in the scurvy, and ought to be eaten very plentifully, as spinnage, lettuce, parsley, celery, endive, radish, dandelion, &c. It is amazing to see how soon fresh vegetables in the spring, cure the brute animals of any scab or foulness which is upon their skins. It is reasonable to suppose that their effects would be as

great upon the human species, were they used in proper quantities for a sufficient length of time.

I have 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 the 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, from a scrophulous nurse, &c. Children who have the misfortune to be born of sickly parents, whose constitutions have been greatly injured by the pox, or other chronic diseases, are apt to be affected with the scrophula. It may likewise proceed from such diseases as weaken the habit or vitiate the humours, as the small-pox, measles, &c. External injuries, as blows, bruises, and the like, sometimes produce scrophulous ulcers; but we have reason to believe, when this happens, that there has been a predisposition in the habit to this disease. In short, whatever tends to vitiate the humours or relax the solids, paves the way to the scrophula; as the want of proper exercise, too much heat or cold, confined air, unwholesome food, bad water, the long use of poor, weak, watery aliments, the neglect of cleanliness, &c. Nothing tends more to produce this disease in children, than allowing them to continue long wet.*

SYMPTOMS.—At first small knots appear under the chin, or behind the ears, which gradually increase in number and size, till they form one large hard tumour. This often continues for a long time without breaking, and when it does break, it only discharges a thin sanies, or watery humour. Other parts of the body are likewise liable to its attack, as the arm-pits, groins, feet, hands, eyes, breasts, &c. Nor are the internal parts exempt from it. It often affects the lungs, liver, or

* The scrophula, as well as the rickets, is found to prevail in large manufacturing towns, where people live gross, and lead sedentary lives.

spleen; and I have frequently seen the glands of the mýsenterý 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 medicines 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 indeed been found, that keeping the body gently open for some time, especially with sea-water, has a good effect; but this should only be given in gross habits, and in such quantity as to procure one, or at most two stools every day.

Bathing in the salt-water has likewise a very good effect, especially in the warm season. I have often known a course of bathing in salt-water, and drinking it in such quantities as to keep the body gently open, cure a scrophula, after many other medicines had been tried in vain. When salt water cannot be obtained, the patient may be bathed in fresh water, and his body kept open by small quantities of salt and water, or some other mild purgative.

Next to cold bathing, and drinking the salt water, we would recommend the Peruvian bark. The cold bath may be used in summer and the bark in winter. To an adult half a 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 both render the decoction less disagreeable, and make it take up more of the bark. The liquor must be strained, and two, three or four table spoonsful, according to the age of the patient, given three times a day.

The Moffat and Harrogate 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 henlock may sometimes be used with advantage in the scrophula. Some lay it down as a general rule, that the sea-water is most proper before there are any suppuration or symptoms of *tubes*; the Peruvian bark, when there are runningsores, and a degree of hectic fever; and the henlock in old inveterate cases, approaching to the scirrhus or cancerous state. Either the extract, or the fresh juice of this plant may be used. The dose must 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 large 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.

Citron OF THE ITCH *ointment*
because the itch

THOUGH this disease is commonly communicated by infection, yet it seldom prevails where due regard is paid to cleanliness, fresh air and wholesome diet. It generally appears in form of small watery pustules, first about the wrists or between the fingers; afterwards it affects the arms, legs, thighs, &c. These pustules are attended with an intolerable itching, especially when the patient is warm in bed, or sits by the fire. Sometimes indeed the skin is covered with large blotches or scabs, and at other times with a white scurf, or scaly eruption. This last is called the dry itch, and is the most difficult to cure.

The itch is seldom a dangerous disease, unless when it is rendered so by neglect or improper treatment. If it be suffered to continue too long, it may vitiate the whole mass of humours; and if it be suddenly 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 with an ointment made of the flour 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 be added, it will entirely take away the disagreeable smell. About the bulk of a nutmeg of this may be rubbed upon the extremities at bed-time twice or thrice a-week. It is seldom necessary to rub the whole body; but when it is, it ought not to be done all at once, but by turns, as it is dangerous to stop too many pores at the same time.

Before the patient begins to use the ointment, he ought, if he be of a full habit, to bleed or take a purge or two. It will likewise be proper, during the use of it, to take every night and morning, as much of the flour of brimstone and cream of tartar, in a little treacle or new milk, as will keep the body gently open. He should beware of catching cold, should wear more clothes than usual, and take every thing warm. The same clothes, the linen excepted, ought to be worn all the time of using the ointment; and such clothes as have been worn while the patient was under the disease, are not to be used again, unless they have been fumigated with brimstone, and thoroughly cleansed, otherwise they will communicate the infection anew.*

I never knew brimstone, when used as directed above, fail to cure the itch; and I have reason to believe, that if duly persisted in, it never will fail; but if it be only used once or twice, and cleanliness neglected, it is no wonder if the disorder returns. The quantity of ointment mentioned above will generally be sufficient for the cure of one person; but if any symptoms of the disease should appear again, the medicine must be repeated. It is both more safe and efficacious when persisted in for a considerable time than when a large quantity is applied at once. As most people dislike the smell of sulphur, they may use in its place the powder of white hellebore root made up into an ointment, in the same manner, which will seldom fail to cure the itch.

People ought to be extremely cautious lest they take other eruptions for the itch; as the stoppage of these may be attended with fatal consequences. Many of the eruptive disorders to which children are liable, have a near resemblance to this disease; and I have often known infants killed by being rubbed with greasy ointments that make these eruptions strike suddenly in, which nature had thrown out to preserve the patient's life, or prevent some other malady.

Much mischief is likewise done by the use of mercury in this disease. Some persons are so fool-hardy as to wash the parts affected with a strong solution of the corrosive sublimate. Others use the mercurial ointment, without taken the least care either to avoid cold, keep the body open, or observe a proper regimen. The consequences

* Sir John Pringle observes, that though this disease may seem trifling, there is no one in the army that is more troublesome to cure, as the infection often lurks in clothes &c. and breaks out a second, or even a third time. The same inconveniency occurs in private families, unless particular regard is paid to the changing or cleaning of their clothes, which last is by no means an easy operation.

of such conduct may be easily guessed. I have known even the mercurial girdles produce bad effects, and would advise every person, as he values his health, to beware how he uses them. Mercury ought never to be used as a medicine without the greatest care. Ignorant people look upon these girdles as a kind of charm, without considering that the mercury enters the body.

It is not to be told what mischief is done by using mercurial ointment for curing the itch and killing vermin; yet it is unnecessary for either: the former may be always more certainly cured by sulphur, and the latter will never be found where due regard is paid to cleanliness.

Those who would avoid this detestable disease ought to beware of infected persons, to use wholesome food, and to study universal cleanliness.*

CHAP. XLII.

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 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 of eruptions, as the small-pox, measles, &c. violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

SYMPTOMS.—An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise he is in danger of being suffocated. A fit or paroxysm of the asthma generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pasteries, toasted cheese, or the like.

* The itch is now by cleanliness banished from every genteel family in Britain. It still however prevails among the poorer sorts of peasants in Scotland, and among the manufacturers in England. These are not only sufficient to keep the seeds of the disease alive, but to spread the infection among others. It were to be wished that some effectual method could be devised for extirpating it altogether. Several country clergymen have told me, that by getting such as were infected cured, and strongly recommending an attention to cleanliness, they have banished the itch entirely out of their parishes. Why might not others do the same.

The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, and difficulty of breathing. To these succeed heat, fever, pain of the head, sickness and nausea, great oppression of the breast, palpitation of the heart, a weak, and sometimes intermitting pulse, an involuntary flow of tears, bilious vomitings, &c. All the symptoms grow worse towards night; the patient is easier when up than in bed, and is very desirous of cool air.

REGIMEN.—The food ought to be light, and of easy digestion. Boiled meats are to be preferred to roasted, and the flesh of young animals to that of old. All windy food, and whatever is apt to swell in the stomach, is to be avoided. Light puddings, white broths, and ripe fruits baked, boiled, or roasted are proper. Strong liquors of all kinds, especially malt-liquor, are hurtful. The patient should eat a very light supper, or rather none at all, and should never suffer himself to be long costive. His clothing should be warm, especially in the winter season. As all disorders of the breast are much relieved by keeping the feet warm, and promoting the perspiration, a flannel shirt or waistcoat, and thick shoes, will be of singular service.

But nothing is of so great importance in the asthma, as pure and moderately warm air. Asthmatic people can seldom bear either the close heavy air of a large town, or the sharp, keen atmosphere of a bleak hilly country; a medium therefore, between these is to be chosen. The air near a large town is often better than at a distance, provided the patient be removed so far as not to be affected by the smoke. Some asthmatic patients indeed, breathe easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatic persons who are obliged to be in town all day, ought at least to sleep out of it. Even this will often prove of great service. Those who can afford it ought to travel into a warmer climate. Many asthmatic persons who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

Exercise is likewise of very great importance in the asthma, as it promotes the digestion, preparation of the blood, &c. The blood of asthmatic persons is seldom duly prepared, owing to the proper action of the lungs being impeded. For this reason such people ought daily to take as much exercise, either on foot, horseback, or in a carriage, as they can bear.

MEDICINE.—Almost all that can be done by medicine in this disease, is to relieve the patient when seized with a violent fit. This indeed requires the greatest expedition, as the disease often proves suddenly fatal. In the paroxysm or fit, the body is generally bound; a purging clyster, with a solution of asafœtida, ought therefore to be administered, and if there be occasion, it may be repeated two or three times. The patient's feet and legs ought to be immersed in warm water, and afterwards rubbed with a warm hand or dry cloth. Bleeding, unless extreme weakness or old age should forbid it, is highly proper. If there be a violent spasm about the breast or stomach, warm fomentations, or bladders filled with warm milk and water, may be applied to the part affected; and warm cataplasms to the soles of the feet. The patient must drink freely of diluting liquors, and may take a tea-spoonful of the tincture of castor and 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 proxysm.

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, mixed with an equal quantity of cinnamon-water, may be taken three or four times through the day, and four or five pills made of equal parts of asafœtida and gum ammoniac, at bed-time.*

For the convulsive or nervous asthma, antispasmodics and bracers are the most proper medicines. The patient may take a tea-spoonful of the paregoric elixir twice a-day. The Peruvian bark is sometimes found to be of use in this case. It may be taken in substance, or infused in wine. In short, every thing that braces the nerves, or takes off spasm, may be of use in a nervous asthma. It is often relieved by the use of asses milk; I have likewise known cow's milk drank warm in the morning, have a very good effect in this case.

In every species of asthma, setons and issues have a good effect; they may either be set in the back or side, and should never be allowed to dry up. We shall here, once for all, observe, that not only in the asthma, but in most chronic diseases, issues are extremely proper. They are both a safe and efficacious remedy; and though they do not always cure the disease, yet they will often prolong the patient's life.

CHAP. XLIII.

OF THE APOPLEXY.

THE apoplexy is a sudden loss of sense and motion, during which the patient is to all appearance dead; the heart and lungs however still continue to move. Though this disease proves often fatal, yet it may be sometimes 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 ob-

* 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 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-spoonful may be taken every three hours.

† 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 coma-

liquely; 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, setous, &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 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 breathing is difficult, and performed with a snorting noise. The excrements and urine are often voided spontaneously, and the patient is sometimes seized with vomiting,

In this species of apoplexy every method must be taken to lessen the force of the circulation towards the head. The patient should be kept perfectly easy and cool. His head should be raised pretty high, and his feet suffered to hang down. His clothes ought to be loosened, especially about the neck, and fresh air admitted into his chamber. His garters should be tied pretty tight, by which means the motion of the blood from the lower extremities will be retarded. As soon as the patient is placed in a proper posture, he should be bled freely in the neck or arm, and, if there be occasion, the operation may be repeated in two or three hours. A laxative clyster, with plenty of sweet oil, or fresh butter, and a spoonful or two of common salt in it, may be administered every two hours; and blistering plasters applied between the shoulders, and to the calves of the legs.

As soon as the symptoms are a little abated, and the patient is able to swallow, he ought to drink freely of some diluting opening liquor, as a decoction of tamarinds and liquorice, cream-tartar whey, or common whey with cream of tartar dissolved in it. Or he may take any cooling purge, as Glauber's salts, manna dissolved in an infusion of senna, or the like. All spirits and other strong liquors are to be avoided. Even volatile salts held to the nose do mischief. Vomits, for the same reason, ought not to be given, or any thing that may increase the motion of the blood towards the head.

In the serous apoplexy, the symptoms are nearly the same, only the pulse is not so strong, the countenance is less florid, and the breathing less difficult. Bleeding is not so necessary here as in the former case. It may, however, generally be performed once with safety and advantage, but should not be repeated. The patient should be

tose, 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.

placed in the same posture as directed above, and should have blistering-plasters applied, and receive opening clysters in the same manner. Purges here are 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 the apoplectic symptoms proceed from opium, or other narcotic substances taken into the stomach, vomits are necessary. The patient is generally relieved as soon as he has discharged the poison in this way.

Persons of 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 to wear any thing too tight about their necks.

CHAP. XLIV.

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 diseases of the intestines themselves, as a palsy, spasms, torpor, tumours, a cold dry state of the intestines, &c.

Excessive costiveness is apt to occasion pains of the head, vomiting, colics, and other complaints of the bowels. It is peculiarly hurtful to hypochondriac and hysteric 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 spinach, leeks, and other soft pot herbs, are likewise proper. Rye-bread, or that which is made of a mixture of wheat and rye together, ought to be eaten. No person troubled with costiveness, should eat white bread alone, especially that which is made of fine flour. The best bread for keeping the body soluble, is what in some parts of England they call *mestlin*. 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 a-bed, &c. Intense thought, and a sedentary life, are likewise hurtful. All the secretion and excretions are promoted by moderate exercise without doors, and by a gay, cheerful, sprightly temper of mind.

The drink should be of an opening quality. All ardent spirits, austere and astringent wines, as port, claret, &c. ought to be avoided. Malt liquor that is fine, and of a moderate strength, is very proper. Butter-milk, whey, and other watery liquors, are likewise proper, and may be drank in turns, as the patient's inclination directs.

Those who are troubled with costiveness, ought if possible to remedy it by diet, as the constant use of medicines for that purpose is attended with many inconveniencies, and often with bad consequences.* I never knew any one get into a habit of taking medicine for keeping the body open, who could leave it off. In time the custom becomes necessary, and generally ends in a total relaxation of the bowels, indigestion, loss of appetite, wasting of the strength, and death.

When the body cannot be kept open without medicine, we would recommend gentle doses of rhubarb to be taken twice or thrice a-week. This is not near so injurious to the stomach as aloes, jalap, or the other drastic purgatives so much in use. Infusions of senna and manna may likewise be taken, or half an ounce of soluble tartar dissolved

* 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 atrabiliarian 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:—That most garden fruits are likewise laxative; and that some of them, as grapes, will throw such as take them immoderately into a cholera morbus, or incurable diarrhoea.

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 choice of an open dry air; to take exercise daily on horseback or in a carriage; to rise betimes; and to avoid all intense thought. He should use a diet of easy digestion; and should avoid excessive heat and great fatigue.

If want of appetite proceeds from errors in diet, or any other part of the patient's regimen, it ought to be changed. If nausea and retchings shew that the stomach is loaded with crudities, a vomit will be of service. After this a gentle purge or two of rhubarb, or any of the bitter purging salts, may be taken. The patient ought next to use some of the stomachic bitters infused in wine. Though gentle evacuations be necessary, yet strong purges and vomits are to be avoided, as they weaken the stomach and hurt digestion.

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-spoonsful 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, 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 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, acids, windy or greasy aliments, and should never use violent exercise soon after a hearty 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. Exercise in the open air will likewise be of use, and every thing that promotes digestion.

When bilious humours occasion the heart-burn, a tea-spoonful of the sweet spirit of nitre in a glass of water, or a cup of tea, will generally give ease. If it proceeds from the use of greasy aliments, a dram of brandy or rum may be taken.

If acidity or sourness of the stomach occasions the heart-burn, absorbents are the proper medicines. In this case an ounce of powdered chalk, half an ounce of fine sugar, and a quarter of an ounce of gum-arabic, may be mixed in a quart of water, and a tea-cupful of it taken as often as is necessary. Such as do not chuse chalk may take a tea-cupful 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-water. A large tea-spoonful is the usual dose; but it may be taken in a much greater quantity when there is occasion. These things are now generally made up into lozenges for the conveniency of being carried in the pocket, and taken at pleasure.

If wind be the cause of this complaint, the most proper medicines are those called carminatives; as aniseeds, juniper berries, ginger, cannella alba, cardamom seeds, &c. These may either be chewed, or infused in wine, brandy or other spirits. One of the safest medicines of this kind is the tincture made by infusing an ounce of rhubarb, and a quarter of an ounce of the lesser cardamom seeds, in an English pint of brandy. After this has digested for two or three days, it ought to be strained, and four ounces of white sugar-candy added to it. It must stand to digest a second time till the sugar be dissolved. A table-spoonful of it may be taken occasionally for a dose.

I have frequently known the heart-burn cured, particularly in pregnant women, by chewing green tea. Two table-spoonful of what is called the milk of gum ammoniac, taken once or twice a-day will sometimes cure the heart-burn.

CHAP. XLV.

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 thereby rendered weak and peevish. The low spirits, timorousness,

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 warm, frequent bleeding, purging, vomiting, &c. Whatever hurts the digestion, or prevents the proper assimilation of the food, has likewise this effect; as long fasting, excess in eating or drinking, the use of windy, crude or unwholesome aliments, an unfavourable posture of the body, &c.

Nervous disorders often proceed from intense application to study. Indeed few studious persons are entirely free from them. Nor is this at all to be wondered at; intense thinking not only preys upon the spirits, but prevents the person from taking proper exercise, by which means the digestion is impaired, the nourishment prevented, 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 favorite child, or from some disappointment in life, than from any other cause. In a word, whatever weakens the body, or depresses the spirits, may occasion nervous disorders, as unwholesome air, want of sleep, great fatigue, disagreeable apprehensions, anxiety, vexation, &c.

SYMPTOMS.—We shall only mention some of the most general symptoms of these disorders, as it would be both an useless and an endless task to enumerate the whole. They generally begin with windy inflations or distensions of the stomach and intestines; the appetite and digestion are usually bad; yet sometimes there is an uncommon craving for food, and a quick digestion. The food often turns sour on the stomach; and the patient is troubled with vomiting of clear water, tough phlegm, or a blackish coloured liquor resembling the grounds of coffee. Excruciating pains are often felt about the naval, attended with a rumbling or murmuring noise in the bowels. The body is sometimes loose, but more commonly bound, which occasions a retention of wind and great uneasiness.

The urine is sometimes in small quantity, at other times very copious and quite clear. There is a great 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 poured on them; flying pains in the arms and limbs, pains in the back and belly, resembling those occasioned by the gravel; the pulse very variable, sometimes uncommonly slow, and at other times very quick; yawning, the hickup, frequent sighing, and a sense of suffocation, as if from a ball or lump in the throat; alternate fits of crying and convulsive laughing; the sleep is unsound, and seldom refreshing; and the patient is often troubled with the night-mare.

As the disease increases, the patient is molested with head-aches, cramps, and fixed pains in various parts of the body; the eyes are clouded, and often affected with pain and dryness; there is a noise in the ears, and often a deafness of hearing; in short the whole animal functions are impaired. The mind is disturbed on the most trivial occasions, and is

hurried into the most perverse commotions, 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 't peevish, fickle, impatient, and apt to run from one physician to another; which is one reason why they seldom reap any benefit from medicine, as they have not sufficient resolution to persist in any one course till it has time to produce its proper effects. They are likewise apt to imagine that they labour under diseases from which they are quite free; and are very angry if any one attempts to set them right, or laugh them out of their ridiculous notions.

REGIMEN.—Persons afflicted with nervous diseases ought never to fast long. Their food should be solid and nourishing, but of easy digestion. Fat meats and heavy sauces are hurtful. All excess should be carefully avoided. They ought never to eat more at a time than they can easily digest; but if they feel themselves weak and faint between meals, they ought to eat a bit of bread, and drink a glass of wine. Heavy suppers are to be avoided. Though wine in excess enfeebles the body, and impairs the faculties of the mind, yet taken in moderation it strengthens the stomach, and promotes digestion. Wine and water is a very proper drink at meals; but if wine sours on the stomach, or the patient is much troubled with wind, brandy and water will answer better. Every thing that is windy or hard of digestion must be avoided. All weak and warm liquors are hurtful, as tea, coffee, punch, &c. People may find a temporary relief in the use of these, but they always increase the malady as they weaken the stomach, and hurt digestion. Above all things, drams are to be avoided. Whatever immediate ease the patient may feel from the use of ardent spirits, they are sure to aggravate the malady, and prove certain poisons at last. These cautions are the more necessary; as most nervous people are peculiarly fond of tea and ardent spirits, to the use of which many of them fall victims.

Exercise in nervous disorders is superior to all medicines. Riding on horseback is generally esteemed the best, as it gives motion to the whole body without fatiguing it. I have known some patients, however, with whom walking agreed better, and others who were most benefited by riding in a carriage. Every one ought to use that which he finds most beneficial. Long sea voyages have an excellent effect; and to those who have sufficient resolution, we would by all means recommend this course. Even change of place, and the sight of new objects, by diverting the mind, have a great tendency to remove these complaints. For this reason a long journey, or a voyage, is of much more advantage than riding short journies near home.

A cool and dry air is proper; as it braces and invigorates the whole body. Few things tend more to relax and enervate than hot air, especially that which is rendered so by great fires, or stoves in small apartments. But when the stomach or bowels are weak, the body ought to be well guarded against cold, especially in winter, by wearing a thin flannel waistcoat next the skin. This will keep up an equal perspiration, and defend the alimentary canal from many impressions to which it would otherwise be subject, upon every sudden change from warm to cold weather. Rubbing the body frequently

with a flesh-brush, or a coarse linen cloth, is likewise beneficial, as it promotes the circulation, perspiration, &c. Persons who have weak nerves ought to rise early, and take exercise before breakfast, as lying too long a-bed cannot fail to relax the solids. They ought likewise to be diverted, and to be kept as easy and cheerful as possible. There is not any thing which hurts the nervous system, or weakens the digestive powers more than fear, grief or anxiety.

MEDICINES.—Though nervous diseases are seldom radically cured, yet the symptoms may sometimes be alleviated, and the patient's life rendered at least more comfortable by proper medicines.

When the patient is cotive, 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 scuna 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 rum, for the space of five or six days. A table-spoonful of the strained liquor may be taken in half a glass of water, an hour before breakfast, dinner and supper.

Few things tend more to strengthen the nervous system than cold bathing. This practice, if duly persisted in, will produce very extraordinary effects ; but when the liver or other *viscera* are obstructed, or otherwise unsound the cold bath is improper. It is therefore to be used with very great caution. The most proper seasons for it are summer and autumn. It will be sufficient, especially for persons of a spare habit, to go into the cold bath three or four times a-week. If the patient be weakened by it, or feels chilly for a long time after coming out, it is improper.

In patient's 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 increases the disease, we would advise people to be extremely sparing in the use of them lest habit render them at last absolutely necessary.

It would be an easy matter to enumerate many medicines which have been extolled for relieving nervous disorder ; 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 AMUSEMENT.

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 by 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 timorous; watchful; fond of solitude; 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; the pulse slow and weak. The functions of the mind are also greatly perverted, insomuch that the patient often imagines himself dead, or changed into some other animal. Some have imagined their bodies were made of glass, or other brittle substances, and were afraid to move, lest they should be broken to pieces. The unhappy patient, in this case, unless carefully watched, is apt to put an end to his own miserable life.

When the disease is owing to an obstruction of customary evacuations, or any bodily disorder, it is easier cured than when it proceeds from affections of the mind, or an hereditary taint. A discharge of blood from the nose, looseness, scabby eruptions, the bleeding piles, or the *menses*, sometimes carry off this disease.

REGIMEN.—The diet should consist chiefly of vegetables of a cooling and opening quality. Animal food, especially salted or smoke-dried fish or flesh, ought to be avoided. All kinds of shell-fish are bad. Aliments prepared with onions, garlic, or any thing that generates thick blood, are likewise improper. All kinds of fruits that are wholesome may be eaten with advantage. Boerhaave gives an instance of a patient who, by a long use of whey, water, and garden-fruit, recovered, after having evacuated a great quantity of black coloured matter.

Strong liquors of every kind ought to be avoided as poison. The most proper drink is water, whey, or very small beer. Tea and coffee are improper. If honey agrees with the patient, it may be eaten freely or his drink may be sweetened with it. Infusions of balm-leaves, pennyroyal, 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 chuse.

The patient ought to take as much exercise as he can bear. This helps to dissolve the viscid humours, it removes obstructions, promotes the perspiration, and all the other secretions. Every kind of madness is attended with a diminished perspiration; all means ought therefore to be used to promote that necessary and salutary discharge. Nothing can have a more direct tendency to increase the disease than confining the patient to a close apartment. Were he forced to ride or walk a certain number of miles every day, it would

tend greatly to alleviate his disorder; but it would have still a better effect, if he were obliged to labour a piece of ground. By digging, hoeing, planting, sowing, &c. both the body and mind would be exercised. A long journey, or a voyage, especially towards a warmer climate, with agreeable companions, have often very happy effects. A plan of this kind, with a strict attention to diet, is a much more rational method of cure, than confining the patient within doors and plying him with medicines.

MEDICINE.—In the cure of this disease particular attention must be paid to the mind. When the patient is in a low state, his mind ought to be soothed and diverted with variety of amusements, as entertaining stories, pastimes, music, &c. This seems to have been the method of curing melancholy among the Jews, as we learn from the story of King Saul; and indeed it is a very rational one. Nothing can remove diseases of the mind so effectually as applications to the mind itself, the most efficacious of which is music. The patient's company ought likewise to consist of such persons as are agreeable to him. People in this state are apt to conceive unaccountable aversions against particular persons; and the very sight of such persons is sufficient to distract their minds, and throw them into the utmost perturbation.

When the patient's strength is high, or the pulse admits of it, evacuations are necessary. In this case he must be bled, and have his body kept open by purging medicines, as manna, rhubarb, cream of tartar, or the soluble tartar. I have seen the last have very happy effects. It may be taken in the dose of half an ounce, dissolved in water-gruel, every day, for several weeks, or even for months, if necessary. More or less may be given according as it operates. Vomits have likewise a good effect; but they must be pretty strong, otherwise they will not operate.

Whatever increases the evacuation of urine or promotes perspiration, has a tendency to remove this disease. Both these secretions may be promoted by the use of nitre and vinegar. Half a 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 an 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 asafetida 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. We do not mean that all these medicines should be administered at once; but which ever 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 pease in them. The most proper place for a seton is between the shoulder-blades: and it ought to be placed upwards and downwards, or in the direction of the spine.

OF THE PALSY.

THE palsy is a loss or diminution of sense or motion, or of both in one or more parts of the body. Of all the affections called nervous, this is the most suddenly fatal. It is more or less dangerous, according to the importance of the part affected. A palsy of the heart, lungs, or any part necessary to life, is mortal. When it affects the stomach, the intestines, or the bladder, it is highly dangerous. If the face be affected, the case is bad, as it shews that the disease proceeds from the brain. When the part affected feels cold, is insensible, or wastes away, or when the judgment and memory begin to fail, there is small hope of a cure.

CAUSES.—The immediate cause of palsy is any thing that prevents the regular exertion of the nervous power upon any particular muscle or part of the body. The occasional and predisposing causes are various, as drunkenness; wounds of the brain, or spinal marrow; pressure upon the brain, or nerves; very cold or damp air; the suppression of customary evacuations; sudden fear; want of exercise; or whatever greatly relaxes the system, as drinking much tea*, or coffee. The palsy may likewise proceed from wounds of the nerves themselves, from the poisonous fumes of metals or minerals, as mercury, lead, arsenic.

In young persons of a full habit, the palsy must be treated in the same manner as the sanguine apoplexy. The patient must be bled, blistered, and have his body opened by sharp clysters or purgative medicines. But in old age, or when the disease proceeds from relaxation or debility, which is generally the case, a quite contrary course must be pursued. The diet must be warm and invigorating, seasoned with spicy and aromatic vegetables, as mustard, horse-radish, &c. The drink may be generous wine, mustard, whey, or brandy and water. Friction with the flesh brush or a warm hand, is extremely proper, especially on the parts affected. Blistering-plasters may likewise be applied to the affected parts with advantage. When this cannot be done, they may be rubbed with the volatile liniment, or the nerve ointment of the Edinburgh dispensatory. One of the best external applications is electricity. The shocks, or rather vibrations, should be received on the part affected, and they ought daily to be repeated for several weeks.

Vomits are very beneficial in this kind of palsy, and ought frequently to be administered. Cephalic snuff, or any thing that makes

* Many people imagine that tea has no tendency to hurt the nerves, and that drinking the same quantity of warm water would be equally pernicious. This however seems to be a mistake. Many persons drink three or four cups of warm milk and water daily, without feeling any bad consequences; yet the same quantity of tea 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.

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 is 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 half a drachm of it in powder may be given in a glass of wine three or four times a-day. If the patient cannot use the valerian, he may take of *sal volatile oleosum*, compound spirits of lavender, and tincture of castor, each half an ounce; mix these together, and take forty or fifty drops in a glass of wine, three or four times a-day. A table-spoonful of mustard-seed taken frequently is a very good medicine. The patient ought likewise to chew cinnamou, bark, ginger, or other warm spiceries.

Exercise is of the utmost importance in the palsy; but the patient must beware of cold, damp, and moist air. He ought to wear flannel next his skia; and if possible, should remove into a warmer climate.

OF THE EPILEPSY, OR FALLING SICKNESS.

THE epilepsy is a sudden deprivation of 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 small space, and returns seldom, there is reason to hope; but if it continues long, and returns frequently, the prospect is bad. It is a very unfavourable symptom when the patient is seized with the fits in his sleep.

CAUSES.—The epilepsy is sometimes hereditary. It may likewise proceed from blows, bruises, or wounds on the head; a collection of water, blood, or serous humours in the brain; a polypus; tumours or concretions within the skull; excessive drinking; intense study; excess of venery; worms; teething; suppression of customary evacuations; too great emptiness or repletion; violent passions or affections of the mind, as fear, joy, &c. hysteric affections; contagion received into the body, as the infection of the small-pox, measles, &c.

SYMPTOMS.—An epileptic fit is generally preceded by unusual weariness; pain of the head; dulness; giddiness; noise in the ears; dimness of 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 hand; 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 faeces 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 or 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.—Epileptic patients ought, if possible, to breathe a pure and free air. Their diet should be light but nourishing. They ought to drink nothing strong, to avoid swine's flesh, water-fowl, and likewise all windy and oily vegetables, as cabbage, nuts, &c. They ought to keep themselves cheerful, carefully guarding against all violent passions, as anger, fear, excessive joy, and the like.

Exercise is likewise of great use; but the patient must be careful to avoid all extremes either of heat or cold, all dangerous situations, as standing upon precipices, riding, deep waters, and such like.

MEDICINE.—The intentions of cure must vary according to the cause of the disease. If the patient be of a sanguine temperament, and there be reason to fear an obstruction in the brain, bleeding and other evacuations will be necessary. When the disease is occasioned by the stoppage of customary evacuations, these, if possible, must be restored; if this cannot be done, others may be substituted in their place. Issues or setons in this case have often a very good effect. When there is reason to believe that the disease proceeds from worms, proper medicines must be used to kill, or carry off these vermin. When the disease proceeds from teething, the body should be kept open by emollient clysters, the feet frequently bathed in warm water, and if the fits prove obstinate, a blistering-plaster may be put 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 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.

* See Appendix, *Electuary for the Epilepsy.*

Sometimes the epilepsy has been cured by electricity.

Convulsion-fits proceed from the same cause, 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 HICKUP.

THE hickup 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 of the stomach; poisons; inflammations or scirrhus tumours of the stomach, intestines, bladder, midriff, or the rest of the *viscera*. In gangrenes, acute and malignant fevers, a hickup is often the forerunner of death.

When the hickup 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 spirits of nitre in a cup of wine. 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 hickup proceeds from a gangrene or mortification, the Peruvian bark, with other antiseptics, are the only medicines which have a chance to succeed. When it is a primary disease, and proceeds from a foul stomach, loaded either with a pituitous or a bilious humour, a gentle vomit and purge, if the patient be able to bear them, will be of service. If it arises from flatulencies, the carminative medicines directed for the heart-burn must be used.

When the hickup 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 hickup 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 hickup 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 scirrhus tumour was found near the pylorus or right orifice of the stomach.

The hickup may be removed by taking vinegar; or by a few drops of the oil of vitriol taken in water.

CRAMP OF THE STOMACH.

THIS disease often seizes people suddenly, is very dangerous, and requires immediate assistance. It is most incident to persons in the decline of life, especially the nervous, gouty, hysteric, and hypochondriac.

If the patient has 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 pains 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 applied to it. I have often seen these produce the most happy effects. The anodyne balsam may also be rubbed on the part affected; and an anti-hysteric plaster worn upon it for some time after the cramps are removed, to prevent their return.

In very violent and lasting pains of the stomach, some blood ought to be let, unless the weakness of the patient forbids it. When the pains or cramps proceeds 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 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. Whytt 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 effects. 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.

Persons who are young and full of blood, if troubled with the night-mare, ought to take a purge frequently, and use a spare diet.

OF SWOONINGS.

PEOPLE of weak nerves or delicate constitutions are liable to swoonings or fainting-fits. These indeed are seldom dangerous when duly attended to; but when wholly neglected, or improperly treated, they often prove hurtful, and sometimes fatal.

The general causes of swoonings are, sudden 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 liquor, or sit near a large fire. This might easily be prevented by people taking care not to go into a warm room immediately after they have been exposed to the cold air, to approach the fire gradually, and not to eat or drink any thing hot, till the body has been gradually brought into a warm temperature.

When any one, in consequence of neglecting these precautions, falls into a swoon, he ought immediately to be removed to a cooler apartment, to have ligatures applied above his knees and elbows, and to have his hands and face sprinkled with vinegar or cold water. He should likewise be made to smell to vinegar, and should have a spoonful or two of water, if he can swallow, with about a third part of vinegar mixed with it, poured into his mouth. If these should not remove the complaint, it will 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 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 of 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 asafoetida 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, &c. 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 quite still and easy upon his back, with his head low, and should have fresh air admitted into his chamber. His food should consist of nourishing broths, sago-gruel, with wine, new milk, and other things of a light and cordial nature. These things are to be given out of the fit. All that can be done in the fit, is to let him smell to a bottle of Hungary-water, *cau 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 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, spirits of lavender, tincture of castor, and the like.

OF FLATULENCIES, OR WIND.

All nervous patients, without exception, are afflicted with wind or flatulencies in the stomach and bowels, which arise chiefly from the want of tone or vigour in these organs. Crude flatulent aliment, as green peas, beans, coleworts, cabbages, and such like, may increase this complaint; but strong and healthy people are seldom

troubled with wind, unless they either overload their stomachs, or drink liquors that are in a 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.*

The list of medicines for expelling wind is very numerous; they often however disappoint the expectations of both the physician and his patient. The most celebrated among the class of carminatives are juniper berries; the root of ginger and zedoary; the seeds of anise, caraway, and coriander; gum asafœtida and opium; the warm waters, tinctures, and spirits, as the aromatic water, the tinctures of woodsoot, the volatile aromatic spirit, æther, &c.

Dr. Whytt 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 continued in the stomach or intestines; whereas those warm medicines, commonly called *carminatives*, do not often give immediate relief, except when the wind is in the stomach.

With regard to æther, the Doctor says, he has often seen very good effects from it in flatulent complaints, where other medicines failed. The dose is a tea-spoonful, mixed with two table-spoonsful of water.† In gouty cases he observes, that æther, a glass of French brandy, or of the aromatic water, or ginger, either taken in substance or infused in boiling water, are among the best medicines for expelling wind.

When the case of flatulent patients is such as makes it improper to give them warm medicines inwardly, the Doctor recommends external applications, which are sometimes of advantage. Equal parts of the anti-hysteric and stomach plaster may be spread upon a piece of soft leather, of such size as to cover the greater part of the belly. This should be kept on for a considerable time, provided the patient be able to bear it; if it should give great uneasiness it may be taken off, and the following liniment used in its stead :

Take of Bate's anodyne balsam, an ounce; of the expressed oil of mace, half an ounce; oil of mint, two 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

* Many nervous people find great benefit from eating a dry biscuit, especially when the stomach is empty. I look upon this as one of the best carminative medicines; and would recommend it in all complaints of the stomach, arising from flatulence, indigestion, &c.

† Though the patient may begin with this quantity, it will be necessary to increase the dose gradually as the stomach can bear it. Æther is now given in considerably greater doses than it was in Dr. Whytt's time.

bark, bitters, chalybeates, and exercise. In flatulent cases, he thinks some nutmeg or ginger should be added to the tincture of the bark and bitters, and that the aromatic powder should be joined with the filings of iron.

When windy complaints are attended with costiveness, which is often the case, few things will be found to answer better than four or five of the following pills taken every night at bed-time :

Take of asafœtida two 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. Whytt has paid great attention to this subject, and as his sentiments upon it in a great measure agree with mine, I have taken the liberty to adopt them; and shall only add to his observations, that exercise is in my opinion superior to all medicine, both for preventing the production, and likewise for expelling of flatulencies. These effects however are not to be expected from sauntering about, or lolling in a carriage; but from labour or such active amusements as give exercise to every part of the body.

OF LOW SPIRITS.

ALL who have weak nerves are subject to low spirits in a greater or less degree. Generous diet, the cold bath, exercise, and amusements, are the most likely means to remove this complaint. It is greatly increased by solitude and indulging gloomy ideas, but may often be relieved by cheerful company and sprightly amusements.

When low spirits are owing to a weak relaxed state of the stomach and bowels, an infusion of 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 foulness of the stomach and intestines, or obstructions in the hypochondriac viscera, aloetic purges will be proper. I have sometimes known the Harrowgate sulphur-water of service in this case.

When low spirits proceed from a suppression of the menstrual or of the hæmorrhoidal flux, these evacuations may either be restored or some other substituted in their place, as issues, setons or the like. Dr. Whytt observes, that nothing has such sudden good effects in this case as bleeding.

When low spirits have been brought on by long continued grief, anxiety, or other distress of mind, agreeable company, variety of amusements, and change of place, especially travelling into foreign countries, will afford the most certain relief.

Persons afflicted with low spirits should avoid all kinds of excess, especially of venery and strong liquors. The moderate use of wine and other strong liquors is by no means hurtful; but when taken to excess they weaken the stomach, vitiate the humours, and depress the spirits. This caution is the more necessary, as the unfortunate and melancholy often fly to strong liquors for relief, by which means they never fail to precipitate their own destruction.

OF HYSTERIC AFFECTIONS.

THESE likewise belong to the numerous tribe of nervous diseases, which may be justly reckoned the reproach of medicine. Women of a delicate habit, whose stomach and intestines are relaxed, and whose nervous system is extremely sensible, are most subject to hysteric complaints. In such persons an hysteric fit, as it is called, may be brought on by an irritation of the nerves of the stomach or intestines, by wind, acrid humour, or the like. A sudden suppression of the *menses* often give 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 scarce to be perceived. At other times the patient is affected with catchings and strong convulsions. The symptoms which precede hysteric fits are likewise various in different persons. Sometimes the fits come on with coldness of the extremities, yawning and stretching, lowness of spirits, oppression and anxiety. At other times the approach of the fit is foretold by a feeling, as if there were a ball at the lower part of the belly, which gradually rises towards the stomach, where it occasions inflation, sickness, and sometimes vomiting; afterwards it rises into the 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 sometimes it goes off by crying. Indeed there is not much difference between the laughing and crying of an highly hysteric lady.

Our aim in the treatment of this disease, must be to shorten the fit or paroxysm when present, and to prevent its return. The longer the fits continue, and the more frequently they return, the disease becomes the more obstinate. Their strength is increased by habit, and they induce so great a relaxation of the system, that it is with difficulty removed.

It is customary during the hysteric fit or paroxysm, to bleed the patient. In strong persons of a plethoric habit, and where the pulse is full, this may be proper; but in weak and delicate constitutions, or where the disease has been of long standing, or arises from inanition, it is not safe. The best course in such case is to rouse the patient by strong smells, as burnt feathers, asafœtida, or spirits of hartshorn, held to the nose. Hot bricks may also be applied to the soles of the feet, and the legs, arms and belly may be strongly rubbed with a warm cloth. But the best application is to put the feet and legs into warm water. This is peculiarly proper when the fits precede the flow of the *menses*. In case of costiveness, a laxative clyster with asafœtida will be proper: and as soon as the pa-

tient can swallow, two table-spoonful of a solution of asafetida, or of some cordial julep, may be 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 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 be a tendency to costiveness, it must be removed either by diet, or by taking an opening pill as often as it shall be found necessary.

To lessen the irritability of the system, antispasmodic medicines will be of use. The best antispasmodic medicines are musk, opium, and castor. When opium disagrees with the stomach, it may either be applied externally, or given in clysters. It is often successful in removing those periodical head-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. Whytt advises, that they should be joined together. He likewise recommends the anti-hysteric plaster to be applied to the *abdomen*.†

Hysteric women are often afflicted with cramps, in various parts of the body, which are most apt to seize them in bed, or when asleep. The most efficacious medicines in this case are opium, blistering-plasters, and warm bathing or fomentations. When the cramp or spasm is very violent, opium is the remedy most to be depended on. In milder cases, immersing the feet and legs in warm water, or applying a blistering-plaster to the part affected, will often be sufficient to remove the complaint. In patients whose nerves are uncommonly

* When hysteric fits are occasioned by sympathy, they may be cured by exciting an opposite passion. This is said to have been the case of a whole school of young ladies in Holland, who were all cured by being told, that the first who was seized should be burnt to death. But this method of cure, to my knowledge, will not always succeed. I would therefore advise, that young ladies who are subject to hysteric fits should not be sent to boarding-schools, as the disease may be caught by imitation. I have known madness itself brought on by sympathy.

† Though antispasmodics and anodynes are universally recommended in this disease, yet all the extraordinary cures that I ever knew in hysteric cases, were performed by means of tonic and corroborating medicines.

delicate and sensible, it will be better to omit the blistering-plaster, and to attempt the cure by opiates, musk, camphire, and the warm bath.

Cramps are often prevented or cured by compression. Thus cramps in the legs are prevented, and sometimes removed, by tight bandages; and when convulsions arise from a flatulent distention of the intestines, or from spasms beginning in them, they may be often lessened or cured by making a pretty strong compression upon the *abdomen* by means of a broad belt. A roll of brimstone held in the hand is frequently used as a remedy for cramps. Though this seems to owe its effects chiefly to imagination, yet, as it sometimes succeeds, it merits a trial.* When spasms or convulsive motions arise from sharp humours in the stomach or intestines, no lasting relief can be procured till these are either corrected or expelled. The Peruvian bark has sometimes cured periodic convulsions after other medicines had failed.

OF HYPOCHONDRIAC AFFECTIONS.

THIS disease generally attacks the indolent, the luxurious, the unfortunate, and the studious. It becomes daily more common in this country, owing, no doubt, to the increase of luxury and sedentary employments. It has so near a resemblance to the immediately preceding, that many authors consider them as the same disease, and treat them accordingly. They require however, a very different regimen; and the symptoms of the latter, though less violent, are more permanent than those of the former.

Men of a melancholy temperament, whose minds are capable of great attention, and whose passions are not easily moved, are in the advanced periods of life, most liable to this disease. It is usually brought on by long and serious attention to abstruse subjects, grief, the suppression of customary evacuations, excess of venery, the repulsion of cutaneous eruptions, long continued evacuations, obstruction 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 ascendent and windy vegetables are to be avoided. Flesh meats agree best with them, and their drink should be old claret, or good madeira. Should these disagree with the stomach, water with a little brandy or rum in it may be drank.

Cheerfulness and serenity of mind are by all means to be cultivated. Exercise of every kind is useful. The cold bath is likewise beneficial; and where it does not agree with the patient, 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 constive, it will be necessary to make use of some

* Some persons afflicted with cramps pretend to reap great benefit from small bundles of rosemary tied all night about their feet, ancles, and knees.

gentle opening medicincs, as pills composed of equal parts of aloes, rhubarb, and asafoetida, with as much of the elixir proprietatis as is necessary to form the ingredients into pills. Two, three, or four of these may be taken as often as it shall be found usefud, to keep the body gently open. Such as cannot bear the asafoetida, may substitute Spanish soap in its place.

Though a cheerful glass may have good effects in this disease, yet all manner of excess is hurtful. Intense study, and every thing that depresses the spirits, are likewise pernicious.

Though the general symptoms and treatment of nervous disorders were pointed out in the beginning of this chapter, yet, for the benefit of the unhappy persons afflicted with those obstinate and complicated maladies, I have treated several of their capital symptoms under distinct or separate heads. These however are not to be considered as different diseases, but as various modifications of the same disease. They all arise from the same general causes, and require nearly the same method of treatment. There are many other symptoms that merit particular attention, which the nature of my plan will not permit me to treat of at full length. I shall therefore omit them altogether, and conclude this chapter with a few general remarks on the most obvious means of preventing or avoiding nervous disorders.

In all persons afflicted with nervous disorders, there is a great delicacy, and sensibility of the whole nervous system, and an uncommon degree of weakness of the organs of digestion. These may be either natural or acquired. When owing to a defect in the constitution, they are hardly to be removed; but may be mitigated by proper care. When induced by diseases, as long or repeated fevers, profuse hæmorrhages, or the like, they prove also very obstinate, and will yield only to a course of regimen calculated to restore and invigorate the habit.

But nervous affections arise more frequently from causes, which it is in a great measure in our own power to avoid, than from diseases, or an original fault in the constitution, &c. Excessive grief, intense study, improper diet, and neglect of exercise, are the great sources of this extensive class of diseases.

It has been already observed, that grief indulged destroys the appetite and digestion, depresses the spirits, and induces an universal relaxation and debility of the whole system. Instances of this are daily to be seen. The loss of a near relation, or any other misfortune in life, is often sufficient to occasion the most complicated series of nervous symptoms. Such misfortunes indeed are not to be avoided, but surely their effects, by a vigorous and proper exertion of the mind, might be rendered less hurtful. For directions in this matter, we must refer the reader to the article **GRIEF**, in the chapter on the passions.

The effects of intense study are pretty similar to those occasioned by grief. It preys upon the animal spirits, and destroys the appetite and digestion. To prevent these effects, studious persons ought according to the Poet, *to toy with their books*.* They should never study too long at a time; nor attend long to one particular subject, especially if it be of a serious nature. They ought likewise to be attentive to

* Armstrong on Health.

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 digestion, and vitiate the humours. When nature is oppressed with fresh loads of food, before she has had time to digest and assimilate the former meal, her powers are weakened, and the vessels are filled with crude humours. On the other hand, when the food is not sufficiently nourishing, or is taken too seldom, the bowels are inflated with wind, and the humours, for want of regular fresh supplies of wholesome chyle, are vitiated. These extremes are therefore with equal care to be avoided. They both tend to induce a relaxation, and debility of the nervous system, with all its dreadful train of consequences.

But the most general cause of nervous disorders, is *indolence*. The active and laborious are seldom troubled with them. They are reserved for the children of ease and affluence, who generally feel their keenest force. All we shall say to such persons, is, that the means of prevention and cure are both in their own power. If the constitution of human nature be such, that man must either labour or suffer diseases, surely no individual has any right to expect an exemption from the general rule.

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.

OF THE TETANUS, OR THE LOCKED-JAW. §

UNDER this term may be comprehended the spasmodic affections, called *emprostotonos*, *opisthotonos*, and *trismus*, being one disease, differing only in the degree of its violence. When the body and head are bended forwards, it is called *emprostotonos*, when they are carried backwards, and immovably fixed, it bears the appellation of *opisthotonos*; and when the body is sustained in an erect position, by the muscle on the fore and back part of the trunk acting with equal strength, the disease is called *tetanus*. When the muscles of the jaw become more particularly affected, it is called *trismus*, or *locked-jaw*.

These spasmodic complaints affect both sexes, and no age is exempted from their violence. They affect the male oftener than the female, and more particularly those people who inhabit warm climates, and every climate at the warm season of the year. Sometimes they occur in winter, independent of wounds.

CAUSES.—Wounds in any part of the body are sometimes succeeded by this disease. But more particularly from those intendons, where a trifling injury will not unfrequently produce this complaint, when it is least expected. Whereas, at other times, a wound of considerable magnitude, under apparently similar circumstances, will have no such effect: and, even after operations in tendinous parts, it by no means a frequent

occurrence; when at other times, a simple fracture of the leg will produce it in all its force. Cold, when accompanied with moisture, will produce this disease; particularly when the body is exposed while asleep on a damp pavement, or in a damp cellar, immediately after being heated and fatigued by exercise. Children are frequently seized with this disease in a short time after delivery.

SYMPTOMS.—This disease, if it is from the effects of cold, generally comes on of a sudden. But when from a wound, it gradually approaches about the tenth, fourteenth, or twentieth days after the accident. It often comes on at a time when the wound gives but little uneasiness, and is nearly healed. The patient first complains of an uneasy sensation at the lower part of the breast bone, with a stiffness in the back part of the neck and muscles, of the lower jaw, which increase with a painful sensation at the root of the tongue, and a slight difficulty in swallowing. But no appearance of swelling can be observed in the throat. The muscles of the back now becomes rigid. This rigidity in a short time extends to those of the neck, attended with a pain in the direction of the spine of the back. At length the head, neck, and back bone are forcibly bent backwards.—The body becomes fixed in that position. The muscles of the jaw are now violently affected, attended with an impossibility of swallowing. Even liquids are thrown forcibly back through the nose. These symptoms generally take place on the second or third day, when the body is frequently seized with violent convulsive spasms; and the pain at the lower part of the breast bone increases, which shoots through towards the back.

The muscles of the limbs now become rigid, and the body is so much bent backwards as to rest on the back part of the head and heels. As the disease advances, the convulsive spasms become more violent. At length tetanus is produced, from the muscles on the fore and back part of the trunk, acting with an equal degree of vigour, sustaining the body in an erect position. The pulse is generally frequent with the other symptoms of fever, particularly when the disease is the consequence of cold. The bowels are generally costive, attended with a retraction of the belly. The urine is discharged with difficulty, and sometimes a suppression of that evacuation takes place.—The face appears pale, expressive of great anxiety and distress. The patient is seldom, if ever, delirious, although he slumbers but little, from which he frequently awakes on a sudden, with violent spasms. At length, the muscular system becomes more generally affected, and one universal convulsion closes the miserable existence of the patient.

MEDICINE.—In our attempt to cure this disease, the indications are nearly the same, when produced from cold or the consequence of a wound, except when the wound is without swelling and inflammation. It should then be dilated and dressed, with lint dipped in warm basilicon, or any other stimulating application. After this, two, three, or even four grains of opium should be given three or four times a-day, according to the urgency of the symptoms, and tendency to induce sleep; for astonishing quantities of this medicine may be given without having the least tendency to make the patient slumber. This remedy should be administered early, as well as large quantities of Madeira wine, before the swallowing becomes inter-

rupted; and the system should be charged with mercury, with as much expedition as possible. For this purpose two or three drachms of mercurial ointment must be rubbed into the inside of the legs, thighs, and arms, morning and evening, and likewise into the muscles more particularly affected with spasms. To co-operate with those medicines, the cold bath must be used, or cold water thrown over the body. The bowels should be kept open with calomel, castor-oil, and clysters. All those remedies must be used at an early period of the complaint, so as to make as formidable an attack as possible on this very formidable disease, which too frequently terminates in the death of the patient, in spite of every effort to save him.

When it is about to take place in infants, the bowels must be opened with calomel or castor-oil. But where it has actually taken place, little can be done. However a similar plan may be used with that recommended in grown persons.

CHAP. XLVI.

DISORDERS OF THE SENSES.

WE do not mean to treat of the nature of our sensations, or to give a minute description of the various organs by which they are performed, but to point out some of the diseases to which these organs are most liable, and to 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 physician; hence we may easily infer the danger of trusting them to ignorant quacks, who, without doubt put out more eyes than they cure. But, though the disease 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

* 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 the age, and the latter, besides being a good poet and philosopher, is master of all the learned languages, and a very considerable adept in the liberal arts.

venerary; the long use of bitters; the effluvia from acrid or volatile substances; various diseases; as the small-pox, measles, &c. but above all, from night-watching and candle-light studies. Long fasting is likewise hurtful to the eyes, and frequent heats and colds are no less pernicious. The eyes are often hurt by the stoppage of customary evacuations; as morning sweats; sweating of the feet; the menses in women; and the bleeding-piles in men. All kind 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 and fall. All excess and night studies are to be avoided. Such as do not choose a seton or an issue, will reap benefit from wearing a small Burgundy-pitch plaster between the shoulders.

A *gutta serena* or *amaurosis* is an abolition of the sight without any apparent cause or fault in the eyes. When it is owing to a decay or wasting of the optic nerve, it does not admit of a cure; but when it proceeds from a compression of the nerves by redundant humours, these may in some measure be drained off, and the patient relieved. For this purpose, the body must be kept open with the laxative mercurial pills. If the patient be young and of a sanguine habit he may be bled. Cupping, with scarifications on the back part of the head, will likewise be of use. A running at the nose may be promoted by volatile salts, stimulating powders, &c. But the most likely means for relieving the patient are issues or blisters kept open for a long time on the back part of the head, behind the ears, or on the neck. I have known these restore sight, even after it had been for a considerable time lost.

Should these fail, recourse must be had to mercurial salivations; or what will perhaps answer the purpose better, twelve grains of corrosive sublimate of mercury may be dissolved in an English pint and an 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 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 dissolved a recent cataract by giving the patient frequent purges with calomel, keeping a poultice of fresh hemlock constantly upon the eye, and a perpetual blister on the neck.*

* In both these cases electricity merits a trial.

The *myopia* or *short sightedness*, and the *presbyopia* or *seeing only at too great a distance*, are disorders which depend on the original structure or figure of the eye, therefore admit of no cure. The inconveniences arising from them may however be, in some measure, remedied by the help of proper glasses. The former requires the aid of a concave, and the latter of a convex glass.

A *strabismus*, or *squinting*, depends upon an irregular contraction of the muscles of the eye from a spasm, palsy, epilepsy, or an ill habit. Children often contract this disorder by having their eyes unequally exposed to the light. They may likewise acquire it by imitation from a squinting nurse or play-fellow, &c. As this disorder can hardly be cured, parents ought to be careful to prevent it. Almost the only thing which can be done for it is to contrive a mask for the child to wear, which will only permit him to see in a straight direction.

Spots or *specks* on the eyes are generally the effect of inflammation, and often appear after the small-pox, the measles, or violent ophthalmias. They are very difficult to cure, and often occasion total blindness. If the specks are soft and thin, they may sometimes be taken off by gentle caustics and discutients; as vitriol, the juice of celandine, &c. When these do not succeed, a surgical operation may be tried: the success of this however is always very doubtful.

The *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 cumphry roots and elder flowers. A soft poultice may be applied to the eyes; and the body should be kept open by gentle purgatives.

The *watery* or *weeping eye* is generally occasioned by a relaxation or weakness of the glandular parts of that organ. These may be braced and strengthened by bathing the eye with brandy and water, Hungary-water, rose-water, with white vitriol dissolved in it, &c.—Medicines which make a revulsion are likewise proper; as mild purgatives, perpetual blisters on the neck, bathing the feet frequently in 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 only be cured by a surgical operation.*

OF THE EAR.

THE functions of the ear may be injured by wounds, ulcers, or any thing that hurts its fabric. The hearing may likewise be hurt by excessive noise; violent colds in the head; fevers; hard wax, or other substances sticking in the cavity of the ear; too great a degree of moisture or dryness of the ear. Deafness is very often the effect of old age, and is incident to most people in the decline of life. Sometimes it is owing to an original fault in the structure or formation of the ear itself. When this is the case, it admits of no cure; and the unhappy person not only continues deaf, but generally likewise dumb, for life.†

* A weeping or watery eye is often the mark of a scrophulous habit.

† 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,

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 must 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 asafetida, may be mixed together, and a few drops of it put into the ear every night at bed-time, stopping them afterwards with a little wool or cotton.—Some, instead of oil, put a small slice of the fat of bacon into each ear, which is said to answer the purpose very well. When the ears abound with moisture, it may be drained off by an issue or seton, which should be made as near the affected parts as possible.

Some, for the cure of deafness, recommend the gall of an eel, mixed with spirit of wine, to be dropped into the ear; others, equal parts of Hungary-water, and spirit of lavender. Etmuller extols amber and musk; and Brookes says, he has often known hardness of hearing cured, by putting a grain or two of musk into the ear with cotton-wool. But these and other applications must be varied according to the cause of the disorder.*

Though such application 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 re-

yet nothing is more certain than that such persons may be taught not only to read and write, but also to speak and to understand what others say to them. Teaching the dumb to speak will appear paradoxical to those who do not consider that the formation of sounds is merely mechanical, and may be taught without the assistance of the ear. This is not only capable of demonstration, but it is actually reduced to practice by the ingenious Mr. Thomas Braidwood of Edinburgh. This gentleman has, by the mere force of genius and application, brought the teaching of dumb persons to such a degree of perfection, that his scholars are generally more forward in their education than those of the same age who enjoy all their faculties. They not only read and write with the utmost readiness, but likewise *speak*, and are capable of holding conversation with any person in the light.—What a pity any of the human species should remain in a state of idiotism, who are capable of being rendered as useful and intelligent as others! We mention this not only from humanity to those who have the misfortune to be born deaf, but also in justice to Mr Braidwood, whose success has far exceeded all former attempts this way; and indeed it exceeds imagination itself so far, that no person who has not seen and examined his pupils, can believe what they are capable of.—As this gentleman, however willing, is only able to teach a few, and as the far greater part of those who are born deaf cannot afford to attend him, it would be an act of great humanity, as well as of public utility, to erect an academy for their benefit.

* A gentleman, on whose veracity I can depend, told me, that after using many things to no purpose for an obstinate deafness, he was at last advised to put a few drops of his own urine warm into his ears every night and morning, from which he received great benefit. It is probable that a solution of *sal ammoniac*, in water, would produce the same effect.

quire a very delicate touch. For this reason, what we would chiefly recommend in deafness, is, to keep the head warm. From whatever cause, the disorder proceeds, this is always proper; and I have known more benefit from it alone, in the most obstinate cases of deafness, than from all the medicines I ever used.*

OF THE TASTE AND SMELL.

THOUGH these senses are not of so 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 whatever may in the least prove injurious. 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 in the brain itself at their origin. A defect or too great a degree of solidity of the small spongy bones of the upper jaw, the caverns of the forehead, &c. may likewise impair the sense of smelling. It may also be injured by a collection of fœtid matter in those caverns, which keeps constantly exhaling from them. Few things are more hurtful to the sense of smelling, than taking great quantities of snuff.

When the nose abounds with moisture, after gentle evacuations, such things as tend to take off irritation, and coagulate the thin sharp serum, may be applied; as the oil of anise mixed with fine flour; camphire dissolved in oil of almonds, &c. The vapours of amber; frankincense, gum-mastic, and benjamin, may likewise be received into the nose and mouth.

For moistening the mucus when it is too dry, some recommend snuff made of the leaves of marjoram, mixed with the oil of amber, marjoram and aniseed; or a sternutatory of calcined white vitriol; twelve grains of which may be mixed with two ounces of marjoram-water, and filtrated. The steam or vapour of vinegar upon hot iron received up the nostril is likewise of use for softening the mucus, opening obstructions, &c.

If there is an ulcer in the nose, it ought to be dressed with some emollient ointment, to which if the pain be very great, a little laudanum may be added. If it be a venereal ulcer, it is not to be cured without mercury. In that case, the solution of the corrosive sublimate in brandy may be taken, as directed in the gutta serena. The ulcer ought likewise to be washed with it; and the fumes of cinnabar may be received up the nostrils.

* An obstinate deafness has been cured by electricity.

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, aphæ, pellicles, warts, &c. covering the tongue: it may be depraved by a fault of the saliva, which being discharged into the mouth, gives the same sensations as if the food which the person takes had really a bad taste; or it may be entirely destroyed by injuries done to the nerves of the tongue and palate. Few things prove more hurtful either to the sense of tasting or smelling than obstinate colds, especially those which affect the head.

When the taste is diminished by filth, mucus, &c. the tongue ought to be scraped and frequently washed with a mixture of water, vinegar, and honey, or some other detergent. When the saliva is vitiated, which seldom happens unless in fevers or other diseases, the curing of the disorder is the cure of this symptom. To relieve it however in the mean time, the following things may be of use; if there be a bitter taste, it may be taken away by vomits, purges, and other things which evacuate bile. What is called a nidorous taste, arising from putrid humours, is corrected by the juice of citrons, oranges, and other acids. A salt taste is cured by plentiful delution with watery liquors. An acid taste is destroyed by absorbents, and alkaline salts, as powder of oyster-shells, salt of worm-wood, &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 spirit of hartshorn, *sal volatile oleosum* horse-radish, &c. may be taken inwardly; the disordered parts, at the same time, be frequently rubbed with fresh nettles or spirit of *sal ammoniac*. Blistering-plasters and sinapisms applied to the parts will likewise be of use, as also warm bathing, especially in the natural hot baths.

CHAP. XLVII.

OF A SCIRRHUS AND CANCER.

A SCIRRHUS is a hard indolent tumour usually seated in some of the glands; as the breasts, the arm pits, &c. If the tumour becomes large, unequal, of a livid, blackish, or leaden colour, and is attended with violent pain, it gets the name of an *occult cancer*. When the skin is broken and a *santes* or ichorus matter of an abominable foetid smell is discharged from the sore, it is called an open or ulcerated cancer. Persons after the age of forty-five, particularly women, and those who lead an indolent sedentary life, are most subject to this disease.

CAUSES.—This disease is often owing to suppressed evacuations; hence it proves so frequently fatal to women of a gross habit, particularly old maids and widows, about the time when the menstrual flux ceases. It may likewise be occasioned by excessive fear, grief, anger, religious melancholy, or any of the depressing passions. Hence the unfortunate, the choleric, and those persons, who devote themselves to a religious life in convents or monasteries, are often afflicted with it. It may also be occasioned by the long continued use of food that is too hard of digestion, or of an acrid nature; by barrenness; indolence; celibacy; 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 hazle-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 becomes intolerable; the appetite fails; the strength is exhausted by a continual hectic fever; at last a violent hæmorrhage, or discharge of blood, from some part of the body, with faintings, or convulsion fits, generally put an end to the miserable patient's life.

REGIMEN.—The diet ought to be light, but nourishing. All strong liquors, and high seasoned or salted provisions, are to be avoided. The

patient may take as much exercise as he can easily bear; and should use every method to divert thought, and amuse his fancy. All kinds of external injury are carefully to be guarded against, particularly of the affected part, which ought to be defended from all pressure, and even from the external air, by covering it with fur or soft flannel.

MEDICINE.—This is one of those diseases for which no certain remedy is yet known. Its progress however, may sometimes be retarded, and some of its most disagreeable symptoms mitigated, by proper applications. One misfortune attending the disease is, that the unhappy patient often conceals it too long. Were proper means used in due time, a cancer might often be cured; but after the disorder has arrived at a certain height, it generally sets all medicine at defiance.

When a scirrhus tumour is first discovered, the patient ought to observe a proper regimen, and to take twice or thrice a-week a dose of the common purging mercurial pill. Some blood may also be let, and the part affected may be gently rubbed twice a-day with a little of the mercurial ointment, and kept warm with fur or flannel. The food must be light, and a pint of the decoction of woods or sarsaparilla may be drank daily. I have sometimes discussed hard tumours, which had the appearance of beginning cancers, by a course of this kind.

Should the tumour however not yield to this treatment, but, on the contrary, become larger and harder, it will be proper to extirpate it, either by the knife or caustic. Indeed, whenever this can be done with safety, the sooner it is done the better. It can answer no purpose to extirpate a cancer after the constitution is ruined, or the whole mass of humours corrupted by it. This, however, is the common way, which makes the operation so seldom succeed. Few people will submit to the extirpation till death stares them in the face; whereas, if it were done early, the patient's life would not be endangered by the operation, and it would generally prove a radical cure.

When the cancer is so situated that it cannot be cut off, or if the patient will not submit to the operation, such medicines as will mitigate or relieve the most urgent symptoms may be used. Dr. Home says, that half a grain of the corrosive sublimate of mercury, dissolved in a proper quantity of brandy, and taken night and morning, will often be of service in cancers of the face and nose. He likewise recommends an infusion of the *solanum* or nightshade, in cancers of the breasts.

But the medicine most in repute at present for this disease is hemlock. Dr. Stork, 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 a day with remarkably good effects. The hemlock may also be used externally either as a poultice or fomentation. The sore may likewise be kept clean by injecting daily a strong decoction of the tops 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 be frequently made fresh, and the patient may take it at pleasure. Two, three, or even four English pints of it may be drank every day for a considerable time. No benefit can be expected from any medicine in this disease, unless it be persisted in for a long time. It is of too obstinate a nature to be soon removed; and, when it admits of a cure at all, it must be brought about by inducing an almost total change of the habit, which must always be a work of time. Setons or issues in the neighbourhood of the cancer have sometimes good effects.†

When all other medicines fail, recourse must be had to opium, as a kind of solace. This will not indeed cure the disease, but it will

* 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 either with an infusion of the bark, or a decoction of carrot, and that the patient should take four or five times a-day, a glass of good wine, with half a 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 above two years with manifest advantage; but being told by an eminent surgeon, that the bark would not cure a cancer, and that the sores ought not to be washed, she discontinued the practice, and died in a few weeks. This course was not expected to cure the cancer, but to prolong the patient's life, which it evidently did almost to a miracle.

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.*

CHAP. XLVIII.

OF POISONS.

EVERY person ought, in some measure, to be acquainted with the nature and cure of poisons. They are generally taken unawares, and their effects are often so sudden and violent, as not to admit of delay, or allow time to procure the assistance of physicians. Happily indeed no great degree of medical knowledge is here necessary; the remedies for most poisons being generally at hand, 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 they can do nothing for the patient, unless they know the particular antidote to that kind of 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 in the stomach before it occasions sickness, with an inclination to vomit. This shews plainly what ought to be done. Indeed common sense dictates to every one, that if any thing has been taken into the stomach which endangers life, it ought immediately to be discharged. Were this duly regarded, the danger arising from poison 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 poisons; neither shall we mention the boasted antidotes, which have been recommended either for preventing or obviating their effects; but shall content ourselves with pointing out the poisons most common in this country, and the means of avoiding their dangerous consequences.

Poisons either belong to the mineral, the vegetable, or the animal kingdom.

Mineral poisons are commonly of an acrid or corrosive quality; as arsenic, cobalt, the corrosive sublimate of mercury, &c.

Those of the vegetable kind are generally of a narcotic or stupe-

* 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.

fective quality; as poppy, hemlock, henbane, berries of the deadly night-shade, &c.

Poisonous animals communicate their infection either by the bite or sting. This poison is very different from the former, and only produces its effects when received into the body by a wound.

MINERAL POISONS—Arsenic is the most common of this class; and, as the whole of them are pretty similar both in their effects and method of cure, what is said with respect to it will be applicable to every other species of corrosive poison.

When a person has been taking 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, hickuping, faintings, and coldness of the extremities. To these succeed black vomits, fetid stools, with a mortification of the stomach and intestines, which are the immediate forerunners of death.

On the first appearance of these symptoms the patient should drink large quantities of new milk and salad oil till he vomits; or he may drink warm water mixed with oil. Fat broths are likewise proper, provided they can be got ready in time. Where no oil is to be had, fresh butter may be melted and mixed with the milk or water. These things are to be drank as long as the inclination to vomit continues. Some have drank eight or ten English quarts before the vomiting ceased; and it is never safe to leave off drinking while one particle of the poison remains in the stomach.

These oily or fat substances not only provoke vomiting, but likewise blunt the acrimony of the poison, and prevent its wounding the bowels; but if they should not make the person vomit, half a drachm or two scruples of the powder of ipecacuanha must be given, or a few spoonsful 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 the poison has got down to the intestines, clysters of milk and oil must be very frequently thrown up; and the patient must drink emollient decoctions of barley, oat-meal, 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 wild 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 sto-

mach, often proves 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 the mineral substances: no time, however, ought to be lost in having them discharged.

Opium, being frequently taken by mistake, merits particular attention. It is used as a medicine both in a solid and liquid form, which latter commonly goes by the name of laudanum. It is indeed a valuable medicine when taken in proper quantity; but as an over-dose proves a strong poison, we shall point out its common effects, together with the method of cure.

An over-dose of opium generally occasions great drowsiness, with stupor and other apoplectic symptoms. Sometimes the person has so great an inclination to sleep, that it is almost impossible to keep him awake. Every method must however be tried for this purpose. He should be tossed, shaken and moved about. Sharp blistering-plasters should be applied to his legs or arms, and stimulating medicines, as salts of hartshorn, &c. held under his nose. It will also be proper to let blood. At the same time every method must be taken to make him discharge the poison. This may be done in the manner directed above, viz. by the use of strong vomits, drinking plenty of warm water with oil, &c.

Mead, besides vomits, in this case, recommends acid medicines with lixivial salts. He says, that he has often given salt of wormwood mixed with juice of lemon in repeated doses with great success.

If the body should remain weak and languid after the poison has been extracted, 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, wolves, and dogs. Hence it is called the *rabies canina*, or dog-madness. It so seldom happens that any person is bit by the two 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, shews an aversion to food and company; he does not bark as usual, but seems to murmur, is peevish, and apt to bite strangers; his ears and tail droop more than usual, and he appears drowsy. Afterwards he begins to loll out his tongue, and froth at the mouth, his eyes 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 seldom 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 most liable to it.

When any person has been bit by a dog, the strictest inquiry ought to be made whether the animal was really mad. Many disagreeable consequences arise from neglecting to ascertain this point. Some people have lived in continual anxiety for many years, because they had been bit by a dog which they believed to be mad; but, as he had been killed on the spot, it was impossible to ascertain the fact. This should induce us, instead of killing a dog the moment he has bit any person, to do all in our power to keep him alive, at least till we 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 in self-defence. He soon gets knocked on the head, and it passes currently that he was mad, as it is then impossible to prove the contrary.

This being the true history of, by far, the greater part of those dogs which pass for mad, is it any wonder that numberless whimsical medicines have been extolled for preventing the effects of their bite? This readily accounts for the great variety of infallible remedies for the bite of a mad dog, which are to be met with in almost every family. Though not one in a thousand has any claim to merit, yet they are all supported by numberless vouchers. No wonder that imaginary diseases should be cured by imaginary remedies. In this way, credulous people first impose upon themselves, and then deceive others. The same medicines 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 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 effects. 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 the bite of a mad dog, are chiefly such as promote the different secretions, and antispasmodics.

Dr. Mead recommends a preventive medicine, which he says he never knew fail, though in the space of thirty years he had used it a thousand times.

The Doctor's prescription is as follows:

"Take ash-coloured ground liver-wort, cleaned, dried, and powdered, half an ounce; of black pepper powdered, a quarter of an ounce. Mix these well together, and divide the powder into four doses; one of which must be taken every morning fasting, for four mornings successively, in half a pint of cows milk warm.

"After these four doses are taken, the patient must go into the cold bath, or a cold spring or river, every morning fasting, for a month; he must be dipped all over, but not stay in (with his head above water) longer than half a minute, if the water be very cold. After this he must go in three times a-week for a fortnight longer.

"The person must be bled before he begins to use the medicine.*"

We shall next mention the famous East-India specific as it is called. This medicine is composed of cinnabar and musk. It is esteemed a great antispasmodic; and, by many, extolled as an infallible remedy for preventing the effects of the bite of a mad dog.

"Take native and factitious cinnabar, of each twenty-four grains, musk sixteen grains. Let these be made into a fine powder, and taken in a glass of arrack or brandy."

This single dose is said to secure the person for thirty days, at the end of which it must be repeated; but if he has any symptoms of the disease, it must be repeated in three hours.

The following is likewise reckoned a good 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 drachms, camphire one drachm; 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 drachm 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 peo-

* 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.

ple to trust any one of them; but from a proper combination of their different powers, there is the greatest reason to hope for success.

The great error in the use of these medicines, lies in not taking them for a sufficient length of time. They are used more like charms, than medicines intended to produce any change in the body. To this, and not to the insufficiency of the medicines, we must impute their frequent want of success.

Dr. Mead says, that the virtue of his medicine consists in promoting urine. But how a poison should be expelled by urine, with only three or four doses of any medicine, however powerful, it is not easy to conceive. More time is certainly necessary, even though the medicine were more powerful than that which the Doctor prescribes.

The East-India specific is still more exceptionable on this account.

As these and most other medicines, taken singly, have frequently been found to fail, we shall recommend the following course :

If a person is 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 drachm of the mercurial ointment. This may be done for ten or twelve days at least.

When this course is over, he may take a purge or two, and wait a few days till the effect of the mercury be gone off. He must then begin to use the cold bath, into which he may go every morning for five or six weeks. If he should feel cold and chilly for a long time after coming out of the cold bath, it will be better to use a tepid one, or to have the water a little warmed.

In the meantime we would advise him not to leave off all internal medicines, but to take either one of the boluses of snake-root, asafetida, and camphire; or one of the powders of nitre, camphire, and snake-root, twice a-day. These may be used during the whole time he is bathing.

During the use of the mercurial ointment, the patient must keep within doors, and take nothing cold.

A proper regimen must be observed throughout the whole course. The patient should abstain from flesh, and all salted and high-seasoned provisions. He must avoid strong liquors, and live mostly upon a light and rather spare diet. His mind should be kept as easy and cheerful as possible, and all excessive heat and violent passions avoided with the utmost care.

I have never seen this course of medicine, with proper regimen, fail to prevent the 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 were 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 dogs as much as possible, as the disease is often upon them for some time before its violent symptoms appear. The hydrophobia has been occasioned by the bite of a dog which shewed no other symptoms of the disease but listlessness and a sullen disposition.

Though we do not mean to treat fully of the cure of the hydrophobia, yet we are far from reckoning it incurable. The notion that this disease could not be cured, has been productive of the most horrid consequences. It was usual either to abandon the unhappy persons, as soon as they were seized with the disease, to their fate, to bleed them to death, or to suffocate them between mattresses or feather-beds, &c. This conduct certainly deserved the severest punishment! We hope, for the honour of human nature, it will never again be heard of.

I have never had an opportunity of treating this disease, and therefore can say nothing of it from my own experience; but the learned Dr. Tissot says, it may be cured in the following manner:

1. The patient must be bled to a considerable quantity, and this may be repeated twice, or thrice, or even a fourth time, if circumstances require it.

2. The patient should be put, if possible, into a warm bath; and this should be used twice a-day.

3. He should every day receive two, or even three emollient clysters.

4. The wound, and the parts adjoining to it, should be rubbed with the mercurial ointment twice a-day.

5. The whole limb which contains the wound should be rubbed with oil, and be wrapped up in an oily flannel.

6. Every three hours a dose of Cob's powder should be taken in a cup of the infusion of lime-tree and elder-flowers. This powder is made, by rubbing together in a mortar, to a very fine powder of native and factitious cinnabar, each twenty-four grains; of musk, sixteen grains.*

7. The following bolus is to be given every night, and to be repeated in the morning, if the patient is not 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;

* 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.

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 panada, 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 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 always 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 country are really other diseases, and proceed from quite different causes.

We cannot however make the same observation with regard to poisonous vegetables. These abound every where, and prove often fatal to the ignorant and unwary. This indeed is chiefly owing to carelessness. Children ought early to be cautioned against eating any kind of fruit,

* The practice of sucking out poisons is very ancient; and indeed nothing can be more rational. When the bite cannot be cut out, this is the most likely way for extracting the poison. There can be no danger in performing this office, as the poison does no harm unless it be taken into the body by a wound. The person who sucks the wound, ought however to wash his mouth frequently with salad-oil, which will secure him from even the least inconveniency. The *PSYLLI* in Africa, and the *MARSI* in Italy, were famed for curing the bites of poisonous animals by sucking the wound; and we are told, that the Indians in North-America practise the same at this day.

† Salad or sweet oil, not only applied outwardly, but taken inwardly, is not only efficacious in curing the bite of the Viper, but also of the rattle-snake.

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 often prove 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, wolfs-bane, 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 bite of the rattle-snake.—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 finds no relief in an hour after, you may give another spoonful, which never fails.—If the roots are dried, they must be moistened with a little water. To the wound may be applied a leaf of good tobacco moistened with rum.

We give this upon the faith of Dr. Brookes, who says it was the invention of a negro; for the discovery of which he had his freedom purchased, and a hundred pounds *per annum* settled upon him during life, by the general Assembly of Carolina.

It is possible there may be in nature specific remedies for every kind of poison; but as we have very little faith in any of those which have yet been pretended to be discovered, we shall beg leave again to recommend the most strict attention to the following rules, *viz.* That when any poisonous 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 anti-spasmodics, or such medicines as take off tension and irritation; the chief of which are opium, musk, camphire, and asafoetida.

KETTERING'S SPECIFIC FOR THE HYDROPHOBIA.

*Extract from the Journals of the Legislature of Pennsylvania, of
March 6, 1802.*

“ The committee appointed to hear the communication of Valentine Kettering, relative to his cure of the bite of a mad animal,

REPORT—“ That they conferred with the said Kettering on that subject, who informed them, that he uses the herb called Red Chickweed, which, when ripe, or in full bloom, he gathers, and dries in the shade, reduces it to a powder, and gives a small table-spoonful at one time, to a grown person, in beer or water, in weight one drachm and one scruple: for a child, an equal dose, but given at three different times, or it may be eaten on bread with butter, honey, or molasses, as the person chuses. For a beast, a large spoonful; if by weight, two drachms and one scruple. When used green for a beast, cut the herb fine, and mix with bran, &c. When given to swine, mix the powdered herb with meal of any kind (dose as above) in little balls.

“ He assures us that he has given it to persons many weeks after they were bitten, and never knew it fail; and never gives more than a single dose, unless to children, as above. He further says, that it is an excellent cure for cuts or wounds on the human body.

“ When green, mash it; drop of the juice into the wound, and bind the herb, so mashed, on. The proper time to sow the seed is about the beginning of April, and it should be sown thin.

“ They also learn, from the Rev. Henry Muhlenberg, that it is an annual plant, known in Switzerland and Germany, by the name of Gauchheil, Rother Meyer, or Rother Hunerdarm; in England, Red Pimpernel; by botanists, as he is informed, Anagallis Phœnicea. That it should be gathered in June, when in full blossom. In Germany, he understands the usual dose was thirty grains of the powder, taken four times a-day, and continued one week, in smaller doses; the wound washed with a decoction of the herb, and some of the powder strewed in it. That the plant is cultivated in many gardens, and grows near Baltimore and Havre-de-Grace, spontaneously, in great plenty.”

 CHAP. XLIX.

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 an 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 of trusting to any particular nostrum for the cure of it. Such nostrums are however generally administered in the same manner to all who apply for them, without the least regard to the state of the disease, the constitution of the patient, the degree of infection, and a thousand other circumstances of the utmost importance.

Though the venereal disease is generally the fruit of unlawful embraces, yet it may be communicated to the innocent as well as the guilty. Infants, nurses, midwives, and married women whose husbands lead dissolute lives, are often affected with it, and frequently lose their lives by not being aware of their danger in due time. The unhappy condition of such persons will certainly plead our excuse, if any excuse be necessary, for endeavouring to point out the symptoms and cure of this too common disease.

To enumerate all its different symptoms, however, and to trace the disease minutely through its various stages, would require a much larger space than falls to this part of my subject; I shall therefore confine my observations chiefly to circumstances of importance, omitting such as are either trifling, or which occur but seldom. I shall likewise pass over the history of the disease, with the different methods of treatment which it has undergone since it was first introduced into Europe, and many other circumstances of a similar nature; all of which though they might tend to amuse the reader, yet could afford him little or no useful knowledge.

OF THE VIRULENT GONORRHOEA.

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 inflammation likewise begin to appear.

As the disorder advances, the pain, heat of urine, and running, increase

crease, while fresh symptoms daily ensue. In men, the erections become painful and involuntary, and are more frequent and lasting than when natural. This symptom is most troublesome when the patient is warm in bed. The pain which was at first only perceived towards the extremity, now begins to reach all up the urinary passage, and is most intense just after the patient has done making water. The running gradually recedes from the colour of seed, grows yellow, and at length puts on the appearance of mucus.

When the disorder has arrived at its height, all the symptoms are more intense; the heat of the urine is so great, that the patient dreads the making water; and though he feels a constant inclination this way, yet it is rendered with the greatest difficulty, and often only by drops: the involuntary erections now become extremely painful and frequent; there is also a pain, heat, and sense of fulness about the seat, and the running is plentiful and sharp, of a brown, greenish, and sometimes of a bloody colour.

By a proper treatment, the violence of the symptoms gradually abates; the heat of urine goes off; the involuntary and painful erections, and the heat and pain about the seat, become easier; the running also gradually decreases, grows whiter and thicker, till at last it entirely disappears.

By attending to these symptoms the gonorrhœa may be generally distinguished from any other disease. There are however some few disorders for which it may be mistaken, as an ulcer in the kidneys or bladder, the *fluor albus*, or whites in women, &c. But in the former of these, the matter comes away only with the urine, or when the sphincter of the bladder is open; whereas in the 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 expect 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, spiritous liquors, rich sauces, spices, salted, high seasoned and smoke-dried provisions, &c. also all aromatic and stimulating vegetables, as onions, garlic, shallot, nutmeg, mustard, cinnamon, mace, ginger, and such like. His food ought chiefly to consist of mild vegetables, milk, broths, light puddings, panada, gruels, &c. His drink may be barley-water, milk and water, decoctions of marsh-mallows and liquorice, linseed tea, or clear whey. Of these he ought to drink plentifully. Violent exercise of all kinds, especially riding on horse-back, 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 proper.

Sometimes indeed a slight infection may be carried off in a few days, by bathing the parts in warm milk and water, and injecting frequently up the urethra a little sweet oil or linseed tea, about the warmth of new milk. Should these not succeed in carrying off the infection, they will at least have a tendency to lessen its virulence.

To effect a cure, however, astringent injections will be found necessary. These may be various ways prepared, but I think those made with the white vitriol are both most safe and efficacious. They can be made stronger or weaker as circumstances may require; but it is best to begin with the more gentle, and increase their power if necessary. I generally order a drachm 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 a gonorrhœa. They ought not, however, to be of the strong or drastic kind. Whatever raises a violent commotion in the body increases the danger, and tends to drive the disease deeper into the habit. Procuring two or three stools every second or third day for the first fortnight, and the same number every fourth or fifth day for the second, will generally be sufficient to remove the inflammatory symptoms, to diminish the running, and to change its colour and consistence. It gradually becomes more white and ropy as the virulence abates.†

When the inflammatory symptoms run high, bleeding is always necessary at the beginning. This operation, as in other topical inflammations, must be repeated according to the strength and constitution of the patient, and the vehemence and urgency of the symptoms.

Medicines which promote the secretion of urine are likewise proper in this stage of the disorder. For this purpose an ounce of nitre and two ounces of gum arabic, pounded together, may be divided into twenty-four doses, one of which may be taken frequently in a cup

* 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 to 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 drachms, or, if his constitution requires it, an ounce of the former, with half an ounce of the latter. These may be dissolved in an English pint of boiling water, whey, or thin water-gruel, and taken early in the morning.

If an infusion of senna and tamarinds be more agreeable, two drachms of the former, and an ounce of the latter, may be infused all night in an English pint of boiling water. The infusion may be strained next morning, and half an ounce of Glauber's salts dissolved in it. A tea-cupful of this infusion may be taken every half hour till it operates.

Should the patient prefer an electuary, the following will be found to answer very well. Take of the lenitive electuary four ounces, cream of tartar, two ounces, jalap in powder, two drachms, rhubarb, one drachm, and as much of the syrup of pale roses as will serve to make up the whole into a soft electuary. Two or three tea-spoonsful of this may be taken over night, and about the same quantity next morning, every day that the patient chuses 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.

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 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 known 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 only able 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 render 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 sali-

vation 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 of the Japonic confection.

To prevent the disagreeable circumstance of the mercury's affecting the mouth too much, or bringing on a salivation, it may be combined with purgatives. With this view the laxative mercurial pill has been contrived, the usual dose of which is half a drachm, or three pills, night and morning, to be repeated every other day; but the safer way for the patient to begin with two, or even with one pill, gradually increasing the dose.

To such persons as can neither swallow a bolus nor a pill, mercury may be given in a liquid form, as it can be suspended even in a watery vehicle, by means of gum-arabic; which not only serves this purpose, but likewise prevents the mercury from affecting the mouth, and renders it in many respects a better medicine.*

It happens very fortunately for those who cannot be brought to take mercury inwardly, and likewise for persons whose bowels are too tender to bear it, that an external 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 use of the ointment, the inflammation of the genital parts, together with the heat and feverishness, should return, or if the mouth should grow sore, the gums tender, and the breath become offensive, a dose or two of Glauber's salts, or some other cooling purge, may be taken and the rubbing intermitted for a few days. As soon however as the signs of spitting are gone off, if the virulency be not quite corrected, the ointment must be repeated, but in smaller quantities, and at longer intervals than before. Whatever

* 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-spoonsful 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.

way mercury is administered, its use may be persisted in as long as any virulency is suspected to remain.

During this which may be called the second stage of the disorder, though so strict a regimen is not necessary as in the first or inflammatory state, yet intemperance of every kind must be avoided. The food must be light, plain, and of easy digestion; and the greatest indulgence that may be allowed with respect to drink is, a little wine diluted with a sufficient quantity of water. Spirituous liquors are to be avoided in every shape. I have often known the inflammatory symptoms renewed and heightened, the running increased, and the cure rendered extremely difficult and tedious, by one fit of excessive drinking.

When the above treatment has removed the heat of urine, and the 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 gonorrhoea 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 Gonorrhoea frequently repeated, or improperly treated, often ends in a gleet, which may either proceed from a relaxation, or from some remains of the disease. It is however of the greatest importance in the cure of the gleet, to know from which of these causes it proceeds. When the discharge proves very obstinate, and receives little or no check from astringent remedies, there is ground to suspect that it is owing to the latter; but if the drain is 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 gonorrhoea, the patient may have recourse to stronger and more powerful astringents, as the Peruvian bark,* alum, vitriol. galls, tormentil, bistort, baldustines, tincture of gum kino, &c. The injections may be rendered more astringent by the addition of a few grains of alum, or increasing the quantity of vitriol as far as the parts are able to bear it.

The last remedy which we shall mention in this case is the cold bath than which there is not perhaps a more powerful bracer in the whole compass of medicine. It ought never to be omitted in this species of gleet,

* 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 an half 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.

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, Pymont, or Bristol waters, with which a little claret or red wine may sometimes be mixed. Any person may now afford to drink these waters, as they can be every where prepared at almost no expense, by a mixture of common chalk and oil of vitriol.

When the gleet does not in the smallest degree yield to these medicines, there is reason to suspect that it proceeds 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, sarsaparilla, sassafras, or the like.

Mr. Fordyce says, he has seen many obstinate gleans, of two, three or four years standing, effectually cured by a mercurial imunction, when almost every other medicine has been tried in vain. Dr. Chapman seems to be of the same opinion; but says, he has always found the mercury succeed best in this case when joined with terebinthinate and other agglutinating medicines. For which reason the Doctor recommends pills made of calomel and Venice turpentine;* and desires that their use may be accompanied with a decoction of guaiacum or sarsaparilla.

The last kind of remedy which we shall mention for the cure of ulcers in the urinary passage, are the suppurating candles or bougies: as these are prepared various ways, and are generally to be bought ready made, it is needless to spend time in enumerating the different ingredients of which they are composed, or teaching the manner of preparing them. Before a bougie be introduced into the urethra, however, it should be smeared all over with sweet oil, to prevent it from stimulating too suddenly; it may be suffered to continue in from one to seven or eight hours, according as the patient can bear it. Obstinate ulcers are not only often healed, but tumours and excrescences in the urinary passages taken away, and an obstruction of urine removed by means of bougies. Obstinate gleans may be removed by the use of bougies.

* 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 and morning. If, during the use of these pills, the mouth should grow sore, or the breath become offensive, they must be discontinued until these symptoms disappear.

OF THE SWELLED TESTICLE.

THE swelled testicle may either proceed from infection lately contracted, or from the venereal poison lurking in the body: the latter indeed is not very common, but the former frequently happens both in the first and second stages of a gonorrhœa; particularly when the running is unseasonably checked by cold, hard drinking, strong drastic purges, violent exercise, the too early use of astringent medicines, or the like.

In the inflammatory stage, bleeding is necessary, which must be repeated according to the urgency of the symptoms.* The food must be light, and the drink diluting. High seasoned food, flesh, wines, and every thing of a heating nature, are to be avoided. Fomentations are of singular service. Poultices of bread and milk, softened with fresh butter or oil, are likewise very proper, and ought constantly to be applied when the patient is in bed; when he is up the testicles should be kept warm, and supported by a 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 anti-venereal course as shall ensure him against any future uneasiness. For this purpose, besides rubbing the mercurial ointment on the part, if free from pain, or on the thighs, as directed in the gonorrhœa, the patient must be confined to bed, if necessary, for five or six weeks, suspending the testicle all the while with a bag or truss, and plying him inwardly with strong decoctions of sarsaparilla.

When these means do not succeed, and there is reason to suspect a scrophulous or cancerous habit, either of which may support a scirrhus 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. Stork in scirrhus 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 scirrhus had begun to be affected with pricking and lancing pains.

OF BUBOES.

VENEREAL buboes are hard tumours seated in the groin, occasioned by the venereal poison lodged in this part. They are of two kinds; *viz.* such as proceed from a recent infection, and such as accompany a confirmed lues.

The cure of recent buboes, that is, such as appear so soon after impure coition, may be first attempted by *dispersion*, and, if that should not succeed, by *suppuration*. To promote the dispersion of a buboe, the same regimen must be observed as was directed in the first stage of a gonorrhœa.

* I have been accustomed for some time past to apply leeches to inflamed testicles, which practice has always been followed by the most happy effects.

† The extract of hemlock may be made into pills, and taken in the manner directed under the article Cancer.

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 subdued.*

But if the bubo should, from the beginning, be attended with great heat, pain, and pulsation, it will be proper to promote its suppuration. For this purpose the patient may 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 a caustic or a lancet, and afterwards dressed with digestive ointment.

It sometimes however happens, that buboes can neither be dispersed nor brought to a suppuration, but remain hard, indolent tumours. In this case the indurated glands must be consumed by caustic; if they should become scirrhous, they must be dissolved by the application of hemlock, both externally and internally, as directed in the scirrhous testicles.

OF CHANCRES.

CHANCRES are superficial, callous, eating ulcers; which may happen either with or without a gonorrhœa. They are commonly seated about the glans, and make their appearance in the following manner: First a little red pimple arises, which soon becomes pointed at top, and is filled with a whitish matter inclining to yellow. This pimple is hot, and itches generally before it breaks: afterwards it degenerates into an obstinate ulcer, the bottom of which is usually covered with a viscid mucus, and whose edges gradually become hard and callous. Sometimes the first appearance resembles a simple exocriation 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

* For the dispersion of a bubo, a number of leeches applied to the part affected will be found equally efficacious as in the inflamed testicle.

† When 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 very necessary for nurses who reside in the neighbourhood of great towns.

must observe the cooling regimen, lose a little blood, and take some gentle doses of salts and manna. The parts affected ought frequently to be bathed, or rather soaked in warm milk and water, and, if the inflammation be great, an emollient poultice or cataplasm may be applied to them. This course will, in most cases, be sufficient to abate the inflammation, and prepare the patient for the use of mercury.

Symptomatic chancres are commonly accompanied with ulcers in the throat, nocturnal pains, 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 given also a short view of their proper treatment; there are, however, several others which sometimes attend this disease, as a *strangury*, or obstruction of urine, a *phymosis*, *paraphymosis*, &c.

A strangury may either be occasioned 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 or uneasiness of the part, a perpetual desire to make water, while the patient can only render a few drops, and a troublesome *tencismus*, or constant inclination to go to stool.

When the strangury is owing to spasms, 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 marshmallows, four ounces of the oil sweet almonds, and half an ounce of nitre, may be added. If these remedies should not relieve the complaint, and a total suppression of urine should come on, bleeding must be repeated, and the patient set in a warm bath up to the middle. It will be proper in this case to discontinue the diuretics, and to draw off the water with a catheter; but as the patient is seldom able to bear its being introduced, we would rather recommend the

* I have found it answer extremely well to sprinkle chancres twice a-day with calomel. This will often perform a cure without any other application whatever. If the chancres are upon the GLANS, they may be washed with milk and water, a little warm, and afterwards the calomel may be applied as above.

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 the symptoms of a beginning mortification appear. When this is the case, the prepuce must be scarified with a lancet, and if necessary, divided, in order to prevent a strangulation, and set the imprisoned glans at liberty. We shall not describe the manner of performing this operation, as it ought always to be done by a surgeon. When a mortification has actually taken place, it will be necessary, besides performing the above operations, to foment the parts frequently with cloths wrung out of a strong decoction of camomile flowers and bark, and to give the patient a drachm of the bark in powder every two or three hours.

With regard to the *priapism*, *chordee*, and other distortions of the *penis*, their treatment is no way different from that of the gonorrhœa. When they prove very troublesome, the patient may take a few drops of laudanum at night, especially after the operation of a purgative through the day.

OF A CONFIRMED LUES.

WE have hitherto treated of those affections in which the venereal poison is supposed to be confined chiefly to the particular part by which it was received, and shall next take a view of the lues in its confirmed state; that is, when the poison is actually received into the blood, and circulating with it through every part of the body, mixes with the several secretions, and renders the whole habit tainted.

The symptoms of a confirmed lues are, buboes in the groin, pain of the head and joints, which are peculiarly troublesome in the night, or when the patient is warm in bed; scabs and scurfs in various parts of the body, especially on the head, of a yellowish colour, resembling a honey-comb; corroding ulcers in various parts of the body, which generally begin about the throat, from whence they creep gradually, by the palate, towards the cartilage of the nose, which they destroy; excrescences or exostoses arise in the middle of the bones, and their spongy ends become brittle, and break upon the least accident; at other times they are soft, and bend like wax; the conglobate glands become hard and callous, and form, in the neck, armpits, groin, and mesentary, 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, nodos, tophs, &c.*; the eyes are affected with itching, pain, redness, and sometimes with total blindness, and the ears with a singing noise, pain, and deafness, whilst their internal substance is ulcerated and rendered carious; at length all the animal, vital, and natural functions are depraved; the face becomes pale and livid; the body emaciated and unfit for motion, and the miserable patient falls into an atrophy or wasting consumption.

Women have symptoms peculiar to the sex; as cancers of the breast; a suppression or overflowing of the menses; the whites; hysteric affections; an inflammation, abscess, scirrhus, gangrene, cancer, or ulcer of the womb; they are generally either barren or subject to abortion; or, if they bring children into the world, they have 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 a great variety of forms, with nearly the same success.* Some time ago it was reckoned impossible to cure a confirmed lues without a salivation. This method is now however pretty generally laid aside, and mercury is found to be as efficacious, or rather more so, in expelling the venereal poison, when administered in such a manner as not to run off by the salivary glands.

Though many are of opinion, that the mercurial ointment is as efficacious as any other preparation of that mineral; yet experience has taught me to think otherwise. I have often seen the most obstinate venereal cases, where great quantities of mercurial ointment had been used in vain, yield to the saline preparations of mercury. Nor am I singular in this opinion. My ingenious friend, Mr. Clare, an eminent surgeon of this city, assures me, that for some time past he has employed, in venereal cases, a saline preparation of mercury with most happy success. This preparation rubbed with a sufficient quantity of any mild powder, he applies, in small portions to the tongue, where, with a gentle degree of friction, it is immediately absorbed, and produces its full effect upon the system, without doing the least injury to the stomach or bowels; a matter of the greatest importance in the application of this most active and powerful remedy.

It is impossible to ascertain either the exact quantity of medicines that must be taken, or the time they ought to be continued, in order to perform a cure. These will ever vary according to the constitution of the patient, the season of the year, the degree of infection, the time it has lodged in the body, &c. But though it is difficult, as Astruc observes, to determine *a priori*, what quantity of mercury will, in the whole, be necessary to cure this distemper completely; yet it may be judged of *a posteriori*, from the abatement and ceasing of the symptoms. The same author adds, that commonly not less than two ounces

* The preparations which I now chiefly use, in the confirmed lues, are calomel and calcined mercury.

of the strong mercurial ointment is sufficient, and not more than three or four ounces necessary.

The only chemical preparation of mercury which we shall take notice of, is the corrosive sublimate. This was some time ago brought into use for the venereal disease, in Germany, by the illustrious Baron Van Swieten; and was soon after introduced into Britain by the learned Sir John Pringle, at that time physician to the army. The method of giving it is as follows: One grain of corrosive sublimate is dissolved in two ounces of French brandy or malt spirits; and of this solution, an ordinary table-spoonful, or the quantity of half an ounce, is to be taken twice a-day, and to be continued as long as any symptoms of the disorder remain. To those whose stomach cannot bear the solution, the sublimate may be given in form of a pill.*

Several roots, woods, and barks, have been recommended for curing the venereal disease; but none of them have been found, upon experience, to answer the high encomiums which had been bestowed upon them. Though no one of these is to be depended upon alone, yet, when joined with mercury, some of them have been found to be very beneficial in promoting a cure. One of the best we know yet is sarsaparilla, 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 sarsaparilla, 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 sarsaparilla.

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 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 cænothus, &c. but whether these are designed to distinguish 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‡.

* The sublimate may be given in distilled water, or any other liquid that the patient chooses. I commonly order ten grains to be dissolved in an ounce of the spirit of wine, for the conveniency of carriage, and let the patient take twenty or thirty drops of it night and morning in half a glass of brandy or other spirits. Mr. Debra, an ingenious chymist 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.

† See Appendix, *Decoction of Sarsaparilla*.

‡ Though we are still very much in the dark with regard to the method of curing this disease among the natives of America, yet it is generally affirmed that they do cure it with speed, safety and success, and that without the least knowledge of mercury. Hence it becomes an object of considerable importance to discover their method of cure. This might surely be done by making trials of the various plants which are found in those parts, and particularly of such as the natives are known to make use of. All people in a rude state take their medicines chiefly from the vegetable kingdom, and are often possessed of valuable secrets with regard to the virtues of plants, of which more enlightened nations are ignorant. Indeed we make no doubt but some plants of our own growth, were proper pains taken to discover them, would be found as efficacious in curing the venereal disease as those in America. It must however be remember-

Many other roots and woods might be mentioned, which have been extolled for curing the venereal disease, as the china-root, the roots of soap-wort, burdock, &c. as also the wood of guaiacum and sassafras; but as none of these have been found to possess virtues superior to those already 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 a slow hectic fever, or the last stage of a consumption. Sometimes, however, these diseases proceed from a confirmed lues; in which case it will be necessary to give mercury. In chronic diseases of a less dangerous nature, as the asthma, the gravel, and such like, mercury, if necessary, may be safely administered. If the patient's strength has been greatly exhausted by sickness, labour, abstinence, or any other cause, the use of mercury must be postponed, till by time, rest, and a nourishing diet, it can be sufficiently restored.

Mercury ought not to be administered to women during the menstrual flux, or when the period is near at hand. Neither should it be given in the last stage of pregnancy. If, however, the woman be not near the time of delivery, and circumstances render it necessary, mercury may be given, but in smaller doses, and at greater intervals than usual: with these precautions, both the mother and child may be cured at the same time; if not, the disorder will at least be kept from growing worse, till the woman be brought to bed, and sufficiently recovered, when a more effectual method may be pursued, which, if she suckles her child, will in all probability be sufficient for the cure of both.

Mercury ought always to be administered to infants with the greatest caution. Their tender condition unfits them for supporting a salivation, and makes it necessary to administer even the mildest preparations of mercury to them with a sparing hand. A similar conduct is recommended in the treatment of old persons, who have the misfortune to labour under a confirmed lues. No doubt the infirmities of age must render people less able to undergo the fatigues of a salivation; but this, as was formerly observed, is never necessary; besides, we have generally found, that mercury had much less effect upon very old persons, than on those who were younger.

Hysteric and hypochondriac persons, and such as are subject to an habitual diarrhoea or dysentery, or to frequent and violent attacks of the epilepsy, or who are afflicted with the scrophula, or the scurvy, ought to be cautious in the use of mercury. Where any one of these disorders prevails, it ought either, if possible, to be cured, or at least palliated,

ed, that what will cure the venereal disease in one country, will not always be found to have equal success in another.

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 luke-warm 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, as 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 this disease at first took its rise from dirtiness, is hard to say; but wherever that prevails, the infection is found in its greatest degree of virulence, which gives ground to believe, that a strict attention to cleanliness, would go far towards extirpating it altogether.*

* I have not only seen a recent infection carried off in a few days by means of cleanliness, viz. bathing, fomentations, injections, &c but have likewise found it of the greatest advantage in the more advanced stages of the disease. Of this I had lately a very remarkable instance, in a man whose penis was almost wholly consumed by venereal ulcers; the matter had been allowed to continue on the sores, without any care having been taken to clean them, till, notwithstanding the use of mercury and other medicines, it had produced the effects above mentioned. I ordered warm milk and water to be injected three or four times a-day, into all the sinuous ulcers, in order to wash out all the matter;

When the venereal disease has been neglected, or improperly treated, it often becomes a disorder of the habit. In this case the cure must be attempted by restoratives, as a milk diet, the decoction of sarsaparilla, and such like, to which mercury may be occasionally added. It is a common practice in North Britain to send such patients to drink goat whey. This is a very proper plan, provided the infection has been totally eradicated before hand; but when that is not the case, and the patient trusts to the whey for finishing his cure, he will often be disappointed. I have frequently known the disease return with all its virulence after a course of goat whey, even when that course had been thought quite sufficient for completing the cure.

One of the most unfortunate circumstances attending patients in this disease, is the necessity they are often laid under of hurrying the cure. This induces them to take medicine too fast, and to leave it off too soon. A few grains more of medicine, or a few days longer confinement, would often be sufficient to perfect the cure; whereas, by neglect of these, a small degree of virulence is still left in the humours, which gradually vitiates, and at length contaminates the whole mass. To avoid this, we would advise, that the patient should never leave off taking medicine immediately upon the disappearing of the symptoms, but continue it for some time after, gradually lessening the quantity, till there is sufficient ground to believe that the disease is entirely eradicated.

It is not only difficult, but absolutely impossible to ascertain the exact degree of virulence that may attend the disease; for which reason it will always be a much safer rule to continue the use of medicine too long, than to leave it off too soon. This seems to be the leading maxim of a modern practitioner of some note for the venereal disease, who always orders his patient to perform a quarantine of at least forty days, during which time he takes forty bottles of, I suppose, a strong decoction of sarsaparilla, or some other anti-venereal simple. Whoever takes this method, and adds a sufficient quantity of corrosive sublimate, or some other active preparation of mercury to the decoction, will seldom fail to cure a confirmed lues.

It is peculiarly unfortunate for the cure of this disease, that not one in ten of those who contract it, are either able or willing to submit to a proper plan of regimen. The patient is willing to take medicine; but he must follow his business, and, to prevent suspicions, must eat and drink like the rest of the family. This is the true source of nine-tenths of all the mischief arising from the venereal disease. I never knew the cure attended with any great difficulty or danger where the patient strictly

after which they were stuffed with dry lint to absorb the fresh matter as it was generated. The patient at the same time took every day half a grain of the corrosive sublimate of mercury, dissolved in an ounce of brandy, and drank an English quart of the decoction of sarsaparilla. By this treatment in about six weeks, he was perfectly cured; and, what was very remarkable, a part of the penis was actually regenerated.

Doctor Gilchrist has given an account of the species of 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 that virtue, it might be extirpated. The treatment of this disease is similar to that of a confirmed lues or pox. The *yaws*, a disease now very common both in America and the West-India islands, may also be cured in the same manner.

followed the physician's advice; but a volume would not be sufficient to point out the dreadful consequences which proceed from an opposite conduct. Scirrhus testicles, ulcerous sore throats, madness, consumptions, carious bones, and a rotten progeny, are a few of the blessings derived from this source.

There is a species of false reasoning, with regard to this disease, which proves fatal to many. A person of a sound constitution contracts a slight degree of the disorder. He gets well without taking any great care, or using much medicine, and hence concludes that this will always be the case. The next time the disease occurs; though ten times more virulent, he pursues the same course, and his constitution is ruined. Indeed, the different degrees of virulence in the small-pox are not greater than in this disease, though, as the learned Sydenham observes, in some cases the most skilful physicians cannot cure, and in others the most ignorant old woman cannot kill the patient in that disorder. Though a good constitution is always in favour of the patient, yet too great stress may be laid upon it. It does not appear from observation, that the most robust constitution is able to overcome the virulence of the venereal contagion, after it has got into the habit. In this case a proper course of medicine is always indispensably necessary.

Although it is impossible, on account of the different degrees of virulence, &c. to lay down fixed and certain rules for the cure of this disease, yet the following general plan will always be found safe, and often successful, viz. to bleed and administer gentle purges with diuretics during the inflammatory state, and as soon as the symptoms of inflammation are abated, to administer mercury, in any form that may be most agreeable to the patient. The same medicine, assisted by the decoction of sarsaparilla, and a proper regimen, will not only secure the constitution against any further progress of a confirmed pox, but will generally perform a complete cure.

CHAP. L.

DISEASES OF WOMEN.

WOMEN in all civilized nations, have the management of domestic affairs, and it is very proper they should, as nature has made them less fit for the more active and laborious employments. This indulgence however, is generally carried too far; and females, instead of being benefited by it, are greatly injured from the want of exercise and free air. To be satisfied of this, one need only compare the fresh and ruddy looks of a milk-maid, with the pale complexion of those females whose whole time is spent within doors. Though nature has made an evident distinction between the male and female with regard to bodily strength and vigour, yet she certainly never meant, either that the one should be always without, or the other always within doors.

The confinement of females, besides hurting their figure and complexion, relaxes their solids, weakens their minds, and disorders all

the functions of the body. Hence proceeds obstructions, indigestion, flatulence, abortions, and the whole train of nervous disorders. These not only unfit women from being mothers and nurses, but often render them whimsical and ridiculous. A sound mind depends so much upon a healthy body, that where the latter is wanting, the former is rarely to be found.

I have always observed that women who were chiefly employed without doors, in the different branches of husbandry, gardening and the like, were almost as hardy as their husbands, and that their children were likewise healthy. But as the bad effects of confinement and inactivity upon both sexes have been already shewn, we shall proceed to point out those circumstances in the structure and design of females, which subject them to peculiar diseases; the chief of which are their *monthly evacuations, pregnancy, and child-bearing*. These indeed cannot properly be called diseases, but, from the delicacy of the sex, and this being often improperly managed in such situations, they become the source of numerous calamities.

OF THE MENSTRUAL DISCHARGE.

FEMALES generally begin to menstruate about the age of fifteen, and leave it off about fifty, which renders these two periods the most critical of their lives. About the first appearance of this discharge, the constitution undergoes a very considerable change, generally indeed for the better, though sometimes for the worse. The greatest care is now necessary, as the future health and happiness of the female depends in a great measure upon her conduct at this period.*

If a girl about this time of life be confined to the house, kept constantly sitting, and neither allowed to romp about, nor employed in any active business, which gives exercise to the whole body, she becomes weak, relaxed, and puny; her blood not being duly prepared, she looks pale and wan; her health, spirits, and vigour decline, and she sinks into a valetudinarian for life. Such is the fate of numbers of those unhappy females, who, either from too much indulgence, or their own narrow circumstances, are, at this critical period, denied the benefit of exercise and free air.

A lazy indolent disposition proves likewise very hurtful to girls at this period. One seldom meets with complaints from obstructions among the more active and industrious part of the sex; whereas the indolent and lazy are seldom free from them. These are in a manner eaten up by the *chlorosis*, or green sickness, and other diseases of this nature. We would therefore recommend it to all who wish to escape these calamities, to avoid indolence and inactivity, as their greatest enemies, and to be as much abroad in the open air as possible.

Another thing which proves very hurtful to girls about this period

* It is the duty of mothers, and those who are intrusted with the education of girls, to instruct them early in the conduct and management of themselves at this critical period of their lives. False modesty, inattention and ignorance of what is beneficial or hurtful at this time, are the sources of many diseases and misfortunes in life, which a few sensible lessons from an experienced matron might have prevented. Nor is care less necessary in the subsequent returns of this discharge. Taking improper food, violent affections of the mind, or catching cold at this period, is often sufficient to ruin the health, or to render the female ever after incapable of procreation.

of life, is unwholesome food. Fond of all manner of trash, they often indulge in it, till their whole humours, are quite vitiated. Hence ensue indigestions, want of appetite, and a numerous train of evils. If the fluids be not duly prepared, it is utterly impossible that the secretions should go properly on. Accordingly we find; that such girls as lead an indolent life, and eat great quantities of trash, are not only subject to obstructions of the *menses*, but likewise to glandular obstructions; as the scrophula, or king's evil, &c.

A dull disposition is also very hurtful to girls at this period. It is a rare thing to see a sprightly girl who does not enjoy good health, while the grave, moping, melancholy creature, proves the very prey of vapours and hysterics. Youth is the season for mirth and cheerfulness. Let it therefore be indulged. It is an absolute duty. To lay in a stock of health in time of youth, is as necessary a piece of prudence, as to make provision against the decays of old age.—While, therefore, wise nature prompts the happy youth to join in sprightly amusements, let not the severe dictates of hoary age forbid the useful impulse, nor damp with serious gloom, the season destined to mirth and innocent festivity.

Another thing very hurtful to females about this period of life, is strait clothes. They are fond of a fine shape, and foolishly imagine that this can be acquired by lacing themselves tight. Hence, by squeezing the stomach and bowels, they hurt the digestion, and occasion many incurable maladies. This error is not indeed so common as it has been; but, as fashions change, it may come about again: we therefore think it not improper to mention it. I know many females, who, to this day, feel the direful 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, asafetida, and other nauseous drugs, to place her in a situation where she can enjoy the benefit of fresh air and agreeable company. There let her eat wholesome food, take sufficient exercise, and amuse herself in the most agreeable manner; and we have little reason to fear, but nature, thus assisted, will do her proper work.—Indeed she seldom fails, unless where the fault is on our side.

This discharge in the beginning is seldom so instantaneous as to surprise females unawares. It is generally preceded by symptoms which foretel its approach; as a sense of heat, weight, and dull pain in the loins; distension and hardness of the breasts; 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 flux usually begins, every thing should be carefully avoided which may obstruct that necessary and salutary evacuation; and all means used to promote it; as sitting frequently over the steams of warm water, drinking warm diluting liquors, &c.

After the *menses*, have once begun to flow, the greatest care should be taken to avoid every thing that may tend to obstruct them. Females ought to be exceeding cautious of what they eat or drink at the time they are out of order. Every thing that is cold, or apt to

sour on the stomach, ought to be avoided; as fruit, butter-milk, and such like. Fish, and all kinds of food that are hard of digestion, are also to be avoided. As it is impossible to mention every thing that may disagree with individuals at this time, we would recommend it to every female to be very attentive to what disagrees with herself, and carefully to avoid it.

Cold is extremely hurtful at this particular period. More of the sex date their diseases from colds, caught while they are out of order, than from all other causes. This ought surely to put them upon their guard, and to make them very circumspect in their conduct at such times. A degree of cold that will not in the least hurt them at another time, will at this period be sufficient entirely to ruin their health and constitution.

The greatest attention ought likewise to be paid to the mind, which should be kept as easy and cheerful as possible. Every part of the animal economy is influenced by the passions, but none more so than this. Anger, fear, grief, and other affections of the mind, often occasion obstructions of the menstrual flux, which prove absolutely incurable.

From whatever cause this flux is obstructed, except in the state of pregnancy, proper means should be used to restore it. For this purpose we would recommend sufficient exercise, in a dry, open, and rather cool air; wholesome diet, and, if the body be weak and languid, generous liquors; also cheerful company and all manner of amusements. If these fail, recourse must be had to medicine.

When obstructions proceed from a weak relaxed state of the solids, such medicines as tend to promote digestion, to brace the solids, and assist the body in preparing good blood, ought to be used. The principal of these are iron and the Peruvian bark, with other bitter and astringent medicines. 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 from women of a gross or full habit, evacuations, and such medicines as attenuate the humours, are necessary. The patient in this case ought to be bled, to bathe her feet frequently in warm water, to take now and then a cooling purge, and to live upon a spare thin diet. Her drink should be whey, water, or small beer; and she ought to take sufficient exercise. A tea-spoonful of the tincture of black hellebore may also be taken twice a-day in a cup of warm water.

When obstructions proceed from affections of the mind, as grief, fear, anger, &c. every method should be taken to amuse and divert the patient. And that she may the more readily forget the cause of her affliction, she ought, if possible, to be removed from the place where it happened. A change of place, by presenting the mind with a variety of new objects, has often a very happy influence in relieving it from the deepest distress. A soothing, kind, and affable behaviour to females in this situation, is also of the last importance.

An obstruction of the *menses* is often the effect of other maladies. When this is the case, instead of giving medicines to force that discharge, which might be dangerous, we ought by all means to endeavour

to restore the patient's health and strength. When that is effected, the other will return of course.

But the menstrual flux may be too great as well as too small. When this happens, the patient becomes weak, the colour pale, the appetite and digestion are bad, and œdematous swellings of the feet, dropsies and consumptions often ensue. This frequently happens to women about the age of forty-five or fifty, and is very difficult to cure. It may proceed from a sedentary life; a full diet, consisting chiefly of salted, high-seasoned, or acrid food; the use of spirituous liquors; excessive fatigue; relaxation; a dissolved state of the blood; violent passions of the mind, &c.

The treatment of this disease must be varied according to its cause. When it is occasioned by any error in the patient's regimen, an opposite course to that which induced the disorder must be pursued, and such medicines taken as have a tendency to restrain the flux, and counteract the morbid affections of the system from 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 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 a-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, how-

* Two drachms 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 drachm 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.

eyer 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 *meneses* cease all of a sudden in women of a full habit, they ought to abate somewhat of their usual quantity of food, especially of the more nourishing kind, as flesh, eggs, &c. They ought likewise to take sufficient exercise, and to keep the body open. This may be done by taking, once or twice a week, a little rhubarb, or an infusion of *hiera picra* in wine or brandy.

It often happens that women of a gross habit, at this period of life, have ulcerous sores break out about their ancles, or in other parts of the body. Such ulcers ought to be considered as critical, and should either be suffered to continue open, or have artificial drains substituted in their stead. Women who will have such sores dried up, are often soon after carried off by acute diseases, or fall into those of a chronic nature.

OF PREGNANCY.

THOUGH pregnancy is not a disease, yet that state is often attended with a variety of complaints which merit attention, and which sometimes requires 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. We shall therefore pay particular attention to it, as it proves generally fatal to the child, and sometimes to the mother.

Pregnant women are often afflicted with the heart-burn. The method of treating this complaint has been already pointed out. They are likewise, in the more early periods of pregnancy, often harrassed 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 pregnancy, but it is

* 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,

most common in the second or third month. Sometimes, however, it happens in the fourth or fifth. If it happens within the first month it is usually called a false conception; if after the seventh month, the child may often be kept alive by proper care.

The common causes of abortion are, the death of the child; weakness or relaxation of the mother; great evacuations; violent exercise; raising great weights; reaching too high; jumping or stepping from an eminence; vomiting; coughing; convulsion fits; blows on the belly; falls; fevers; disagreeable smells; excess of blood; indolence; high living, or the contrary; violent passions or affections of the mind, as fear, grief, &c.

The signs of approaching abortion are, pain in the loins, or about the bottom of the belly; a dull heavy pain in the inside of the thigh; a slight degree of coldness, or shivering; sickness, palpitation of the heart; the breasts becomes flat and soft; the belly falls; and there is a discharge of blood or watery humours from the womb.

To prevent abortion, we would advise women of a weak or relaxed habit to use solid food, avoiding great quantities of tea and other weak and watery liquors; to rise early and go soon to bed; to shun damp houses; to take frequent exercise in the open air, but to avoid fatigue; and never to go abroad in damp foggy weather, if they can 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 oat-meal 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 drachm 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-spoonful of the saline mixture. In general, opiates are of service; but they should always be given with caution.

Sanguine robust women, who are liable to miscarry at a certain time of pregnancy, ought always to be bled a few days before that period arrives. By this means, and observing the regimen above prescribed, they might often escape that misfortune.

Though we recommend due care for preventing abortion, we would not be understood as restraining pregnant women from their usual exercises. This would generally operate a quite contrary way.

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.

Want of exercise not only relaxes the body, but induces a plethora, or too great a fulness of the vessels, which are the two principal causes of abortion. There are, however, some women of so delicate a texture, that it is necessary for them to avoid almost every kind of exercise during the whole period of pregnancy.

OF CHILD-BIRTH.

MANY diseases proceed from the want of due care in child-bed; and the more hardy part of the sex are most apt to despise the necessary precautions in this state. This is peculiarly the case with young wives. They think, when the labour-pains are ended, the danger is over; but in truth it may only then be said to be begun. Nature, if left to herself, will seldom fail to expel the *fœtus*; but proper care and management are certainly necessary for the recovery of the mother. No doubt mischief may be done by too much as well as by too little care. Hence females who have the greatest number of attendants in child-bed generally recover worst. But this is not peculiar to the state of child-bed. Excessive care always defeats its own intention, and is generally more dangerous than none at all.*

During actual labour, nothing of a heating nature ought to be given. The woman may now and then take a little panada, and her drink ought to be toast and water, or thin groat gruel. Spirits, wines, cordial-waters, and other things which are given with a view to strengthen the mother, and promote the birth, for the most part, tend only to increase the fever, inflame the womb, and retard the labour. Besides, they endanger the woman afterwards, as they often occasion violent and mortal hæmorrhages, or dispose her to eruptive and other fevers.

When the labour proves tedious and difficult, to prevent inflammations, it will be proper to bleed. An emollient clyster ought likewise frequently to be administered; and the patient should sit over the steams of warm water. The passage ought to be gently rubbed with a little soft pomatum or fresh butter, and cloths wrung out of warm water applied over the belly. If nature seems to sink, and the woman is greatly exhausted with fatigue, a draught of generous wine, or some other cordial, may be given, but not otherwise. These directions are sufficient in natural labours; and in all preternatural cases, a skilful surgeon, or man-midwife, ought to be called as soon as possible.

After delivery, the woman ought to be kept as quiet and easy as

* 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 an hundred of them have any education, or proper knowledge of their business. It is true, that Nature, if left to herself, will generally expel the *fœtus*; but it is equally true, that most women in child-bed require to be managed with skill and attention, and that they are often hurt by the superstitious prejudices of ignorant and officious midwives. The mischief done in this way is much greater than is generally imagined; most of which might be prevented by allowing no 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 this indelicate and disagreeable branch of medicine, which is, on many other accounts, more proper for the other sex.

possible.* Her food should be light and thin, as gruel, panada, &c. and her drink weak and diluting. To this rule, however, there are many exceptions. I have known several women, whose spirits could not be supported in child-bed without solid food and generous liquors; to such, a glass of wine and a bit of chicken must be allowed.

Sometimes an excessive hæmorrhage or flooding happens after delivery. In this case the patient should be laid with her head low, 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 gruel or tea with a little saffron in it; and to take small broths, with carraway-seeds, or a bit of an orange-peel in them; an ounce of the oil of sweet almonds may likewise be frequently taken in a cup of any of the above liquors; and if the patient be restless, a spoonful of the syrup of poppies may now and then be mixed with a cup of her drink. If she be hot or feverish, one of the following powders may be taken in a cup of her usual drink every five or six hours.‡

An inflammation of the womb is a dangerous and not unfrequent disease after delivery. It is known by pains in the lower part of the belly, which are greatly increased upon touching; by the tension or tightness of the parts; 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 an inflammation of the womb. In all these cases, the safest course is plen-

* We cannot help taking notice of that ridiculous custom which still prevails in some parts of the country, of collecting a number of women together on 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.

‡ Take of crabs' 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 *asafoetida* in a cup of penny-royal tea.

iful dilution, gentle evacuations, and fomentations of the parts affected. In the milk-fever, the breasts may be embrocated with a little warm linseed-oil, or the leaves of red cabbage may be applied to them. The child should be often put to the breast, or it should be drawn by some other person.

Nothing would tend more to prevent the milk-fever than putting the child early to the breast. The custom of not allowing children to suck for the first two or three days, is contrary to Nature, and common sense, and is very hurtful both to the mother and child.

Every mother who has milk in her breasts, ought either to suckle her own child, or to have her breasts frequently drawn, at least for the first month. This would prevent many of the diseases which prove fatal to women in 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 repellents, in this case, is very dangerous; they often occasion fevers, and sometimes cancers; whereas a suppuration is seldom attended with any danger, and has often the most salutary effects.

When the nipples are fretted or chapt, 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 to 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 at the stomach, and bilious vomiting. The pulse is generally quick, the tongue dry, and there is a remarkable depression of spirits and loss of strength. A great pain is usually felt in the back, hips, and region of the womb; a sudden change in the quantity or quality of the *lochia* also takes place; and the patient is frequently troubled with a *tenesmus*, or constant inclination to go to stool. The urine, which is very high coloured, is discharged in small quantity, and generally with pain. The belly sometimes swells to a considerable bulk, and becomes susceptible of pain

from the slightest touch. When the fever has continued for a few days, the symptoms of inflammation usually subside, and the disease acquires a more putrid form. At this period, if not sooner, a bilious or putrid looseness, of an obstinate and dangerous nature, comes on, and accompanies the disease through all its future progress.

There is not any disease that requires to be treated with more skill and attention than this; consequently the best assistance ought always to be obtained as soon as possible. In women of plethoric constitutions, bleeding will generally be proper at the beginning; it ought however to be used with caution, and not to be repeated unless where the signs of inflammation rise high; in which case it will also be necessary, to apply a blistering plaster to the region of the womb.

During the rigour, or cold fit, proper means should be used to abate its violence and shorten its duration. For this purpose the patient may drink freely of warm diluting liquors, and, if low, may take now and then a cup of wine whey; warm applications to the extremities, as heated bricks, bottles or bladders filled with warm water, and such like, may also be used with advantage.

Emollient clysters of milk and water, or of chicken water, ought to be frequently administered through the course of the disease. These prove beneficial by promoting a discharge from the intestine, and also by acting as a kindly fomentation to the womb and parts adjacent. Great care however is requisite in giving them, on account of the tenderness of the parts in the *pelvis* at this time.

To evacuate the offending bile from the stomach, a vomit is generally given. But as this is apt to increase the irritability of the stomach, already too great, it will be safer to omit it, and to give in its stead a gentle laxative, which will both tend to cool the body, and to procure a free discharge of the bile.*

The medicine which I have always found to succeed best in this disease, is the saline draught. This, if frequently repeated, will often put a stop to the vomiting, and at the same time lessen the violence of the fever. If it runs off by stool, or if the patient be restless, a few drops of laudanum, or some syrup of poppies, may occasionally be added.

If the stools should prove so frequent as to weaken and 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.

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

* 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.

require. As the bark in substance will be apt to purge, it may be given in decoction or infusion mixed with the tincture of roses, or other gentle astringents; or a scruple of the extract of bark with half an ounce of spirituous cinnamon-water, two ounces of common water, and ten drops of laudanum, may be made into a draught, and given every second, third, or fourth hour, as shall be found necessary.

When the stomach will not bear any kind of nourishment, the patient may be supported for some time by clysters of beef-tea, or chicken-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; and a proper attention should be paid to cleanliness.

To prevent the milk fever, the breasts ought frequently to be drawn; and if they are filled previous to the onset of a fever, they should, upon its first appearance, be drawn, to prevent the milk from becoming acrid and its being absorbed in this state. Costiveness is likewise to be avoided. This will be best effected by the use of mild clysters and a laxative diet.

We shall conclude our observations on child-bed women by recommending it to them, above all things, to beware of cold. Poor women, whose circumstances oblige them to quit their bed too soon, often contract diseases from cold, of which they never recover. It is a pity the poor are not better taken care of in this situation.

But the better sort of women run the greatest hazard from too much heat. They are generally kept in a sort of bagnio for the first eight or ten days, and then dressed out to see company. The danger of this conduct must be obvious to every one.

The superstitious custom of obliging women to keep the house till they go to church, is likewise a very common cause of catching cold. All churches are damp, and most of them cold; consequently they are the very worst places to which a woman can go to make her first visit, after having been confined in a warm room for a month.

OF BARRENNESS.

BARRENNESS may be very properly reckoned among the diseases of females, as few married women who have not children enjoy a good state of health. It may proceed from various causes, as high living, grief, relaxation, &c. but it is chiefly owing to an obstruction or irregularity of the menstrual flux.

It is very certain that high living vitiates the humours, and prevents fecundity. We seldom find a barren woman among the labouring poor, while nothing is more common among the rich and affluent. The inhabitants of every country are prolific in proportion to their poverty; and it would be an easy matter to adduce many instances of women, who, by being reduced to live entirely upon a milk and vegetable diet, have conceived and brought forth children, though they never had any before. Would the rich use the same sort of food and exercise as the better sort of peasants, they would seldom have cause to envy their poor

vassals and dependants, the blessing of a numerous and healthy offspring, while they pine in sorrow for 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 Spaw or Tunbridge waters, Peruvian bark, &c.; and lastly, above all, the cold bath.

Barrenness is often the consequence of grief, sudden fear, anxiety, or any of the passions which tend to obstruct the menstrual flux. When barrenness is suspected to proceed from affections of the mind, the person ought to be kept as easy and cheerful as possible: all disagreeable objects are to be avoided, and every method taken to amuse and entertain the fancy.

CHAP. LI.

DISEASES OF CHILDREN.

MISERABLE indeed is the lot of man in the state of infancy! He comes into the world more helpless than any other animal, and stands much longer in need of the protection and care of his parents; but, alas! this care is not always bestowed upon him; and when it is, he often suffers as much from improper management as he would have done from neglect. Hence the officious care of parents, nurses, and midwives, becomes one of the most fruitful sources of the disorders of infants†.

It must be obvious to every attentive person, that the first diseases of children arise chiefly from their bowels. Nor is this in the least to be wondered at, as they are in a manner poisoned with indigestible drugs and improper diet as soon as they come into the world. Every

* Dr. Cheyne avers, that want of children is oftener the fault of the male than of the female, and strongly recommends a milk and vegetable diet to the former as well as the latter; adding, that his friend Dr. Taylor, whom he calls the Milk-doctor of Croydon, had brought sundry opulent families in his neighbourhood, who had continued some years after marriage without progeny, to have several fine children, by keeping both parents, for a considerable time, to a milk and vegetable diet.

† Of the officious and ill-judged care of midwives, we shall adduce only one instance, viz. the common practice of torturing infants, by squeezing their breasts, to draw off the milk, as they call it. Though a small quantity of moisture is generally found in the breasts of infants, yet, as they are certainly not intended to give suck, this ought never to be drawn off. I have seen this cruel operation bring on hardness, inflammation, and suppuration of the breasts; but never knew any ill consequences from its being omitted. When the breasts are hard, the only application that we would recommend, is a soft poultice, or a little of the diachylon plaster, spread thin upon a bit of soft leather, about the size of half a crown, and applied over each nipple. These may be suffered to continue till the hardness disappears.

thing that the stomach cannot digest may be considered as a poison; and unless it can be thrown up, or voided by stool, it must occasion sickness, gripes, spasmodic affections of the bowels, or what the good women call inward fits, and at last convulsions and death.

As these symptoms evidently arise from somewhat that irritates the intestines, doubtless the proper method of cure must be to expel it as soon as possible. The most safe and effectual method of doing this is by gentle vomits. Five or six grains of the powder of ipecacuanha may be mixed in two table spoonful of water, and sweetened with a little sugar. A tea-spoonful of this may be given to the infant every quarter of an hour till it operates; or, what will more certainly answer the purpose, a grain of emetic tartar may be dissolved in three ounces of water, sweetened with a little syrup, and given as above. Those who are willing to use the emetic tartar, may give six or seven drops of the antimonial wine, in a tea-spoonful of water or thin gruel. Small doses of ipecacuanha wine 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 frequently rubbed with a warm hand before the fire, they will seldom fail to relieve those affections of the stomach and bowels from which infants suffer so much.

These general directions include most of what can be done for relieving the internal disorders of infants. They will likewise go a considerable way in alleviating those which appear externally, as the rash, *gum*, or *fellon*, &c. These, as was formerly observed, are principally owing to too hot a regimen, and consequently will be most effectually relieved by gentle evacuations. Indeed, evacuations of one kind or other constitute a principal part of the medicine of infants, and will seldom, if administered with prudence, in any of their diseases, fail to give relief.

OF THE MECONIUM.

THE stomach and bowels of a new-born infant are filled with a blackish coloured matter of the consistence of syrup, commonly called the *meconium*. This is generally passed soon after the birth, by the mere effort of nature; in which case it is not necessary to give the infant any kind of medicine. But if it should be retained, or not sufficiently carried off, a little manna or *magnesia alba* may be given as mentioned above; or, if these should not be at hand, a common spoonful of whey, sweetened with a little honey, or 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 claubs of syrup, oils, and other indigestible stuff, crammed down their throats.

THE APHTHÆ, OR THRUSH.

The aphthæ are little whitish ulcers affecting the whole inside of the mouth, tongue, throat, and stomach of infants. Sometimes they reach through the whole intestinal canal; in which case they are very dangerous, and often put an end to the infant's life.

If the aphthæ are of a pale colour, pellucid, few in number, soft, superficial, and fall easily off, they are not dangerous; but if opaque, yellow, brown, black, thick, or running together, they ought to be dreaded.

It is generally thought that the aphthæ owe their origin to acid humours; we have reason however to believe, that they are more frequently owing to too hot a regimen both of the 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 in 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 greens stools, gripes, &c. These appearances have induced many to believe, that all the diseases of children were owing to an acid abounding in the stomach and bowels; but whoever considers the matter attentively, will find that these symptoms of acidity are oftener the effect than the cause of their diseases.

Nature evidently intended that the food of children should be acescent; and unless the body be disordered, or the digestion hurt, from some other cause, we will venture to say, that the acescent quality of their food is seldom injurious to them. Acidity, however, is often a symptom of disorders in children, and, as it is sometimes a troublesome one, we shall point out the method of relieving it.

When green stools, gripes, purging, sour smells, &c. shew that the bowels abound with an acid, let the child have a little small broth, with light white bread in it; and it should have sufficient exercise in order to promote the digestion. It has been customary in this case to give the pearl-julep, chalk, crabs' eyes, and other testaceous powders. These, indeed, by their absorbent quality, may correct the acidity; but they are attended with this inconvenience, that they are apt to lodge in the bowels, and occasion costiveness, which may prove very hurtful to the infant. For this reason they should never be given unless mixed with purgative medicines: as rhubarb, manna, and 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 in a mixture, as recommended in the Appendix.*

When an infant is troubled with gripes, it ought not at first to be dosed with brandy, spiceries, and other hot things; but should have its body opened with an emollient clyster, or the medicine mentioned above; and at the same time a little brandy may be rubbed on its belly with a warm hand before the fire. I have seldom seen this fail to ease the gripes of infants. If it should happen, however, not to succeed, a little brandy or other spirits may be mixed with thrice the quantity of warm water, and a tea-spoonful of it given frequently till the infant be easier. Sometimes a little peppermint water will answer this purpose 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.

* See Appendix, *Laxative absorbent Mixture*.

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 *claterium*, be dissolved in half an ounce of marjoram-water, and applied to the nose, as above directed, that it brings away the *mucus* without sneezing.

In obstinate cases these medicines may be tried; but I have never found any thing necessary, besides rubbing the nose at bed-time with a little sweet oil, or fresh butter. This resolves the filth, and renders the breathing more free.*

OF VOMITING.

From the delicate state of children, and the great sensibility of their organs, a vomiting or looseness may be induced by any thing that irritates the nerves of the stomach or intestines. Hence these disorders are much more common in childhood, than in the more advanced periods of life. They are seldom, however, dangerous, and ought never to be considered as diseases, unless when they are violent, or continue so long as to exhaust the strength of the patient.

Vomiting may be excited by an over-quantity of food; by food that is of such a nature as to irritate the nerves of the stomach too much; or by the sensibility of the nerves being so much increased as to render them unable to bear the stimulus of even the mildest 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 of the stomach, such medicines as have a tendency to brace and strengthen that organ, and to abate its sensibility, must be used. The first of these intentions may be answered by a slight infusion of the Peruvian bark, with the addition of a little rhubarb and orange-peel; and the second by the saline draughts, to which a few drops of liquid laudanum may be occasionally 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*.

* 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 A LOOSENESS.

A LOOSENESS may generally be reckoned salutary when the stools are sour, slimy, green or curdled. It is not the discharge, but the production of such stools, which ought to be remedied. Even where the purging is thin and watery, it ought not to be checked too suddenly, as it often proves critical, especially when the child has caught cold, or an eruption on the skin has disappeared. Sometimes an evacuation of this kind succeeds a humid state of the atmosphere, in which case it may also prove of advantage, by carrying off a quantity of watery humours, which would otherwise tend to relax the habit.

As the principal intention of the cure of a looseness is to evacuate the offending matter, it is customary to give the patient a gentle vomit of ipecacuanha, and afterwards to exhibit small and frequent doses of rhubarb; interposing absorbent medicines, to mitigate the acrimony of the humours. The best purge, however, in this case, is *magnesia alba*. It is at the same time absorbent and laxative, and operates without exciting gripes.

The antimonial wine, which acts both as an emetic and purge, is also an excellent medicine in this case. By being diluted with water, it may be proportioned to the weakest constitution; and, not being disagreeable to the palate, it may be repeated as often as occasion requires. Even one dose will frequently mitigate the disease, and pave the way for the use of absorbents. If, however, the patient's strength will permit, the medicine ought to be repeated every six or eight hours, till the stools begin to assume a more natural appearance; afterwards a longer space may be allowed to intervene between the doses. When it is necessary to repeat the medicine frequently, the 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 general cause of eruptive disorders, must be obvious to every one. The children of the poor, and of all who despise cleanliness, are almost constantly found to swarm with vermin, and are generally covered with the scab, itch and other eruptions.

When eruptions are the effect of improper food, or want of cleanliness, a proper attention to these alone will generally be sufficient to remove them. If this should not be the case, some drying medicines will be necessary. When they are applied, the body ought at the same time to be kept open, and cold is carefully to be avoided. We know no medicine that is more safe for drying up cutaneous eruptions than sulphur, provided it be prudently used. A little of the 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 exceeding difficult to cure, and sometimes indeed the cure proves worse than the disease. I have frequently known children seized with internal disorders, of which they died soon after their scabbed heads had been healed by the application of drying medicines.† The cure ought always first to be attempted by keeping the head very clean, cutting off the hair, combing and brushing away the scabs, &c.

* The following method for drying and curing cutaneous eruptions, is deemed not unworthy of attention—it is an extract of a letter (taken from a Calcutta paper,) from a Gentleman of the Faculty, at Fort St. George, to the Doctor of the Bengal Establishment:—

“ Sir Paul Joddrel, from his skill in botany, has made a discovery which is likely to prove of importance to the health and ease of the Europeans in India; and will tend to the extirpation of that cruel malady, the RINGWORM; and the remedy is as simple as it is efficacious. It consists in nothing more than a frequent embrocation, or friction of the parts where the eruption prevails, with *common mushroom ketchup*. This remedy, simple as it appears, has never been known to fail in removing the *ring-worm*, *itch*, or any other cutaneous eruption, after every nostrum has failed.

“ Sir Paul accounts for this efficacy of the vegetable curative, in the known noxious property of the mushroom to all animalcula. The solution or essence of this fungus is proved, by this discovery, to bear such enmity to the minute insect which is the occult cause of this disorder, that it immediately perforates the cuticle, and totally exterminates the infection. The experiment is easy, and a trial is recommended to those afflicted with *ring-worms*, *tefters* or eruptions of any kind.”

A. E.

† I some time ago saw a very striking instance of the danger of substituting drying medicines in the place of cleanliness and wholesome food, in the Foundling Hospital at Ackworth, where the children were grievously afflicted with scabbed heads, and other cutaneous disorders. Upon inquiry it was found, that very little attention was paid either to the propriety or soundness of their provisions, and that cleanliness was totally neglected; accordingly it was advised, that they should have more wholesome food, and be kept thoroughly clean. This advice, however, was not followed. It was too troublesome to the servants, 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.

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 should be kept gently open; and cold, as far as possible, ought to be avoided. To prevent any bad consequences from stopping this discharge, it will be proper, especially in children of a gross habit, to make an issue in the 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 kept long wet or cold, and afterwards suddenly heated. When children are cold, instead of taking exercise to warm themselves gradually, they run to the fire. This occasions a sudden rarefaction of the humours, and an infraction of the vessels; which being often repeated, the vessels are at last overdistended, and forced to give way.

To prevent it, violent cold and sudden heat must be equally avoided. When the parts begin to look red and swell, the patient ought to be purged, and to have the affected parts frequently rubbed with mustard and brandy, or something of a warming nature. They ought likewise to be covered with flannel, and kept warm and dry. Some apply warm ashes between cloths, to the swelled parts, which frequently help to reduce them. When there is a sore, it must be dressed with Turner's cerate, the ointment of tutty, 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, OR HIVES.

CHILDREN are often seized very suddenly with this disease, which, if not quickly relieved, proves mortal. It is known by various names in different parts of Britain. On the east coast of Scotland, it is called the *croup*. On the west they call it the *chock* or *stuffing*. In some parts of England, where I have observed it, the good women call it the *rising of the lights*, and in America, the *hives*. 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 must 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 be immediately put into warm water. He ought likewise to be

bled,* and to have a laxative clyster administered as soon as possible. He should be made to breathe over the steams of warm water and vinegar; or an emollient decoction, and emollient cataplasms or fomentations may be applied round his neck. If the symptoms do not abate, a blistering-plaster must be applied round the neck, or between the shoulders, and the child may take frequently a table-spoonful of the following julep: Take penny-royal water three ounces, syrup of althea and of poppies, each one ounce, mix them together.

Asafoetida is found to have a good effect in this case. It may be both given in form of clyster, and taken by the mouth. Two drachms of asafoetida may be dissolved in one ounce of Mindererus's spirit, and three ounces of penny-royal water. A table-spoonful of this mixture may be given every hour, or oftener, if the patient's stomach be able to bear it. If the child cannot be brought to take this medicine, two drachms of the asafoetida 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 carefully be avoided; as wet feet, cold, damp, easterly winds, &c. Children who have had frequent returns of this disease, or whose constitutions seem to dispose them to it, ought to have their diet properly regulated; all food that is viscid or hard of digestion, and all crude, raw, trashy fruits are to be avoided. They ought likewise to have a drain constantly kept open in some part of their body, by means of a seton or issue. I have sometimes known a Burgundy-pitch plaster, worn continually between the shoulders for several years, have a very happy effect in preventing the return of this dreadful disorder.

OF TEETHING.

Dr. Arbuthnot observes, that above a tenth part of infants die in teething, by symptoms proceeding from the irritation of the tender nervous parts of the jaws, occasioning inflammations, fevers, convulsions, gangrenes, &c. These symptoms are in a great measure owing to the great delicacy, and exquisite sensibility of the nervous system at this time of life, which is too often increased by an effeminate education. Hence it comes to pass, that children who are

* In this disease bleeding is not always proper; but in very full habits it certainly must be of use.

† I was lately favoured with a letter from Dr. William Turnbull in London, a physician of great experience, and who, from his former situation on the north-east coast of England, had many opportunities of observing the symptoms and progress of this dangerous disease. I am sorry the letter came too late to be inserted at length; but as the Doctor's sentiments differ very little from my own, this misfortune is the less to be regretted. The Doctor indeed observes, that he never found blistering of any service; but recommends cataplasms of garlic, camphor and Venice treacle, to be applied both to the throat and soles of the feet. He likewise recommends bolusses of camphor, castor, valerian root, salt of hartshorn, and musk, adapted to the age, strength, &c. of the patient; after which he advises two spoonful of the following decoction: Take of garlic and distilled vinegar each an ounce, hysop-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.

delicately brought up, always suffer most in teething, and often fall by convulsive disorders.

About the sixth or seventh month the teeth generally begin to make their appearance; first, the *incisores*, or fore-teeth; next, the *canini*, or dog-teeth; and lastly, the *molares*, or grinders. About the seventh year, there comes a new set; and about the twentieth, the two inner grinders, called *dentes sapientæ*, 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. Purgings, 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 convulsive-fits, a blistering-plaster may be applied between the shoulders, or one behind each ear.

Sydenham says, that in fevers occasioned by teething, he never found any remedy so effectual as two, three, or four drops of spirits of hartshorn in a spoonful of simple water, or other convenient vehicle, given every four hours. The number of doses may be four, five, or six. I have often prescribed this medicine with success, but always found a larger dose necessary. It may be given from five drops to fifteen or twenty, according to the age of the child, and when costiveness does not forbid it, three or four drops of laudanum may be added to each dose.

In Scotland, it is very common, when children are cutting their teeth, to put a small Burgundy-pitch plaster between their shoulders. This generally eases the tickling cough which attends teething, and is by no means an useless application. When the teeth are cut with difficulty, it ought to be kept on during the whole time of teething. It may be enlarged as occasion requires, and ought to be renewed at least once a fortnight.

Several things have been recommended for rubbing the gums, as oils, mucilages, &c. but from these, much is not to be expected. If any thing of this kind is to be used, we would recommend a little fine honey, which may be rubbed on with the finger three or four times a day. Children are generally at this time disposed to chew whatever they get into their hands. For this reason they ought never to be without somewhat that will yield a little to the pressure of their gums as a crust of bread, a wax caudle, 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 six-penny piece that is worn thin, or any sharp body which can be with safety introduced into the mouth; but a lancet, in a skilful hand, is certainly the most proper.

In order to render the teething less difficult, parents ought to take care that their children's food be light and wholesome, and that their nerves be braced by sufficient exercise without doors, the use of the cold bath, &c. Were these things duly regarded, they would have a much better effect than *teething necklaces*, or other nonsensical amulets worn for that purpose.

OF THE RICKETS.

THIS disease generally attacks children between the age of nine months and two years. It appeared first in England, about the time when manufactures began to flourish, and still prevails most in towns where the inhabitants follow sedentary employments, by which means they neglect either to take proper exercise themselves, or to give it to their children.

CAUSES.—One cause of the rickets is diseased parents. Mothers of a weak relaxed habit, who neglect exercise, and live upon weak watery diet, can neither be expected to bring forth strong and healthy children, or to be able to nurse them after they are brought forth. Accordingly we find, that the children of such women generally die of the rickets, the scrophula, consumptions or such like diseases. Children begotten by men in the decline of life, who are subject to the gout, the gravel or other chronic diseases, or who have been often afflicted with the venereal disease in their youth are likewise very liable to the rickets.

Any disorder that weakens the constitution, or relaxes the habit of children, as the small-pox, measles, teething, the whooping-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 chuse 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 spongy parts. Hence the wrists and ancles become thicker than usual; the spine or back-bone puts on an unnatural shape; the breast is likewise often deformed; and the bones of the arms and legs grow crooked. All these symptoms vary according to the violence of the disease. The pulse is generally quick, but feeble; the appetite and digestion for the most part bad; the teeth come slowly and with difficulty, and they often rot and fall out afterwards. Ricketty children generally have great acuteness of mind, and an understanding above their years. Whether this is owing to their being more in the company of adults than other children, or to the preternatural enlargement of the brain, is not material.

REGIMEN.—As this disease is always attended with evident signs of weakness and relaxation, our chief aim in the cure must be to brace and strengthen the solids, and to promote digestion and the due preparation of the fluids. These important ends will be best answered by wholesome nourishing diet, suited to the age and strength of the patient, open dry air, and sufficient exercise. If the child has a bad nurse, who either neglects her duty, or does not understand it, she should be changed. If the season be cold, the child ought to be kept warm; and when the weather is hot, it ought to be kept cool; as sweating is apt to weaken it, and too great a degree of cold has the same effect. The limbs should be rubbed frequently with a warm hand, and the child kept as cheerful as possible.

The diet ought to be dry and nourishing, as good bread, roasted flesh, &c. Biscuit is generally reckoned the best bread; and pigeons, pullets, veal, rabbits, or mutton roasted or minced, are the most proper 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.

MEDICINE.—Medicines are here of little avail. The disease may often be cured by the nurse, but seldom by the physician. In children of a gross habit, gentle vomits and repeated purges of rhubarb may sometimes be of use, but they will seldom carry off the disease; that must depend chiefly upon such things as brace and strengthen the system: for which purpose, besides the regimen mentioned above, we would recommend the cold bath, especially in the warm season. It must however be used with prudence, as some ricketty children cannot bear it. The best time for using the cold bath is in the morning, and the child should be well rubbed with a dry cloth immediately after he comes out of it. If the child should be weakened by the cold bath, it must be discontinued.

Sometimes issues have been found beneficial in this disease. They are peculiarly necessary for children who abound with gross humours. An infusion of the Peruvian bark in wine or ale would be of service, were it possible to bring them to take it. We might here mention many other medicines which have been recommended for the rickets; but as there is far more danger in trusting to these than in neglecting them altogether, we chuse 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 medicines, as the tincture of soot, *asafoetida*, or castor. A few drops of any of these may be mixed in a cup of white-wine whey, and given occasionally.

When convulsions proceed from any external cause, as the pressure occasioned by strait clothes or bandages, &c. These ought immediately to be removed; though in this case taking away the cause will not always remove the effect, yet it ought to be done. It is not likely that the patient will recover, as long as the cause which first gave rise to the disorder continues to act.

When a child is seized with convulsions without having any complaint in the bowels, or symptoms of teething; or any rash or other discharge which has been suddenly dried up; we have reason to conclude that it is a primary disease, and proceeds immediately from the brain. Cases of this kind, however, happen but seldom, which is very fortunate, as little can be done to relieve the unhappy patient. When a disease proceeds from an original fault in the formation or structure of the brain itself, we cannot expect that it should yield to medicine. But as this is not always the cause, even of convulsions which proceed immediately from the brain, some attempts should be made to remove them. The chief intention to be pursued for this purpose, is to make some derivation from the head, by blistering, purging, and the like. Should these fail, issues or setons may be put in the neck, or between the shoulders.

OF WATER IN THE HEAD.

THOUGH water in the head, or a dropsy of the brain, may affect adults as well as children, yet, as the latter are more peculiarly liable to it, we thought that it would be most proper to place it among the diseases of infants.

CAUSES.—A dropsy of the brain may proceed from injuries done to the brain itself by falls, blows, or the like; it may also proceed from an original laxity or weakness of the brain; from scirrhus tumours or excrescences within the skull: a thin watery state of the blood: a diminished secretion of urine; a sudden check of the perspiration; and lastly, from tedious and lingering diseases, which waste and consume the patient.

SYMPTOMS.—This disease has at first the appearance of a slow fever; the patient complains of a pain in the crown of his head or over his eyes; he shuns the light; is sick, and sometimes vomits; his pulse is irregular and generally low: though he seems heavy and dull, yet he does not sleep: he is sometimes delirious, and frequently sees objects double; towards the end of this commonly fatal disease, the pulse becomes more frequent, the pupils are generally dilated, the cheeks flushed, the patient becomes comatose, and convulsions ensue.*

MEDICINE.—No medicine has hitherto been found sufficient to carry off a dropsy of the brain. It is laudable, however, to make some attempts, as time or chance may bring many things to light, of which at present we have no idea. The medicines generally used are, purges of rhubarb or jalap, with calomel or blistering-plasters applied to the neck or back part of the head. To which we would beg leave to add diuretics, or medicines which promote the secretion of urine, such as are recommended in the common dropsy. A discharge from the nose ought likewise to be promoted by causing the patient to snuff the powder of asarum, white hellebore or the like.

Some practitioners have of late pretended to cure this disease by the use of mercury. I have not been so happy as to see any instances of a cure being performed in a confirmed dropsy of the brain; but in so desperate a malady every thing deserves a trial.†

CHAP. LII.

OF SURGERY.†

TO describe all the operations of surgery, and to point out the different diseases in which these operations are necessary, would extend this article far beyond the limits allotted to it: we must therefore confine our observations to such cases as most generally occur, and

* I very lately lost a patient in this disease, where a curious metastasis seemed to take place. The water at first appeared to be in the abdomen, afterwards in the breast, and last of all it mounted up to the brain, where it soon proved fatal.

† 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 yet sufficiently known, and are often mistaken even by physicians themselves. Of this I lately saw a striking instance in a patient, attended by an eminent practitioner of this city, who had all along mistaken the disease for teething.

‡ Late Practice has fully proven, that all Surgical Instruments, except the lancet for Vaccination, dipped in oil at the instant of using, lessens the pain—It is salutary also to have all instruments at blood heat.

in which proper assistance is either not asked, or not always to be obtained.

Though an acquaintance with the structure of the human body is indispensably necessary to qualify a man for being an expert surgeon; yet many things may be done to save the lives of their fellow-men, in emergencies, by those who are no adepts in anatomy. It is amazing with what facility the peasants daily perform operations upon brute animals, which are not of a less difficult nature than many of those performed on the human species; yet they seldom fail of success.

Indeed every man is in some measure a surgeon whether he will or not. He feels an inclination to assist his fellow-men in distress, and accidents happen every hour which give occasion to exercise this feeling. The feelings of the heart, however, when not directed by the judgment, are apt to mislead. Thus one, by a rash attempt to save his friend, may sometimes destroy him; while another, for fear of doing amiss, stands still and sees his bosom friend expire without so much as attempting to relieve him, even when the means are in his power. As every good man would wish to steer a course different from either of these, it will no doubt be agreeable to him to know what ought to be done upon such emergencies.

OF BLEEDING.

NO operation of surgery is so frequently necessary as bleeding; it ought therefore to be very generally understood. But though practised by midwives, gardeners, blacksmiths, &c. we have reason to believe that very few know when it is proper. Even physicians themselves have been so much the dupes of theory in this article, as to render it the 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 stopt from any cause whatever, except in swoonings occasioned by mere weakness or hysteric affections, it is proper to open a vein. But in all disorders proceeding from a relaxation of the solids, and an impoverished state of the blood, as dropsies, cacochymies, &c. bleeding is improper.

Bleeding for topical inflammations ought always to be performed as near the part affected as possible. When this can be done with a lancet, it is to be preferred to any other method; but where a vein cannot be found, recourse must be had to leeches or cupping.

The quantity of blood to be let must always be regulated by the strength, age, constitution, manner of life, and other circumstances relating to the patient. It would be ridiculous to suppose that a child

could bear to lose as much blood as a grown person, or that a delicate lady should be bled to the same extent as a robust man.

From whatever part of the body blood is to be let, a bandage must be applied between that part and the heart. As it is often necessary, in order to raise the vein, to make the bandage pretty tight, it will be proper in such cases, as soon as the blood begins to flow, to slacken it a little. The bandage ought to be applied at least an inch, or an inch and an half, from the place where the wound is intended to be made.

Persons not skilled in anatomy ought never to bleed in a vein that lies over an artery or a tendon, if they can avoid it. The former may easily be known from its pulsation or beating, and the latter from its feeling hard or tight like a whip cord under the finger.

It was formerly a rule, even among those who had the character of being regular practitioners, to bleed their patients in certain diseases till they fainted. Surely a more ridiculous rule could not be proposed. One person will faint at the very sight of a lancet, while another will lose almost the whole blood of his body before he faints. Swooning depends more upon the state of the mind than of the body: besides, it may often be occasioned or prevented by the manner in which the operation is performed.

Children are generally bled with leeches. This, though sometimes necessary, is a very troublesome and uncertain practice. It is impossible to know what quantity of blood is taken away by leeches; besides, the bleeding is often very difficult to stop, and the wounds are not easily healed. Would those who practice 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 the blood is taken. But this, though a foolish prejudice, is not near so hurtful as the vulgar notion that the first bleeding will perform wonders. This belief makes them often postpone the operation when necessary, in order to reserve it for some more important occasion, and, when they think themselves in extreme danger, they fly to it for relief whether it be proper or not. Bleeding at certain stated periods or seasons has likewise bad effects.

It is a common notion that bleeding in the feet draws the humours downwards, and consequently cures diseases of the head and other superior parts; but we have already observed that, in all topical affections, the blood ought to be drawn as near the part as possible. When it is necessary, however, to bleed in the foot or hand, as the veins are small, and the bleeding is apt to stop too soon, the 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 operation as seeing it once performed by an expert hand. Neither is it necessary

to point out the different parts of the body from whence blood may be taken, as the arm, foot, forehead, temples, neck, &c. These will readily occur to every intelligent person, and the foregoing observations will be sufficient for determining which of them is most proper upon any particular occasion. In all cases where the intention is merely to lessen the general mass of blood, the arm is the most commodious part of the body in which the operation can be performed.

OF INFLAMMATIONS AND ABSCESES.

FROM whatever cause an inflammation proceeds, it must terminate either by dispersion, suppuration, or gangrene. Though it is impossible to foretel with certainty in which of these ways any particular inflammation will terminate, yet a probable conjecture may be formed with regard to the event, from a knowledge of the patient's age and constitution. Inflammations happening in a slight degree upon colds, and without any previous indisposition, will most probably be dispersed; those which follow close upon a fever, or happen to persons of a gross habit of body, will generally suppurate; and those which attack very old people, or persons of a dropsical habit, will have a strong tendency to gangrene.

If the inflammation be slight, and the constitution sound, the dispersion ought always to be attempted. This will be best promoted by a slender diluting diet, plentiful bleeding, and repeated purges. The part itself must be fomented, and, if the skin be very tense, it may be embrocated with a mixture of three-fourths of sweet oil, and one-fourth of vinegar, and afterwards covered with a piece of wax-plaster.

If, notwithstanding these applications, the symptomatic fever increases, and the tumour becomes larger, with violent pain and pulsation, it will be proper to promote the suppuration. The best application for this purpose is a soft poultice, which may be renewed twice a-day. If the suppuration proceeds but slowly, a raw onion cut small or bruised may be spread upon the poultice. When the abscess is ripe or fit for opening, which may easily be known from the thinness of the skin in the most prominent part of it, a fluctuation of matter which may be felt under the finger, and, generally speaking, an abatement of the pain, it may be opened either with a lancet, or by means of caustic.

The last way in which an inflammation terminates, is in a gangrene or mortification, the approach of which may be known by the following symptoms: the inflammation loses its redness, and becomes duskish or livid; the tension of the skin goes off, and it feels flabby; little bladders filled with ichor of different colours spread all over it; the tumour subsides, and from a duskish complexion becomes black; a quick low pulse, with cold clammy sweats, are the immediate forerunners of death.

When these symptoms first appear, the part ought to be dressed with London treacle, or a cataplasm made of lixivium and bran.—Should the symptoms become worse, the part must be scarified and afterwards dressed with basilicum softened with oil of turpentine. All the dressings must be applied warm. With regard to internal medicines, the patient must be supported with generous cordials, and the Peruvian

bark exhibited in as large doses as the stomach will bear it. If the mortified parts should separate, the wound will become a common ulcer, and must be treated accordingly.

This article includes the treatment of all those diseases, which, in different parts of the country, go by the names of *biles*, *imposthumes*, *whitloes*, &c. They are all abscesses in consequence of a previous inflammation, which, if possible, ought to be discussed; but when this cannot be done, the suppuration should be promoted, and the matter discharged by an incision, if necessary; afterwards the sore may be dressed with yellow basilicum, or some other digestive ointment.

OF WOUNDS.

NO part of medicine has been more mistaken than the treatment or cure of wounds. Mankind in general believe that certain herbs, ointments, and plasters are possessed of wonderful healing powers, and imagine that no wound can be cured without the application of them. It is however a fact, that no external application whatever contributes towards the cure of a wound, any other way than by keeping the parts soft, clean, and defending them from the external air, which may be as effectually done by dry lint, as by the most pompous applications, while it is exempt from many of the bad consequences attending them.

The same observation holds with respect to internal applications. These only promote the cure of wounds as far as they tend to prevent a fever, or to remove any cause that might obstruct or impede the operations of Nature. It is Nature alone that cures wounds! All that art can do is to remove obstacles, and to put the parts in such a condition as is the most favourable to Nature's efforts.

With this simple view we shall consider the treatment of wounds, and endeavour to point out such steps as ought to be taken to facilitate their cure.

The first thing to be done when a person has received a wound, is to examine whether any foreign body be lodged in it, as wood, stone, iron, lead, glass, dirt, bits of cloth or the like. These, if possible, ought to be extracted, and the wound cleaned, before any dressings be applied. When that cannot be effected with safety, on account of the patient's weakness, or loss of blood, they must be suffered to remain in the wound, and afterwards extracted when he is more able to bear it.

When a wound penetrates into any of the cavities of the body, as the breast, the bowels, &c. or where any considerable blood-vessel is cut, a skilful surgeon ought immediately to be called, otherwise the patient may lose his life. But sometimes the discharge of blood is so great, that if not stopt, 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, bleeding may generally be stopt 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 cartrope to secure his loading, till the bleeding stops. Whenever this is the case, he must take care to twist it no longer, as strain-

ing it too much might occasion an inflammation of the parts, and endanger a gangrene.

In parts where this bandage cannot be applied, various other methods may be tried to stop the bleeding, as the application of styptics, astringents, &c. Cloths dipped in a solution of blue vitriol in water, or the *styptic water* of the Dispensatories, may be applied to the wound. When these cannot be obtained, strong spirits of wine may be used. Some recommend the *agaric** of the oak as preferable to any of the other styptics; and indeed it deserves considerable encomiums.

It is easily obtained, and ought to be kept in every family, in case of accidents. A piece of it must be laid upon the wound, and covered with a good deal of lint, above which a bandage may be applied so tight as to keep it firmly on.

Though spirits, tinctures, and hot balsams may be used, in order to stop the bleeding when it is excessive, they are improper at other times. They do not promote, but retard the cure, and often change a simple wound into an ulcer. People imagine, because hot balsams congeal the blood, and seem, as it were, to solder up the wound, that they therefore heal it; but this is only a deception. They may indeed stop the flowing blood, by searing the mouths of the vessels; but, by rendering the parts callous they obstruct the cure.

In slight wounds, which do not penetrate much deeper than the skin, the best application is a bit of the common black sticking-plaster. This keeps the sides of the wound together, and prevents the air from hurting it, which is all that is necessary. When a wound penetrates deep, it is not safe to keep its lips quite close: this keeps in the matter, and is apt to make the wound fester. In this case the best way is to fill the wound with soft lint, commonly called *caddis*. It however must not be stuffed in too hard, otherwise it will do hurt. The lint may be covered with a cloth dipped in oil, or spread with the common wax-plaster;† and the whole must be kept on by a proper bandage.

We shall not spend time in describing the different bandages that may be proper for wounds in different parts of the body; common sense will generally suggest the most commodious method of applying a bandage; beside, descriptions of this kind are not easily understood or remembered.

The first dressing ought to continue on for at least two days; after

* Dr. Tissot, in his "Advice to the people," gives the following directions for gathering, preparing, and applying the agaric.—"Gather in autumn," says he, "while the fine weather lasts, the agaric of the oak, which is a kind of fungus or excrescence issuing from the wood of that tree. It consists at first of four parts, which present themselves successively:—1. The outward rind, or skin, which may be thrown away. 2. The part immediately under this rind, which is the best of all. This is to be beat well with a hammar, 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.

† See Appendix, *Wax-Plaster*.

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 *basilicum*;* and if fungus, or what is called *proud-flesh*, should rise in the wound, it may be checked, by mixing with the ointment a little burnt alum or red precipitate of mercury.

When a wound is greatly inflamed, the most proper application is a poultice of bread and milk, softened with a little sweet oil or fresh butter. This must be applied instead of a plaster, and should be changed twice a day.

If the wound be large, and there is reason to fear an inflammation, the patient should be kept on a very low diet. He must abstain from flesh, strong liquors, and every thing that is of a heating nature. If he be of a full habit, and has lost but little blood from the wound, he must be bled; and, if the symptoms be urgent, the operation may be repeated. But when the patient has been greatly weakened by loss of blood from the wound, it will be dangerous to bleed him, even though a fever should ensue. Nature should never be too far exhausted. It is always more safe to allow her to struggle with the disease in her own way, than to sink the patient's strength by excessive evacuations.

Wounded persons ought to be kept perfectly quiet and easy. Every thing that ruffles the mind or moves the passions, as love, anger, fear, excessive joy, &c. are very hurtful. They ought above all things to abstain from venery. The body should be kept gently open, either by laxative clysters, or by a cool vegetable diet, as roasted apples, stewed prunes, boiled spinage, and such like.

BURNS AND SCALDS. §

VARIOUS remedies are recommended for the treatment of these accidents; and it happens fortunately for the pressure of such an emergency, that some of the most common things are also the most useful on the occasion. The pain of burns and scalds may be instantly abated by immersing the part affected in cold water, or indeed in any cold fluid, or in spirits of wine. An excellent application likewise is vinegar, with or without powdered chalk in it. If the injury be on the fingers or hands, the application may be made by immersion, but if in any part where this would be inconvenient, the vinegar may be applied by means of linen rags dipped in it. In slight injuries, the vinegar, if early and assiduously applied, will of itself soon effect a cure; but should any degree of pain return, the immersion or fomentation must be repeated.

In recent burns or scalds, attended with large blisters, excoriations, or loss of substance, the vinegar ought to be applied till the pain nearly ceases, which generally happens within eight hours. Many practitioners recommend spirits of turpentine instead of vinegar; on lime-water and

* See Appendix, YELLOW BASILICUM.

linseed-oil. The vinegar need not be employed longer than twelve hours, except on the outside of the sores, which, while they continue to be swelled or inflamed, should be fomented for a minute or two before they are dressed.

For dressing the sores which arise from burns or scalds, one of the best applications is a poultice of bread, water, and sweet oil. This should be removed in six hours, when the sores are to be covered with chalk finely powdered, till it has absorbed the matter, and appears quite dry. A fresh poultice must be laid over the whole, which, with the sprinkling of the chalk, is to be repeated morning and evening till the sores are healed.

After the second or third day, if the sores be on a part of the body where it is difficult to keep the poultice from shifting, a plaster of cerate thickly spread, may be used as a substitute in the day-time.

When there are large blisters upon the part they should be opened with a lancet before the application of the vinegar; and the water they contain be pressed out with a linen cloth, that the vinegar may act more closely upon the burnt flesh, which in this case it does efficaciously. In severe cases, and in cold weather, the vinegar should be nearly blood-warm.

If the patient will not suffer the vinegar to be applied immediately to the surface, on account of the pain it excites, a linen rag soaked in sweet oil may be previously laid on the part, covering the whole with cloths dipped in vinegar; and these applications are to be occasionally repeated till the pain and inflammation be entirely removed; after which the parts should be dressed, or if the burning be very deep, with mixture of *that* and yellow basilicum.

When the burn or scald is violent, or has produced a high degree of inflammation, so that there is reason to be apprehensive of a gangrene, the same method of cure becomes necessary as in other violent inflammations. The patient in this case, must be put upon a low diet, and drink plentifully of weak diluting liquors. He must likewise be bled, and his body be kept open. But if the burnt parts should become livid or black, with other symptoms of mortification, it will be necessary to apply to them camphorated spirits of wine, tincture of myrrh, and other antiseptics, or correctors of putrefaction, mixed with a decoction of the Peruvian bark. In this case, the bark must likewise be taken internally; the patient at the same time using a more generous diet, with wine, spices, &c.

When burns are occasioned by the explosion of gunpowder, some of the grains of the powder are apt to be forced into the skin. At first they produce much irritation; and, if they be not removed, they commonly leave marks which remain during life. They should therefore be picked out as soon as possible after the accident; and to prevent inflammation, as well as to dissolve any powder which may remain, the parts affected, should be covered for a day or two with emollient poultices.

A strong solution of soap in water has long been in use with artificers employed in any business exposing workmen to very bad scalds. This is allowed to be an excellent remedy. But, as the soap would take some time in dissolving, and the solution some time in cooling, Dr. Underwood recommends a mixture of six ounces of oil to ten of water, with two drachms of the ley of kali, or pot-ash. This quantity may be sufficient for a burn on the hand or foot, which is to be im-

mersed, and kept about half an hour in the liquor, which will remove the injury, if recourse to it immediately be had; but must be repeated, as the pain may require, if the scald or burn be of some standing.

As example teaches better than precept, I shall relate the treatment of the most dreadful case of this kind that has occurred in my practice. A middle-aged man, of a good constitution, fell into a large vessel full of boiling water, and miserably scalded about one half of his body. As his clothes were on, the burning in some parts was very deep before they could be got off. For the first two days the scalded parts had been frequently anointed with a mixture of lime-water and oil, which is a very proper application for recent burnings. On the third day, when I first saw him, his fever was high, and his body costive, for which he was bled, and had an emollient clyster administered. Poultices of bread and milk, softened with fresh butter, were likewise applied to the affected parts, to abate the heat and inflammation. His fever still continuing high, he was bled a second time, was kept strictly on the cooling regimen, took the saline mixture with small doses of nitre, and had an emollient clyster administered once a-day. When the inflammation began to abate, the parts were dressed with a digestive composed of brown cerate and yellow basilicum. Where any black spots appeared, they were slightly scarified, and touched with the tincture of myrrh, and to prevent their spreading, the Peruvian bark was administered. By this course, the man was so well in three weeks as to be able to attend his business.

The most useful application, we are told, with which families can be provided against any emergency of this kind, is a strong brine, made by placing sliced potatoes and common salt in alternate layers in a pan, allowing them to remain until the whole of the salt is liquified; which must be then drained off, and kept in bottles, properly labelled, ready for immediate use.

OF BRUISES.

BRUISES are generally productive of worse consequences than wounds. The danger from them does not appear immediately, by which means it often happens that they are neglected. It is needless to give any definition of a disease so universally known; we shall therefore proceed to point out the method of treating it.

In slight bruises it will be sufficient to bathe the part with warm vinegar to which a little brandy or rum may occasionally be added, and to keep cloths wet with this mixture constantly applied to it. This is more proper than rubbing it with brandy, spirits of wine, or other ardent spirits, which are commonly used in such cases.

In some parts of the country the peasants apply to a recent bruise a cataplasm of fresh cow-dung. I have often seen this cataplasm applied to violent contusions occasioned by blows, falls, bruises, and such like, and never knew it fail to have a good effect.

When a bruise is very violent, the patient ought immediately to be bled, and put upon a proper regimen. His food should be light and cool, and his drink weak and of an opening nature; as whey sweetened with honey, decoctions of tamarinds, barley, cream-tartar whey, and such like. The bruised part must be bathed with vinegar and water, as directed above; and a poultice made by boiling crumbs of bread, elder-flowers, and camomile flowers, in equal quantities of vinegar and water,

applied to it. This poultice is peculiarly proper when a wound is joined to the bruise. It may be renewed two or three times a-day.

As the structure of the vessels is totally destroyed by a violent bruise, there often ensues a great loss of substance, which produces an ulcerous sore very difficult to cure. If the bone be affected, the sore will not heal before an exfoliation takes place; that is, before the diseased part of the bone separates, and comes out through the wound. This is often a very slow operation, and may even require several years to be completed. Hence it happens, that these sores are frequently mistaken for the king's evil, and treated as such, though in fact they proceed solely from the injury which the solid parts received from the blow.

Patients in this situation are pestered with different advices. Every one who sees them proposes a new remedy, till the sore is so much irritated with various and opposite applications, that it is often at length rendered absolutely incurable. The best method of managing such sores is, to take care that the patient's constitution does not suffer by confinement or improper medicine, and to apply nothing to them besides simple ointment spread upon soft lint, over which a poultice of bread and milk, with boiled camomile flowers, or the like, may be put to nourish the part, and keep it soft and warm. Nature, thus assisted, will generally in time operate a cure, by throwing off the diseased parts of the bone, after which the sore soon heals.

OF ULCERS.

ULCERS may be the consequence of wounds, bruises, or imposthumes improperly treated; they may likewise proceed from an ill state of the humours, or what may be called a bad habit of body.

In the latter case they ought not to be hastily dried up, otherwise it may prove fatal to the patient. Ulcers happen most commonly in the decline of life; and persons who neglect exercise, and live grossly, are most liable to them. They might often be prevented by retrenching some part of the solid food, or by opening artificial drains, as issues, setons, or the like.

An ulcer may be distinguished from a wound by its discharging a thin watery humour, which is often so acrid as to inflame and corrode the skin; by the hardness and perpendicular situation of its sides or edges; by the time of its duration, &c.

It requires considerable skill to be able to judge whether or not an ulcer ought to be dried up. In general, all ulcers which proceed from a bad habit of body, should be suffered to continue open, at least till the constitution has been so far changed by proper regimen, or the use of medicine, that they seem disposed to heal of their own accord. Ulcers which are the effect of malignant fevers or other acute diseases, may generally be healed with safety after the health has been restored for some time. The cure ought not however to be attempted too soon, nor at any time without the use of purging medicines and a proper regimen. When wounds or bruises have, by wrong treatment, degenerated into ulcers, if the constitution be good, they may generally be healed with safety. When ulcers either accompany chronic 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 those 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 ought to be kept cheerful, and should take as much exercise as he can easily bear.

When the bottom and sides of an ulcer seem hard and callous, they may be sprinkled twice a-day with a little red precipitate of mercury, and afterwards dressed with the yellow *basilicum* ointment. Sometimes it will be necessary to have the edges of the ulcer scarified with the lancet.

Lime-water has frequently been known to have happy effects in the cure of obstinate ulcers. It may be used in the same manner as directed for the stone and gravel.

My late learned and ingenious friend Dr. Whytt strongly recommends the use of the solution of corrosive sublimate of mercury in brandy, for the cure of obstinate ill-conditioned ulcers. I have frequently found this medicine, when given according to the Doctor's directions, prove very successful. The dose is a table-spoonful night and morning; at the same time washing the sore twice or thrice a-day with it. In a letter which I had from the Doctor a little before his death, he informed me, "That he observed washing the sore thrice a-day with the solution of a triple strength was very beneficial."*

A fistulous ulcer can seldom be cured without an operation. It must either be laid open so as to have its callous parts destroyed by some corrosive application, or they must be entirely cut away by the knife; but as this operation requires the hand of an expert surgeon, there is no occasion to describe it. Ulcers about the *anus* are most apt to become fistulous, and are very difficult to cure. Some indeed pretend to have found Ward's fistula paste very successful in this complaint. It is not a dangerous medicine, and being easily procured, it may deserve a trial; but as these ulcers generally proceed from an ill habit of body, they will seldom yield to any thing except a long course of regimen, assisted by medicines which are calculated to correct that particular habit, and to induce an almost total change in the constitution.

* 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.

CHAP. LIII.

OF DISLOCATIONS.

WHEN a bone is moved out of its place or articulation, so as to impede its proper functions, it is said to be *luxated* or *dislocated*. As this often happens to persons in situations where no medical assistance can be obtained, by which means limbs, and even lives, are frequently lost, we shall endeavour to point out the method of reducing the most common luxations, and those which require immediate assistance. Any person of common sense and resolution, who is present when a dislocation happens, may often be of more service to the patient, than the most expert surgeon can after the swelling and inflammation have come on. When these are present, it is difficult to know the state of the joint, and dangerous to attempt a reduction, and by waiting till they are gone off, the muscles become so relaxed, and the cavity filled up, that the bone can never afterwards be retained in its place.

A recent dislocation may generally be reduced by extension alone, which must always be greater or less according to the strength of the muscles which move the joint, the age, robustness, and other circumstances of the patient. When the bone has been out of its place for a 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 dipt in vinegar or camphorated spirits of wine to the part, and to keep it perfectly easy. Many bad consequences proceed from the neglect of this rule. A dislocation seldom happens without the tendons and ligaments of the joint being stretched and sometimes torn. When these are kept easy till they recover their strength and tone, all goes on very well; but if the injury be increased by too frequent an exertion of the parts, no wonder if they be found weak and diseased ever after.

DISLOCATION OF THE JAW.

THE lower jaw may be luxated by yawning, blows, falls, chewing hard substances, or the like. It is easily known from the patient's being unable to shut his mouth, or to eat any thing, as the teeth of the under jaw do not correspond with those of the upper; besides, the chin either hangs down, or is thrown 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 part 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 upon his back on the ground, and, the operator must place himself behind him so as to be able to lay hold of his head with both hands, while he makes a resistance by placing his knees against the patient's shoulders. In this posture he must pull the head with considerable force, gently twisting it at the same time, if the face be turned to one side, till he perceives that the joint is replaced, which may be known from the noise which the bones generally make when going in, the patient's beginning to breathe, and the head continuing in its natural posture.

This is one of those operations which 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 situation.

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; by this means the heads of the luxated ribs may slip into their former place.

DISLOCATION OF THE SHOULDER.

THE humerus or upper bone of the arm may be dislocated in various directions: it happens however most frequently downwards, but very seldom directly upwards. From the nature of its articulation, as well as from its exposure to external injuries, this bone is the most subject to dislocation of any in the body. A dislocation of the humerus may be known by a depression of cavity on the top of the shoulder, and an inability to move the arm. When the dislocation is downward or forward, the arm is elongated, and a ball or lump is perceived under the arm pit; but when it is backward, there appears a protuberance behind the shoulder, and the arm is thrown forwards towards the breast.

The usual method of reducing dislocations of the shoulder is to seat the patient upon a low stool, and to cause an assistant to hold his body so that it may not give way to the extension, while another lays hold of the arm a little above the elbow, and gradually extends it. The operator then puts a napkin under the patient's arm, and causes it to be tied behind his own neck; by this, while a sufficient extension is made, he lifts up the head of the bone, and with his 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 patient's I have generally found it a very easy matter to reduce the shoulder, by extending the arm with one hand, and thrusting in the head of the bone with the other. In making the extension, the arm ought always to be a little bent.

DISLOCATION OF THE ELBOW.

THE bones of the fore-arm may be dislocated in any direction. When this is the case, a protuberance may be observed on that side of the arm towards which the bone is pushed, from which, and the patient's inability to bend his arm, a dislocation of this joint may easily be known.

Two assistants are generally necessary for reducing a dislocation of the elbow; one of them must lay hold of the arm above, and the other below the joint, and make a pretty strong extension, while the operator returns the bones into their proper place. Afterwards the arm must be bent, and suspended for some time with a sling about the neck.

Luxations of the wrist and fingers are to be reduced in the same manner as those of the elbow; viz. by making an extension in different directions, and thrusting the head of the bone into its place.

DISLOCATION OF THE THIGH.

WHEN the thigh-bone is dislocated forward and downward, the knee and foot are turned out, and the leg is longer than the other;

but when it is displaced backward, it is usually pushed upwards at the same time, by which means the limb is shortened, and the foot is turned inwards.

When the thigh bone is displaced forward and downward, the patient in order to have it reduced, must be laid up on 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 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. LIV,

OF BROKEN BONES, &c.

THERE is, in most villages, some person who pretends to the art of reducing fractures. Though in general such persons are very ignorant, yet some of them are very successful; which evidently proves, that a small degree of learning, with a sufficient share of common sense and a mechanical head, will enable a man to be useful in this way. We would, however, advise people never to employ such operators, when an expert and skilful surgeon can be had; but when that is impracticable, they must be employed: we shall therefore recommend the following hints to their consideration:

When a large bone is broken, the patient's diet ought in all respects to be the same as in an inflammatory fever. He should likewise be kept quiet and cool, and his body open by emollient clysters; or, if these cannot be conveniently administered, by food that is of an opening quality; as stewed prunes, apples boiled in milk, boiled spinage, and the like. It ought however to be here remarked, that persons who have been accustomed to live high, are not all of a sudden to be reduced to a very low diet. This might have fatal effects. There is often a necessity for indulging even bad habits, in some measure, where the nature of the disease might require a different treatment.

It will generally be necessary to bleed the patient immediately after a fracture, especially if he be young, of a full habit, or has at the same time received any bruise or contusion. This operation should not only be performed soon after the accident happens, but if the patient be very feverish, it may be repeated next day. When several of the ribs are broken, bleeding is peculiarly necessary.

If any of the large bones which support the body are broken, the patient must keep his bed for several weeks. It is by no means necessary, however, that he should lie all that time, as is customary, upon his back. This situation sinks the spirits, galls and frets the patient's skin, and renders him very uneasy. After the second week he may be gently raised up, and may sit several hours, supported by a bed-chair, or the like, which will greatly relieve him. Great care, however, must be taken in raising him up and laying him down, that he make no exertions himself, otherwise the action of the muscles may pull the bone out of its place.*

It is of great importance to keep the patient dry and clean while in this situation. By neglecting this, he is often so galled and excoriated, that he is forced to keep shifting places for ease. I have known a fractured thigh-bone, after it had been kept straight for above a fortnight, displaced by this means, and continue bent for life, in spite of all that could be done.

It has been customary when a bone was broken, to keep the limb for five or six weeks continually upon the stretch. But this is a bad posture. It is both uneasy to the patient, and unfavourable to the cure. The best situation is to keep the limb a little bent. This is the posture into which every animal puts its limbs when it goes to rest, and in which fewest muscles are upon the stretch. It is easily effected, by either laying the patient upon his side, or making the bed so as to favour this position of the limb.

Bone-setters ought carefully to examine whether the bone be not shattered or broken into several pieces. In this case it will sometimes be necessary to have the limb immediately taken off, otherwise a gangrene or mortification may ensue. The horror which attends the very idea of an amputation, often occasions its being delayed in such cases till too late. I have known this principle operate so strongly, that a limb, where the bones were shattered into more than twenty pieces, was not amputated before the third day after the accident, when the gangrene had proceeded so far as to render the operation useless.

When a fracture is accompanied with a wound, it must be dressed in all respects as a 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 succeed to fractured bones are owing to tight bandages. This is one of the ways in which excess of art, or rather the abuse of it, does more mischief than would be occasioned by the want of it. Some of the most sudden cures of broken bones which were ever known, happened where no banda-

* Various pieces of machinery have been contrived for counteracting the force of the muscles, and retaining the fragments of broken bones; but as descriptions of these without drawings would be of little use, I shall refer the reader to a cheap and useful performance "on the nature and cure of fractures," lately published by my ingenious friend Mr. Aitken, surgeon in Edinburgh; wherein that gentleman has not only given an account of the machines recommended in fractures by former authors, but has likewise added several improvements of his own, which are peculiarly useful in compound fractures, and in cases where patients with broken bones are obliged to be transported from one place to another.

ges 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 be applied, soon assume the shape of the included member, and are sufficient, by the assistance of a very slight bandage, for all the purposes of retention. The bandage which we would recommend, is that made with twelve or eighteen tails. It is much easier applied and taken off than rollers, and answers all the purposes of retention equally well. The splints should always be as long as the limb, with holes cut for the ankle when the fracture is in the leg.

In fractures of the ribs, where a bandage cannot be properly used, an adhesive plaster may be applied over the part. The patient in this case ought to keep himself quite easy, avoiding every thing that may occasion sneezing, laughing, coughing, or the like. He ought to keep his body in a straight posture, and should take care that his stomach be constantly distended, by taking frequently some light food, and drinking freely of weak watery liquors.

The most proper external application for a fracture, is *oxycrate* or a mixture of vinegar and water. The bandages should be wet with this at every dressing.

OF STRAINS.

STRAINS are often attended with worse consequences than broken bones. The reason is obvious; they are generally neglected. When a bone is broken, the patient is obliged to keep the member easy, because he cannot make use of it; but when a joint is only strained, the person, finding he can still make a shift to move it, is sorry to lose his time for so trifling an ailment. In this way he deceives himself, and converts into an incurable malady what might have been removed by only keeping the part easy for a few days.

Country people generally immerse a strained limb in cold water. This is very proper provided it be done immediately, and not kept in too long. But the custom of keeping the part immersed in cold water for a long time is certainly dangerous. It relaxes instead of bracing the part, and is more likely to produce a disease than remove one.

Wrapping a garter, or some other bandage, pretty tight about the strained part, is likewise of use. It helps to restore the proper tone of the vessels and prevents the action of the parts from increasing the disease. It should not however be applied too tight. I have frequently known bleeding near the affected part have a very good effect; but what we would recommend above all is *ease*. It is more to be depended on than any medicine, and seldom fails to remove the complaint.*

* 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 oat-meal, 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,

OF RUPTURES.

CHILDREN and old people are most liable to this disease. In the former it is generally occasioned by excessive crying, coughing, vomiting, or the like. In the latter, it is commonly the effect of blows or violent exertions of the strength, as leaping, carrying great weights, &c. In both a relaxed habit, indolence, and an oily or very moist diet, dispose the body to this disease.

A rupture sometimes proves fatal before it is discovered. Whenever sickness, vomiting, and obstinate costiveness give reason to suspect an obstruction of the bowels, all those places where ruptures usually happen ought carefully to be examined. The protusion of a very small part of the gut will occasion all these symptoms, and if not returned in due time, will prove fatal.

On the first appearance of a rupture in an infant, it ought to be laid upon its back, with its head very low. While in this posture, if the gut does not return of itself, it may easily be put up by gentle pressure. After it is returned, a piece of sticking plaster may be applied over the part, and a proper truss or bandage must be constantly worn for a considerable time. The method of making and applying these rupture bandages for children is pretty well known. The child must as far as possible, be kept from crying, and from all violent exertions, till the rupture is quite healed.

In adults, when the gut has been forced down with great violence, or happens from any cause to be inflamed, there is often great difficulty in returning it, and sometimes the thing is quite impracticable without an operation; a description of which is foreign to our purpose. As I have been fortunate enough, however, always to succeed in my attempts to return the gut, without having recourse to any other means than what are in the power of every man, I shall briefly mention the method which I generally pursue.

After the patient has been bled, he must be laid upon his back, with his head very low, and his breech raised high with pillows. In this situation flannel cloths wrung out of a decoction of mallows and camomile flowers, or, if these are not at hand, of warm water, must be applied for a considerable time. A clyster made of this decoction, with a large spoonful of butter and an ounce or two of salt, may be afterwards thrown up. If these should not prove successful, recourse must be had to pressure. If the tumour be very hard, considerable force will be necessary: but it is not force alone which succeeds here. The operator, at the same time that he makes a pressure with the palms of his hands, must with his fingers artfully conduct the gut in by the same aperture through which it came out. The manner of doing this can be much easier conveyed than described. Should these endeavours prove ineffectual, clysters of the smoke of tobacco may be tried. These have been often known to succeed where every other method failed.

There is reason to believe that, by persisting in the use of these, and such other means as the circumstances of the case may suggest, most *hernias* might be reduced without an operation. Cutting for the *hernia* is a nice and difficult matter. I would therefore advise surgeons to try every method of returning the gut before they have recourse to the knife. I have once and again succeeded by persevering

in my endeavours, after eminent surgeons had declared the reduction of the gut impracticable without an operation.*

An adult, after the gut has been returned, must wear a steel bandage. It is needless to describe this, as it may always be had ready made from the artists. Such bandages are generally uneasy to the wearer for some time, but by custom they become quite easy. No person who has had a rupture after he arrived at man's estate should ever be without one of those bandages.

Persons who have a rupture ought carefully to avoid all violent exercise, carrying great weights, leaping, running, and the like. They should likewise avoid windy aliment and strong liquors; and should carefully guard against catching cold.

CHAP. LV.

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 stopt 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 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 further notice taken of him. This conduct seems to be the result of ignorance, supported by an ancient superstitious notion, which forbids the body of any person killed by accident to be laid in an house that is inhabited. What the ground of this superstition may be, we shall not pre-

* I would here beg leave to recommend it to every practitioner, when his patient complains of pain in the belly with obstinate costiveness, to examine the groins and every place where a rupture may happen. in order that it may be immediately reduced. By neglecting this, many perish who were not suspected to have had ruptures till after they were dead. I have known this happen where half a dozen of the faculty were in attendance.

tend 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 wind pipe or gullet; and if that is the case, attempts must be made to remove it. When unwholesome air is the cause, the patient ought immediately to be removed out of it. If the circulation be suddenly stopped, from any cause whatever, except mere weakness, the patient should be bled. If the blood does not flow, he may be immersed in warm water, or rubbed with warm cloths, &c. to promote the circulation. When the cause cannot be suddenly removed, our great aim must be to keep up the vital warmth, by rubbing the patient with hot cloths, or salt, and covering his body with warm sand, ashes or the like.

I should now proceed to treat more fully of those accidents, which without immediate assistance, would often prove fatal, and to point out the most likely means for relieving the unhappy sufferers; but as I have been happily anticipated in this part of my subject by the learned and humane Dr. Tissot, I shall content myself with 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 STOPPED BETWEEN THE MOUTH AND STOMACH.

THOUGH accidents of this kind are very common, and extremely dangerous, yet they are generally the effect of carelessness. Children should be taught to chew their food well, and to put nothing into their mouths which it would be dangerous for them to swallow. But children are not the only persons guilty of this piece of imprudence. I know many adults who put pins, nails, and other sharp-pointed substances in their mouths upon every occasion, and some who even sleep with the former there all night. This conduct is exceedingly injudicious, as a fit of coughing, or twenty other accidents, may force over the substances before the person is aware.*

When any substance is retained 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

* A woman in one of the hospitals of 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.

small pair of forceps, such as surgeons use. But this attempt to extract rarely succeeds, if the substance be of a flexible nature, and has descended far into the gullet.

If the fingers and 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 their middle part, crooks and thus disengages them; or, if they are very brittle substances, serves to break them.

When the obstructing bodies are small, and only stop up a part of the passage, and which may either easily elude the hook, or 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 pack-thread, which may be waxed for their greater strength and consistence. One of these is to be tied fast to a handle of iron wire, whale-bone, or any kind of flexible wood, and by this means introduced, in order to surround the obstructing substance, and to draw it out. Several of these rings passed through one another may be used, the more certainly to lay hold of the obstructing body, which may be involved by one, if another should miss it. These rings have one advantage, which is, that when the substance to be extracted is once laid hold of, it may then, by turning the handle, be retained so strongly in the ring thus twisted, as to be moved every way, which must in many cases be a considerable advantage.

Another material employed on these unhappy occasions, is the sponge. Its property of swelling considerably on being wet is the principal foundation of its usefulness here. If any substance is stopt in the gullet, but without filling up the whole passage, a bit of sponge may be introduced into that part which is unstoppt, 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 intro-

duced. A bit of sponge may likewise be compressed by a piece of whale-bone 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 further 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 have been followed by no disorder.

Whenever it is manifest that all endeavours, either to extract or push down the substance, must prove ineffectual, they should be discontinued; because the inflammation occasioned by persisting in them might be as dangerous as the obstruction itself. Some have died in consequence of the inflammation, even after the body which caused the obstruction had been entirely removed.

While the means recommended above are making use of, the patient should often swallow, or, if he cannot, he should frequently receive by injection through a crooked tube or pipe that may reach down to the gullet, some emollient liquor, as warm milk and water, barley-water, or a decoction of mallows. Injections of this kind not only soften and sooth 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 adhering body more effectually than instruments. Thus a blow on the back

has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious when the substance gets into the wind-pipe. In this case vomiting and sneezing are likewise to be excited. Pins which stuck in the gullet have been frequently discharged by riding on horseback, or in a carriage.

When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous 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, and is often the only method which can be taken to preserve life in these emergencies, we thought proper to mention it, though it should only be attempted by persons skilled in surgery.

OF DROWNED PERSONS.

WHEN a person has remained above a quarter of an hour under water, there can be no considerable hopes of his recovery. But as several circumstances may happen to have continued life, in such an unfortunate situation, beyond the ordinary term, we should never too soon resign the unhappy object to his fate, but try every method for his relief, as there are many well attested proofs of the recovery of persons to life and health, who had been taken out of the water apparently dead, and who remained a considerable time without exhibiting any signs of life.

The first thing to be done, after the body is taken out of the water, is to convey it as soon as possible to some convenient place where the necessary operations for its recovery may be performed. In doing this, care must be taken not to bruise or injure the body by carrying it in any unnatural posture with the head downwards, or the like. If an adult body, it ought to be laid on a bed, or on straw with the head a little raised, and carried on a cart or men's shoulders, and kept in as natural and easy a position as possible. A small body may be carried in the arms.

In attempting to recover persons apparently drowned, the principal intention to be pursued is, *to restore the natural warmth*, upon which all the vital functions depend; and to excite these functions by the application of stimulants, not only to the skin, but likewise to the lungs, intestines, &c.

Though cold was by no means the cause of the person's death, yet it will prove an effectual obstacle to his recovery. For this reason, stripping him of his wet clothes, his body must be strongly rubbed for a considerable time with coarse linen cloths, as warm as they can be made: and, as soon as a well-heated bed can be got ready, he may be

laid into it, and the rubbing should be continued. Warm cloths ought likewise to be frequently applied to the stomach and bowels, and hot bricks, or bottles of warm-water, to the soles of his feet, and to the palms of his hands.

Strong volatile spirits should be frequently applied to the nose; and the spine of the back and pit of the stomach may be rubbed with warm brandy or spirit of wine. The temples ought also to be chafed with volatile spirits; and stimulating powders, as that of tobacco or marjoram, may be blown up the nostrils.

To renew the breathing a strong person may blow his own breath into the patient's mouth with all the force he can, holding his nostril at the same time. When it can be perceived by the rising of the chest or belly that the lungs are filled with air, the person ought to desist from blowing, and should press the breast and belly so as to expel the air again; and this operation may be repeated for some time, alternately inflating and depressing the lungs so as to imitate natural respiration.

If the lungs cannot be inflated in this manner, it may be attempted by blowing through one of the nostrils, and at the same time keeping the other close. Dr. Monro for this purpose recommends a wooden pipe fitted at one end for filling the nostril, and at the other for being blown into by a person's mouth, or for receiving the pipe of a pair of bellows, to be employed for the same purpose, if necessary.

When air cannot be forced into the chest by the mouth or nose, it may be necessary to make an opening into the wind-pipe for this purpose. It is needless, however, to spend time in describing this operation, as it should not be attempted unless by persons skilled in surgery.

To stimulate the intestines, the fume of tobacco may be thrown up in form of clyster. There are various pieces of apparatus contrived for this purpose, which may be used when at hand; but where these cannot be obtained, the business may be done by a common tobacco pipe. The bowl of the pipe must be filled with tobacco well kindled, and, after the small tube has been introduced into the fundament, the smoke may be forced up by blowing through a piece of paper full of holes wrapped round the mouth of the pipe, or by blowing through an empty pipe, the mouth of which is applied close to that of the other. This may also be done in the following manner. A common clyster-pipe with a bag mounted upon it may be introduced into the fundament, and the mouth of the bag may be applied round the small end of a tobacco-pipe, in the bowl of which tobacco is to be kindled, and the smoke blown up as directed above. Should it be found impracticable to throw up the smoke of tobacco, clysters of warm water, with the addition of a little salt and some wine or spirits, may be frequently administered. This may be done by a common clyster-bag and pipe; but, as it ought to be thrown well up, a pretty large syringe will answer the purpose better.

While these things are doing, some of the attendants ought to be preparing a warm bath, into which the person should be put, if the above endeavours prove ineffectual. Where there are no conveniences for using the warm bath, the body may be covered with warm salt, sand, ashes, grains, or such like. Tissot mentions an instance of a girl who was restored to life, after she had been taken out of the water, swelled,

bloated, and to all appearance dead, by laying her naked body upon hot ashes, covering her with others equally hot, putting a bonnet round her head, and a stocking round her neck, stuffed with the same, and heaving coverings over all. After she had remained half an hour in this situation, her pulse returned, she recovered speech, and cried out, *I freeze; I freeze*; a little cherry-brandy was given her and she remained buried as it were under the ashes for eight hours; afterwards she was taken out, without any other complaint except that of lassitude or weariness, which went off in a few days. The Doctor mentions likewise an instance of a man who was restored to life, after he had remained six hours under water, by the heat of a dunghill.

Till the patient shews some signs of life, and is able to swallow, it would be useless and even dangerous to pour liquors into his mouth. His lips however, and tongue, may be frequently wet with a feather dipt in warm brandy or other strong spirits; and, as soon as he has recovered the power of swallowing, a little warm wine, or some other cordial, ought every now and then to be administered.

Some recommend a vomit after the patient is a little re-animated; but if he can be made to puke without the sickening draught, it will be more safe: this may generally be done by tickling the throat and fauces with an oiled feather, or some other soft substance, which will not injure the parts. Tissot in this case recommends the oxymel of squills, a table-spoonful of which, diluted with water, may be given every quarter of an hour, till the patient has taken five or six doses. Where that medicine is not at hand, a strong infusion of sage, camomile-flowers, or *carduus benedictus*, sweetened with honey, or some warm water, with the addition of a little salt, may, he says, supply its place. The Doctor does not intend that any of these things should be given in such quantity as to occasion vomiting. He thinks emetics in this situation are not expedient.

We are by no means to discontinue our assistance as soon as the patients discover some tokens of life, since they sometimes expire after these first appearances of recovering. The warm and stimulating applications are still to be continued, and small quantities of some cordial liquor ought frequently to be administered. Lastly, though the person should be manifestly re-animated, there sometimes remains an oppression, a cough, and feverishness, which effectually constitute a disease. In this case it will be necessary to bleed the patient in the arm and to cause him to drink plentifully of barley-water, elder-flower tea, or any other soft pectoral infusions.

Such persons as have the misfortune to be deprived of the appearances of life, by a fall, a blow, suffocation, or the like, must be treated nearly in the same manner as those who have been for some time under water. I once attended a patient who was so stunned by a fall from a horse, that for above six hours he scarcely exhibited any signs of life; yet this man, by being bled, and proper methods taken to keep up the vital warmth, recovered, and in a few days was perfectly well. Dr. Alexander gives an instance to the same purpose in the *Edinburgh Physical and Literary Essays*, of a man who was to all appearance killed by a blow on the breast, but recovered upon being immersed for some time in warm water. These, and other instances of a similar nature, which might be adduced, amount to a full proof of this fact, that many of those

unhappy persons who lose their lives by falls, blows, and other accidents, might be saved *by the use of proper means duly persisted in.*

OF NOXIOUS VAPOURS.

AIR may be many ways rendered noxious or even destructive to animals. This may either happen from its vivifying principles being destroyed, or from subtle exhalations with which it is impregnated. Thus air that has passed through burning fuel is neither capable of supporting fire nor the life of animals. Hence the danger of sleeping in close chambers with coal fires. Some indeed suppose the danger here proceeds from the sulphureous oil contained in the coal, which is set at liberty and diffused all over the chamber; while others imagine it is owing to the air of the room being charged with phlogiston. Be this as it may, it is a situation carefully to be avoided. Indeed it is dangerous to sleep in a small apartment with a fire of any kind. I lately saw four persons who had been suffocated by sleeping in an apartment where a small fire of coal had been left burning.

The vapour which exhales from wine, cyder, beer, or other liquors in the state of fermentation, contains something poisonous, which kills in the same manner as the vapour of coal. Hence there is always danger in going into cellars where a large quantity of these liquors, is in a state of fermentation, especially if they have been close shut up for some time. There have been many instances of persons struck dead on entering such places, and of others who have with difficulty escaped.

When subterraneous caves, that have been very long shut, are opened, or when deep wells are cleaned, which have not been emptied for several years, the vapours arising from them produce the same effects as those mentioned above. For this reason no person ought to venture into a well, pit, cellar, or any place that is damp, and has been long shut up, till the air has been sufficiently purified, by burning 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 smell of lamps and of candles, especially when their flames are extinguished, operate like other vapours, though with less violence, and less suddenly. There have however been instances of people killed by the fumes of lamps which had been extinguished in a close chamber, and persons of weak delicate breasts generally find themselves quickly oppressed in apartments illuminated with many candles.

Such as are sensible of their danger in these situations, and retreat seasonably from it, are generally relieved as soon as they get into the open air, or, if they have any remaining uneasiness, a little water and vinegar, or lemonade, drank hot, affords them relief. But when they are so far poisoned as to have lost their feeling and understanding, the following means must be used for their recovery.

The patient should be exposed to a very pure, fresh, and open air, and volatile salts, or other stimulating substances, held to his nose. He should next be bled in the arm, or if that does not succeed, in the

neck. His legs ought to be put into warm water, and well rubbed. As soon as he can swallow, some lemonade, or water and vinegar with the addition of a little nitre, may be given him.

Nor are sharp clysters by any means to be neglected; these may be made, by adding to the common clyster, syrup of buckthorn and tincture of senna, of each two ounces; or, in their stead, half an ounce of Venice turpentine dissolved in the yolk of an egg. Should these things not be at hand, two or three large 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, preceded by great sleepiness. The traveller, in this situation, who finds himself begin to grow drowsy, should redouble his efforts to extricate himself from the imminent danger he is exposed to. This sleep, which he might consider as some alleviation of his sufferings, would, if indulged, prove his last.

Such violent effects of cold are happily not very common in this country; it frequently happens, however, that the hands or feet of travellers are so benumbed or frozen, as to be in danger of a mortification, if proper means are not used to prevent it. The chief danger in this situation arises from the sudden application of heat. It is very common, when the hands or feet are pinched with cold, to hold them to the fire; yet reason and observation shew that this is a most dangerous and imprudent practice.

Every peasant knows, if frozen meat, fruits, or roots of any kind be brought near the fire, or put into warm water, they will be destroyed, by rotteness or a kind of mortification; and that the only way to recover them, is to immerse them for some time in very cold water. The same observation holds with regard to animals in this condition.

When the hands or feet are greatly benumbed with cold, they ought either to be immersed in cold water, or rubbed with snow, till they recover their natural warmth and sensibility: after which the person may be removed into an apartment a little warmer, and may drink some cups of tea, or an infusion of elder flowers sweetened with honey. Every person must have observed, when his hands were even but slightly af-

fects with cold, that the best way to warm them was by washing them in cold water, and continuing to rub them well for some time.

When a person has been so long exposed to the cold, that all appearances of life are gone, it will be necessary to rub him all over with snow or cold water; or, what will answer better, if it can be obtained, to immerse him in a bath of the very coldest water. There is the greatest encouragement to persist in the use of these means, as we are assured that persons who had remained in the snow, or had been exposed to the freezing air during five or six successive days, and who had discovered no marks of life for several hours; have nevertheless been revived.

I have always thought that the whitloes, kibes, chilblains, and other inflammations of the extremities, which are so common among the peasants in the cold season, were chiefly occasioned by their sudden 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 consequences from this quarter might be easily avoided, by only observing the precautions mentioned above.

EFFECTS OF EXTREME HEAT.

THE effects of extreme heat, though not so common in this country, are no less fatal, and much more sudden than those of cold. In hot countries people frequently drop down dead in the streets, exhausted with heat and fatigue. In this case, if any warm cordial can be poured into the mouth, it ought to be done. If this cannot be effected, they may be thrown up in form of a clyster. Volatile spirits and other things of a stimulating nature, may be applied to the skin, which should be well rubbed with coarse cloths, whipped with nettles, or other stimulating things. Some of the ancient physicians are said to have restored to life persons apparently dead by beating them with rods.

CHAP. LVII.

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 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 flannels. Hungary-water, volatile salts, or strong smelling herbs, as rue, mint, or rosemary, may be held to his nose. His mouth must 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 panada, made with soup instead of water, new laid eggs lightly poached, chocolate, light roast meats, jellies, and such like.

Those fainting fits, which are the effect of bleeding, or of the violent operation of purges, belong to this class. Such as happen after artificial bleeding are seldom dangerous, generally terminating as soon as the patient is laid upon the bed; indeed persons subject to this kind should always be bled lying, in order to prevent it. Should the fainting however continue longer than usual, volatile spirits may be held to the nose, and rubbed on the temples, &c.

When fainting is the effect of too strong or acrid purges or vomits, the patient must be treated in all respects as if he had taken poison. He should be made to drink plentifully of milk, warm water, and oil, barley water, or such like emollient clysters will likewise be proper and the patient's strength should afterwards be recruited, by giving him generous cordials, and anodyne medicines.

Faintings are often occasioned by indigestion. This may either proceed from the quantity or quality of the food. When the former of these is the cause, the cure will be best performed by vomiting, which may be promoted by causing the patient to drink a weak infusion of camomile-flowers, *cardus 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 in 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 after it. Swoonings which happen in diseases accompanied with great evacuations, must be treated like those which are owing to weakness, and the evacuations ought to be restrained. When they happen towards the end of a violent fit of an intermitting fever, or at that of each exacerbation of a continual fever, the patient must be supported by small draughts of wine and water.

Delicate and hysteric women are very liable to swooning or fainting fits after delivery. These might be often prevented by generous cordials, and the admission of fresh air. When they are occasioned by excessive flooding, it ought by all means to be restrained. They are generally the effect of mere weakness or exhaustion. Dr. Engleman, relates the case of a woman "in child-bed, who, after having been 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 while, being out of patience at his delay, attempted to assist her herself, and extending herself upon her mistress, applied her mouth to her's, blew in as much breath as she possibly could, and in a very short time the exhausted woman awaked as out of a profound sleep; when proper things being given her, she soon recovered.

"The maid being asked how she came to think of this expedient, said she had seen it practised at Aldenburgh, by midwives, upon children, with the happiest effect."

We mention this chiefly that other midwives may be induced to follow so laudable an example. Many children are born without any signs of life, and others expire soon after the birth, who might without all doubt, by proper care, be restored to life.

From whatever cause fainting-fits proceed, fresh air is always of the greatest importance to the patient. By not attending to this circumstance, people often kill their friends while they are endeavouring to save them. Alarmed at the patient's situation, they call in a crowd of people to his assistance, or perhaps to witness his exit, whose breathing exhausts the air, and increases the danger. There is not the least doubt but this practice, which is very common among the lower sort of people, often proves fatal, especially to the delicate, and such persons as fall into fainting-fits from mere exhaustion or the violence of some disease. No more persons ought ever to be admitted into the room where a patient lies in a swoon than are absolutely ne-

cessary for his assistance, and the windows of the apartment should always be opened, at least as far as to admit a stream of fresh air.

Persons subject to frequent swoonings, or fainting-fits, should neglect no means to remove the cause of them, as their consequences are always injurious to the constitution. Every fainting-fit leaves the person in dejection and weakness; the secretions are thereby suspended, the humours disposed to stagnation, coagulations and obstructions are formed, and, if the motion of the blood be totally intercepted, or very considerably checked, *polypuses* are sometimes formed in the heart or larger vessels. The only kind of swoonings not to be dreaded are those which some time 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 over dose 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 over-charged with liquor.

More of those unhappy persons, who die intoxicated, lose their lives from 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 way bent, twisted, or have any thing too tight about it.

The excessive degree of thirst occasioned by drinking strong liquors, often induces people to quench it by taking what is hurtful. I have known fatal consequences even from drinking freely of milk after a debauch of wine or sour punch; these acid liquors, together with the heat of the stomach, having coagulated the milk in such a manner that it could never be digested. The safest drink after a debauch is water with a toast, tea, infusions of balm, sage, barley-water, and such like. If the person wants to vomit, he may drink a weak infusion of camomile flowers, or lukewarm water and oil; but in this condition vomiting may generally be excited by only tickling the throat with the finger or a feather.

Instead of giving a detail of all the different symptoms of intoxication which indicate danger, and proposing a general plan of treatment for persons in this situation, I shall briefly relate the history of a case which lately fell under my own observation, wherein most of these symptoms usually reckoned dangerous concurred, and where the treatment was successful.

A young man, about fifteen years of age, had, for a hire, drank ten

glasses of strong brandy. He soon after fell fast asleep, and continued in that situation for several hours, till at length his uneasy manner of breathing, the coldness of the extremities, and other threatening symptoms, alarmed his friends, and made them send for me. I found him still sleeping, his countenance ghastly, and his skin covered with cold clammy sweat. Almost the only signs of life remaining were, a deep laborious breathing, and a convulsive motion or agitation of his bowels.

I tried to rouse him, but in vain, by pinching, shaking, applying volatile spirits, and other stimulating things to his nose, &c. A few ounces of blood were likewise taken from his arm, and a mixture of vinegar and water was poured into his mouth; but, as he could not swallow, very little of this got into the stomach. None of these things having the least effect, and the danger seeming to increase, I ordered his legs to be put into warm water, and a sharp clyster to be immediately administered. This gave him a stool, and was the first thing that relieved him. It was afterwards repeated with the same happy effect, and seemed to be the chief cause of his recovery. He then began to shew some signs of life, took drink when it was offered him and came gradually to his senses. He continued, however, for several days weak and feverish, and complained much of a soreness in his bowels, which gradually went off, by means of a slender diet, and cool mucilaginous liquors.

This young man would probably have been suffered to die without any assistance being called, had not a neighbour a few days before, who had been advised to drink a bottle of spirits, to cure him of an ague, expired under very similar circumstances.

OF SUFFOCATION AND STRANGLING.

THESE may some times proceed from an infraction of the lungs, produced by viscid clammy humours, or 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 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 parygoric 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 hysterical fit. This ought to serve as a caution against employing hysterical 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.

cradle, its face ought never to be covered. A small degree of attention to these two simple rules would save the lives of many infants, and prevent others from being rendered weak and sickly all their days by the injuries done their lungs.

Instead of laying down a plan for the recovery of infants who are suffocated, or over-laid, 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 over-lay 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 clothes and a parcel of ashes were warming, he had the boy unswathed, and laid him in a warm bed, and on the right side. He then was rubbed all over with fine linen, for fear of fretting his tender and delicate skin. As soon as the ashes had received their due degree of heat, Mr. *Janin* buried him in them, except the face, placed him on the side opposite to that on which he had been at first laid, and covered him with a blanket. He had a bottle of *eau de luce* in his pocket, which he presented to his nose from time to time; and between whiles some puffs of tobacco were blown up his nostrils: to these succeeded the blowing 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 became more frequent and free, and the eyes closed and opened alternately. At length the child fetched some cries expressive of his want of the breast, which being applied to his mouth, he caught 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 advisable to leave his little patient three quarters of an hour longer under the ashes. He was afterwards taken out, cleaned and dressed as usual; to which a gentle sleep succeeded, and he continued perfectly well.

Mr. *Janin* mentions likewise an example of a young man who had hanged himself through despair, to whom he administered help as effectually as in the preceding case.

Mr. *Glover*, surgeon in Doctors Commons, London, relates the case of a person who was restored to life after twenty-nine minutes hanging, and continued in good health for many years after.

The principal means used to restore this man to life were, opening the temporal artery and the external jugular; rubbing the back, mouth, and neck, with a quantity of volatile spirits and oil; administering the tobacco clyster by means of lighted pipes, and strong frictions of the legs and arms. This course had been continued for about four hours, when an incision was made into the 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 spirits of sal amoniac, he opened his eyes. Warm cordials were then administered to him, and in two days he was so well as to be able to walk eight miles.

These cases are sufficient to shew what may be done for the recovery of those unhappy persons who strangle themselves in a fit of despair.

OF PERSONS WHO EXPIRE IN CONVULSION FITS.

CONVULSION fits often constitute the last scene of acute or chronic disorders. When this is the case there can remain but small hopes of the patient's recovery after expiring in a fit. But when a person who appears to be in perfect health, is suddenly seized with a convulsion fit, and seems to expire, some attempts ought always to be made to restore him to life. Infants are most liable to convulsions, and are often carried off very suddenly by one or more fits about the time of teething. There are many well authenticated accounts of infants having been restored to life, after they had to all appearance expired in convulsions; but we shall only relate the following instance, mentioned by Dr. Johnson, in his pamphlet *on the practicability of recovering persons visibly dead*.

In the parish of St. Clemens in Colchester, a child of six months old, lying upon its mother's lap, having had the breast, was seized with a strong convulsion fit, which lasted so long, and ended with so total a privation of motion in the body, lungs, and pulse, that it was deemed absolutely dead. It was accordingly stripped, laid out, the passing bell ordered to be tolled, and a coffin to be made; but a neighbouring gentlewoman who used to admire the child, hearing of its sudden death, hastened to the house, and upon examining the child, found it not cold, its joints limber, and fancied that a glass she held to its mouth and nose was a little damped with the breath; upon which she took the child in her lap, sat down before the fire, rubbed it, and kept it in gentle agitation. In a quarter of an hour she felt the heart begin to beat faintly; she then put a little of the mother's milk into its mouth, continued to rub its palms and soles, found the child begin to move, and the milk was swallowed; and in another quarter of an hour she had the satisfaction of restoring to its disconsolate mother the babe quite recovered, eager to lay hold 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 society for the recovery of drowned persons, instituted at Amsterdam in the year 1767, had the satisfaction to find that no fewer than 150 persons, in the space of four years, had been saved by the means pointed out by them, many of whom owed their preservation to peasants and people of no medical knowledge. But the means used with so much efficacy in recovering drowned persons are, with equal success, applicable to a number of cases where the powers of life seem in reality to be only suspended, and to remain capable of renewing all their functions, on being put into motion again. It is shocking to reflect, that for want of this consideration many persons have been committed to the grave in whom the principles of life might have been revived.

The cases wherein such endeavours are most likely to be attended with success, are all those called sudden deaths from an inevitable cause, as apoplexies, hysterics, faintings, and many other disorders wherein persons in a moment sink down and expire. The various casualties in which they may be tried are, suffocations from the sulphureous damps of mines, coal-pits, &c. the unwholesome air of long unopened wells or caverns; the noxious vapours arising from fermenting liquors; the steams of burning charcoal; sulphureous mineral acids; arsenical effluvia, &c.

The various accidents of drowning, strangling, and apparent deaths, by blows, falls, hunger, cold, &c. likewise furnish opportunities of trying such endeavours. Those perhaps who to appearance are killed by lightning, or by any violent agitation of the passions, as fear, joy, surprise, and such like, might also be frequently recovered by the use of proper means, as blowing strongly into their lungs, &c.

The means to be used for the recovery of persons suddenly deprived of life, are nearly the same in all cases; they are practicable by every one who happens to be present at the accident, and require no great expense, and less skill. The great aim is to restore the warmth and vital motions. This may in general be attempted by means of heat, frictions, bleeding, blowing air into the lungs, administering clysters and generous cordials. These must be varied according to circumstances. Common sense, and the situation of the patient, will suggest the proper manner of conducting them. Above all we would recommend *perseverance*. People ought never to despair on account of discouraging circumstances, or to leave off their endeavours as long as there is the least hope of success. Where much good and no hurt can be done, no one ought to grudge his labour.

It were greatly to be wished, that an institution similar to that of Amsterdam, was established, upon a more extensive plan, in Great Britain; and that a reward was allowed to every one who should be instrumental in restoring to life a person seemingly dead.* Men

* The Author is happy to observe, that since the first publication of this work, several societies have been instituted in Britain with the same benevolent intention as that of Amsterdam, and that their endeavours have proved no less successful. He is also happy to observe, that premiums have been awarded to those who have been active in their endeavours to restore to life persons who had been drowned, or suddenly deprived of life by any accident. How much is this superior to the superstitious institution, which allows any man a premium who brings a dead person out of the water, so that he may receive Christian

will do much for fame, but still more for money. Should no profit, however, be annexed to those benevolent offices, the heartfelt pleasure which a good man must enjoy on reflecting that he has been the happy instrument of saving one of his fellow-creatures from an untimely grave, is itself a sufficient reward.

CHAP. LVII.

CAUTIONS CONCERNING COLD BATHING AND DRINKING THE MINERAL WATERS.

AS it is now fashionable for persons of all ranks to plunge into the sea, and drink the mineral waters, I was desirous of rendering this work still more extensively useful, by the addition of some practical remarks on these active and useful medicines. Finding it impossible to bring these observations within so narrow a compass as not to swell the book, already too large, into an enormous size, I resolved to confine myself to a few hints or cautions; which may be of service to persons who bathe, or drink the mineral waters, without being able to put themselves under the care of a physician.

No part of the practice of medicine is of greater importance, or merits more the attention of the physician, as many lives are lost, and numbers ruin their health, by cold bathing, and an imprudent use of mineral waters. On some future occasion I may probably resume this subject, as I know not any work that contains a sufficient number of practical observations to regulate the patient's conduct in the use of these active and important medicines.

We have indeed many books on the mineral waters, and some of them are written with much ingenuity; but they are chiefly employed in ascertaining the contents of the waters by chymical analysis. This no doubt has its use, but it is by no means of such importance as some may imagine. A man may know the chymical analysis of all the articles in the *materia medica*, without being able properly to apply any one of them in the cure of diseases. One page of practical observations is worth a whole volume of chymical analysis. But where are such observations to be met with? Few physicians are in a situation to make them, and fewer still are qualified for such a task. It can only be accomplished by practitioners who reside at the fountains, and who possessing minds superior to local prejudices, are capable of distinguishing diseases with accuracy, and of forming a sound judgment respecting the genuine effects of medicines.

Without a proper discrimination with regard to the diseases and the constitution of the patient, the most powerful medicine is more likely to do harm than good. Every one knows that the same physician who, by cold bathing, cured Augustus, by an imprudent use of the same medicine, killed his heir. This induced the Roman senate to make laws for regulating the baths, and preventing the numerous

burial; but allows nothing to the person who brings him out alive, or who recovers him after he has been to all appearance dead.

vices which arose from an imprudent and promiscuous use of those elegant and fashionable pieces of luxury. But as no such laws exist in this country, *every one does that which is right in his own eyes*, and of course many must do wrong!

People are apt to imagine that the simple element of water can do no hurt, and that they may plunge into it 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 too long in it, and other maladies so much aggravated by its continued use, that they could never be wholly eradicated. Nor are examples wanting, either in ancient or modern times, of the baneful consequences which have arisen also from an injudicious application of the *warm* bath; but as warm baths are not so common in this country, and are seldom used but under the direction of a physician, I shall not enlarge on that part of the subject.

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 no importance; our business is to point out the advantages which may be derived from it, and to guard people against an improper use of it.

The cold bath recommends itself in a variety of cases, and is peculiarly beneficial to the inhabitants of populous cities, who indulge in idleness, and lead sedentary lives. In persons of this description the action of the solids is always too weak, which induces a languid circulation, a crude indigested mass of humours, and obstructions in the capillary vessels and glandular system. Cold water, from its gravity as well as its tonic power, is well calculated either to obviate or remove these symptoms. It accelerates the motion of the blood, promotes the different secretions, and gives permanent vigour to the solids. But all these important purposes will be more essentially answered by the application of *salt water*. This ought not only to be preferred on account of its superior gravity, but likewise for its greater power of stimulating the skin, which promotes the perspiration, and prevents the patient from catching cold.

It is necessary, however, to observe, that cold bathing is more likely to prevent, than to remove obstructions of the glandular or lymphatic system. Indeed, when these have arrived at a certain pitch, they are not to be removed by any means. In this case the cold bath will only aggravate the symptoms, and hurry the unhappy patient into an untimely grave. It is therefore of the utmost importance, previous to the patient's entering upon the use of the cold bath, to determine whether or not he labours under any obstinate obstructions of the lungs or other *viscera*; and where this is the case cold bathing ought strictly to be prohibited.*

* The late celebrated Dr. Smollet has indeed said, that if he were persuaded behad an ulcer in the lungs, he would jump into the cold bath; but here the Dr.

In what is called a plethoric state, or too great a fullness of the body, it is likewise dangerous to use the cold bath, without due preparation. In this case there is great danger of bursting a blood-vessel, or occasioning an inflammation of the brain or some of the *viscera*. This precaution is the more necessary to citizens, as most of them live full, and are of a gross habit. Yet, what is very remarkable, these people resort in crowds every season to the sea-side, and plunge in the water without the least consideration. No doubt they often escape with impunity; but does this give a sanction to the practice? Persons of this description ought by no means to bathe, unless the body has been previously prepared by suitable evacuations.

Another class of patients, who stand peculiarly in need of the bracing qualities of cold water, is the nervous. This includes a great number of the male, and almost all the female inhabitants of great cities. Yet even those persons ought to be cautious in using the cold bath. Nervous people have often weak bowels, and may, as well as others, be subject to congestions and obstructions of the *viscera*; and in this case they will not be able to bear the effects of cold water. For them, and indeed for all delicate people, the best plan would be to accustom themselves to it by the most pleasing and gentle degrees. They ought to begin with the temperate bath, and gradually use it cooler, till at length the cold proves quite agreeable. Nature revolts against all great transitions; and those who do violence to her dictates, have often cause to repent of their temerity.

Wherever cold bathing is practised, there ought likewise to be tepid baths for the purpose mentioned above. Indeed it is the practice of some countries to throw cold water over the patient as soon as he comes out of the warm bath; but though this may not injure a Russian peasant, we dare not recommend it to the inhabitants of this country. The ancient Greeks and Romans, we are told, when covered with sweat and dust, used to plunge into rivers, without receiving the smallest injury. Though they might often escape danger from this imprudent conduct, yet it was certainly contrary to sound reason. I have known many robust men throw away their lives by such an attempt. We would not however advise patients to go into the cold water when the body is chilly; as much exercise, at least ought to be taken, as may excite a gentle glow all over the body, but by no means so as to over heat it.

To young people and particularly to children, cold bathing is of the last importance. Their lax fibres render its tonic powers peculiarly proper. It promotes their growth, increases their strength*, and prevents a variety of diseases incident to childhood. Where in-

evidently shews more courage than discretion; and that he was more a man of wit than a physician, every one will allow. A nervous asthma, or an atrophy may be mistaken for a pulmonary consumption; yet, in the two former, the cold bath proves often beneficial, though I never knew it so in the latter. Indeed all the phthisical patients I ever saw, who had tried the cold bath, were evidently hurt by it.

* The celebrated Galen says, that immersion in cold water is fit only for the young of lions and bears; and recommends warm bathing, as conducive to the growth and strength of infants. How egregiously do the greatest men err whenever they lose sight of facts, and substitute reasoning in physic in place of observation and experience.

Infants early accustomed to the cold bath, it would seldom disagree with them; and we should see fewer instances of the scrophula, rickets, and other diseases which prove fatal to many, and make others miserable for life. Sometimes indeed, these disorders render infants incapable of bearing the shock of cold water; but this is owing to their not having been early and regularly accustomed to it. It is however necessary here to caution young men against too frequent bathing, as I have known many fatal consequences result from the daily practice of plunging into rivers, and continuing there too long.

The most proper time of the day for using the cold bath is no doubt the morning, or at least before dinner; and the best mode, that of quick immersion. As cold bathing has a constant tendency to propel the blood and other humours towards the head, it ought to be a rule always to wet that part as soon as possible. By due attention to this circumstance, there is reason to believe, that violent head-achs, and other complaints, which frequently proceed from cold bathing, might be often prevented.

The cold bath, when too long continued in, not only occasions an excessive flux of humours towards the head, but chills the blood, cramps the muscles, relaxes the nerves, and wholly defeats the intention of bathing. Hence, by not adverting to this circumstance, expert swimmers are often injured, and sometimes even lose their lives. All the beneficial purposes of cold bathing are answered by one immersion at a time; and the patient ought to be rubbed dry the moment he comes out of the water, and should continue to take exercise for some time after.

When cold bathing occasions chiliness, loss of appetite, listlessness, pain of the breast or bowels, a prostration of strength, or violent head-achs, it ought to be discontinued.

Though these hints are by no means intended to point out all the cases where cold bathing may be hurtful, nor to illustrate its extensive utility as a medicine; yet it is hoped they may serve to guard people against some of those errors into which, from mere inattention, they are apt to fall, and thereby not only endanger their own lives, but bring an excellent medicine into disrepute.

OF DRINKING THE MINERAL WATERS.

THE internal use of water, as a medicine, is no less an object of the physician's attention than the external. Pure elementary water is indeed the most inoffensive of all liquors, and constitutes a principal part of the food of every animal. But this element is often impregnated with substances of a very active and penetrating nature; and of such an insidious quality, that, while they promote certain secretions, and even alleviate some disagreeable symptoms, they weaken the powers of life, undermine the constitution, and lay the foundation of worse diseases than those which they were employed to remove. Of this every practitioner must have seen instances; and physicians of eminence have more than once declared that they have known more diseases occasioned than removed by the use of mineral waters. This doubtless has proceeded from the abuse of these powerful medicines, which evinces the necessity of using them with caution.

By examining the contents of the mineral waters which are most used in this country, we shall be enabled to form an idea of the danger

which may arise from an improper application of them either externally or internally, though it is to the latter of these that the present observations are chiefly confined.

The waters most in use for medical purposes in Britain, are those impregnated with salts, sulphur, iron, and mephitic air, either separately, or variously combined. Of these the most powerful is the saline sulphureous water of Harrowgate, of which I have had more occasion to observe the pernicious consequences, when improperly used, than of any other. To this, therefore, the following remarks will more immediately relate, though they will be found applicable to all the purging waters in the Kingdom which are strong enough to merit attention.*

The errors which so often defeat the intention of drinking the purgative mineral waters, and which so frequently prove injurious to the patient, proceed from the manner of using them, the quantity taken, the regimen pursued, or using them in cases where they are not proper.

A very hurtful prejudice still prevails in this country, that all diseases must be cured by medicines taken into the stomach, and that the more violently these medicines operate, they are the more likely to have the desired effect. This opinion has proved fatal to thousands, and will, in all probability, destroy many more before it can be wholly eradicated. Purgings is often useful in acute diseases, and in chronical cases may pave the way for the operation of other medicines; but it will seldom perform a cure; and by exhausting the strength of the patient, will often leave him in a worse condition than it found him. That this is frequently the case with regard to the more active mineral waters, every person conversant in these matters will readily allow.

Strong stimulants applied to the stomach and bowels for a length of time, must tend to weaken and destroy their energy; and what stimulants are more active than salt and sulphur, especially when these substances are intimately combined, and carried through the system by the penetrating medium of water? Those bowels must be strong indeed, which can withstand the daily operation of such active principles for months together, and not be injured. This however is the plan pursued by most of those who drink the purging mineral waters, and whose circumstances will permit them to continue long enough at those fashionable places of resort.

Many people imagine that every thing depends on the quantity of water taken, and that the more they drink they will the sooner get well. This is an egregious error; for while the unhappy patient thinks he is by this means eradicating his disorder, he is often in fact undermining the powers of life, and ruining his constitution. Indeed nothing can do this so effectually as weakening the powers of digestion by the improper application of strong stimulants. The very essence of health

* The greatest class of mineral waters in this country is the chalybeate. In many parts of Britain these are to be found in almost every field; but those chiefly in use, for medical purposes, are the purging chalybeates, as the waters of Scarborough, Cheltenham, Thorp Arch, Nevil Holt, &c. Of those which do not purge, the waters of Tunbridge stand in the highest repute. The Saline purging waters, as those of Acton, Epsom, Kilburn, &c. are also in very general esteem; but the fountains most frequented by the sick in this country, are those to which the minerals impart a certain degree of heat, as Bath, Bristol, Buxton, &c.

depends on the digestive organs performing their due functions, and the most tedious maladies are all connected with indigestion.

Drinking the water in too great quantity, not only injures the bowels and occasions indigestion, but generally defeats the intention for which it is taken. The diseases for the cure of which mineral waters are chiefly celebrated, are mostly of the chronic kind; and it is well known that such diseases can only be cured by the slow operation of alternatives, or such medicines as act by inducing a gradual change in the habit. This requires length of time, and never can be effected by medicines which run off by stool, and operate chiefly on the first passages.

Those who wish for the cure of any obstinate malady from the mineral waters, ought to take them in such a manner as hardly to produce any effect whatever on the bowels. With this view a half-pint glass may be drank at bed time*, and the same quantity an hour before breakfast, dinner, and supper. The dose, however, must vary according to circumstances. Even the quantity mentioned above will purge some persons, while others will drink twice as much without being in the least moved by it. Its operation on the bowels is the only standard for using the water as an alternative. No more ought to be taken than barely to move the body; nor is it always necessary to carry it this length, provided the water goes off by the other emunctories, and does not occasion a chillness, or flatulency in the stomach or bowels. When the water is intended to purge, the quantity mentioned above may be all taken before breakfast.

I would not only caution patients who drink the purging mineral waters over night to avoid heavy suppers, but also from eating heavy meals at any time. The stimulus of water, impregnated with salts, seems to create a false appetite. I have seen a delicate person, after drinking the Harrowgate waters of a morning, eat a breakfast sufficient to have served two ploughmen, devour a plentiful dinner of flesh and fish, and, to crown all, eat such a supper as might have satisfied an hungry porter.

All this, indeed, the stomach seemed to crave; but this craving had better remain not quite satisfied, than that the stomach should be loaded with what exceeds its powers. To starve patients was never my plan; but I am clearly of opinion, that in the use of all the purging mineral waters, a light and rather diluting diet is the most proper; and that no person, during such a course, ought to eat to the full extent to what his appetite craves.

To promote the operation of mineral waters, and to carry them through the system, exercise is indispensably necessary. This may be taken in any manner that is most agreeable to the patient; but he ought never to carry it to excess. The best kinds of exercise are those connected with amusement. Every thing that tends to exhilarate the spirits, not only promotes the operation of the waters, but acts as a medicine. All who resort to the mineral waters ought therefore to leave every care behind,

* When I speak of drinking a glass of the water over-night, I must beg leave to caution those who follow this plan against eating heavy suppers. The late Dr. Daultry of York, who was the first that brought the Harrowgate waters into repute, used to advise his patients to drink a glass before they went to bed; the consequence of which was, that having eat a flesh supper, and the water operating in the night, they were often tormented with gripes and obliged to call for medical assistance.

to mix with the company, and to make themselves as cheerful and happy as possible. From this conduct, assisted by the free and wholesome air of those fashionable places of resort, and also the regular and early hours which are usually kept, the patient often receives more benefit than from using the waters.

But the greatest errors in drinking the purging mineral waters arise from their being used in cases where they are absolutely improper, and adverse to the nature of the disease. When people hear of a wonderful cure having been performed by some mineral water, they immediately conclude that it will cure every thing, and accordingly swallow it down, when they might as well take poison. Patients ought to be well informed, before they begin to drink the more active kinds of mineral waters, of the propriety of the course, and should never persist in using them when they are found to aggravate the disorder.

In all cases where purging is indicated, the saline mineral waters will be found to fulfil this intention better than any other medicine. Their operation, if taken in proper quantity, is generally mild; and they are neither found to irritate the nerves, nor debilitate the patient so much as the other purgatives.

As a purgative, these waters are chiefly recommended in diseases of the first passages, accompanied with, or proceeding from, inactivity of the stomach and bowels, acidity, indigestion, vitiated bile, worms, putrid sores, the piles, and jaundice. In most cases of this kind they are the best medicines that can be administered. But when used with this view, it is sufficient to take them twice, or at most three times a-week, so as to move the body three or four times; and it will be proper to continue this course for some weeks.

But the operation of the more active mineral waters is not confined to the bowels. They often promote the discharge of urine, and not unfrequently increase the perspiration. This shows that they are capable of penetrating into every part of the body, and of stimulating the whole system. Hence arises their efficacy in removing the most obstinate of all disorders, *obstructions of the glandular and lymphatic system*. Under this class is comprehended the scrophula or *Kings-civil*, indolent tumours, obstructions of the liver, spleen, kidneys, and mesenteric glands. When these great purposes are to be effected, the waters must be used in the gradual manner mentioned above, and persisted in for a length of time. It will be proper however now and then to discontinue their use for a few days.

The next great class of diseases where mineral waters are found to be beneficial, are those of the skin, as the itch, scab, tetters, ring-worms, scaly eruptions, leprosy, blotches, foul ulcers, &c. Though these may seem superficial, yet they are often the most obstinate which the physician has to encounter, and not unfrequently set his skill at defiance: but they will sometimes yield to the application of mineral waters for a sufficient length of time, and in most cases of this kind these waters deserve a trial. The saline sulphureous water, such as those of Moffat in Scotland, and Harrogate in England, are the most likely to succeed in diseases of the skin; but for this purpose it will be necessary not only to drink the waters, but likewise to use them externally.

To enumerate more particularly the qualities of the different mineral waters, to specify those diseases in which they are respectively

indicated, and to point out their proper modes of application, would be an useful, and by no means a disagreeable employment; but as the limits prescribed to these remarks will not allow me to treat the subject at more length, I shall conclude by observing, that whenever the mineral waters are found to exhaust the strength, depress the spirits, take away the appetite, excite fevers, distend the bowels, or occasion a cough, they ought to be discontinued.

CHAP. LVIII.

OBSERVATIONS CONCERNING THE DIET OF THE COMMON PEOPLE, RECOMMENDING A METHOD OF LIVING LESS EXPENSIVE, AND MORE CONDUCTIVE TO HEALTH, THAN THE PRESENT.

EXPERIENCE proves that not a few of the diseases incident to the inhabitants of this country, are owing to their mode of living. The vegetable productions they consume, fall considerably short of the proportion which they ought to bear to the animal part of their food. The constant use of bread, and animal substances, excites an unnatural thirst, and leads to the immoderate use of beer and other stimulating liquors, which generate disease and reduce the lower orders of people to a state of indigence. To teach the poor man how to live cheaper and better, is the design of the following pages.

Though the common people of this country live at a greater expense than any where else, it does not follow that they live better. They are strong indeed, but by no means healthy; and it is found that, from an attachment to a particular mode of living, they are more liable to disease and death in foreign climes, than the inhabitants of any other country.

It is certainly proper that the poor man should be instructed in every thing that can make his little earnings go as far as possible, or which can add to the comfort of himself and family. Nor can a frugality in living be deemed trivial, in a country where the riches depend on the cheapness of labour.

It is alleged that the English are so much attached to their own modes of living, that no argument will induce them to make the smallest change. Habits are indeed obstinate things, especially those which relate to diet; but there are proofs that the English are not inflexible even in this matter. The mode of living among the lower orders has been greatly changed in my time, and I am sorry to say, not for the better.

The people of England have too much good sense not to listen to reason, provided due care were taken to instruct them. But here the people may be truly said "*to perish for want of knowledge.*" No means have been used to give them proper instruction. Hurtful customs have been suffered to prevail, till they have struck such deep roots that it will not be an easy matter to eradicate them. The difficulty, however, is not unsurmountable. A few experiments of reform would have the effect to render it as agreeable as it is salutary.

Adults have many old prejudices to overcome, but the case is different in regard to children. They may be taught to use any kind of

food, and what they use when young, they will love when old. If I can introduce a different method of feeding children, my purposes will be answered. This alone will, in time effect a total change in the general mode of living.

The late distress of the poor has called forth many publications intended for their relief. Most of them however, were adapted only for the particular occasion, and not calculated to prevent the return of like evils. The following observations, it is hoped, will have a more permanent effect. They are intended to recommend a plan of living, which will render the people less dependent on bread and animal food for their subsistence, and consequently not so liable to suffer from a scarcity or dearth of either of these articles in future.

Particular attention has been paid to the substitutes for bread, as the scarcity of this article proves peculiarly distressing to the poor. It will appear from the following pages, that bread is by no means so much a necessary of life as generally imagined, and that its place may, in many instances, be supplied by a variety of other farinaceous substances.

GENERAL OBSERVATIONS ON ALIMENT.

NO creature eats such a variety of food as man. Intended for an inhabitant of every climate, he devours the productions of them all; and if they do not suit his palate, or agree with his stomach, he calls in the aid of cookery, an art peculiar to himself; by which many things that, in a crude state, would prove hurtful, or even poisonous, are rendered wholesome and salutary.

The obvious division of food is into animal and vegetable. To say that man was intended by nature for using either the one or the other alone, would be absurd. His structure and appetite prove that he was formed for both. Judgment, however, is requisite in adjusting the proportions of each, so as to avoid the inconveniences arising from an extreme on either hand.

Though animal food is more nourishing than vegetable, it is not safe to live on that alone. Experience has shewn that a diet consisting solely of animal food, excites thirst, and nausea, occasions putrescence in the stomach and bowels, and finally brings on violent griping pains, with cholera and dysentery.

Animal food is less adapted to the sedentary than the laborious, and least of all to the studious, whose diet ought to consist chiefly of vegetables. Indulging in animal food renders men dull, and unfit for the pursuits of science, especially when it is accompanied with the free use of strong liquors.

The plethoric, or persons of a full habit, should eat sparingly of animal food. It yields far more blood than vegetables taken in the same quantity, and of course may induce inflammatory disorders. It acts as a stimulus to the whole system, by which means the circulation of the blood is greatly accelerated.

I am inclined to think, that consumptions so common in England, are in part owing to the great use of animal food. Though the *phthisis pulmonalis* properly speaking, is not an inflammatory disease, yet it generally begins with symptoms of inflammation, and is often accompanied with them through its whole progress.

But the disease most common to this country is the scurvy. One

finds a dash of it in almost every family, and in some the taint is very deep. A disease so general must have a general cause, and there is none so obvious as the great quantity of animal food devoured by the natives. As a proof that scurvy arises from this cause, we are in possession of no remedy for that disease equal to the free use of fresh vegetables.

By the uninterrupted use of animal food a putrid diathesis is induced in the system, which predisposes to a variety of disorders. I am fully convinced that many of those obstinate complaints for which we are at a loss to account, and find it still more difficult to cure, are the effects of a scorbutic taint lurking in the habit.

Improper diet affects the mind as well as the body. The choleric disposition of the English is almost proverbial. Where I to assign a cause, it would be, their living so much on animal food. There is no doubt but this induces a ferocity of temper unknown to men whose food is chiefly taken from the vegetable kingdom.

Though these and similar consequences may arise from the excess of animal diet, we are far from discouraging its use in moderation. In all cold countries it is certainly necessary; but the major part of the aliment ought nevertheless to consist of vegetable substances. There is a continual tendency in animal food, as well as in the human body itself, to putrefaction, which can only be counteracted by the free use of vegetables.

With regard to the proportion of vegetable food to that of animal, great nicety is by no means required. It must vary according to circumstances, as the heat of the weather, the warmth of the climate, and the like. The vegetable part, however, where nothing forbids, ought certainly to preponderate, and I think in the proportion of at least two to one.

The excessive consumption of animal food is one great cause of the scarcity of grain. The food that a bullock afford bears but a small proportion to the quantity of vegetable matter he consumes.

I am no enemy to good fruit, as an article of diet; but the greater part of what is used in this country, by the lower orders of the people, is mere trash. Fruit should be eaten in the early part of the day, when the stomach is not loaded with food, and it never ought to be eaten raw till it be thoroughly ripe.

OF BREAD.

BREAD, or something resembling it, makes a part of the diet of all nations. Hence it is emphatically denominated *the staff of life*. It may however, be used too freely. The late Dr. Fothergill was of opinion, and I perfectly agree with him, that most people eat more bread than is conducive to their health. I do not mean to insinuate that bread is unwholesome, but that the best things may prove hurtful when taken to excess. A surfeit of bread is more dangerous than of any other food. *Omni repletio mala repletio panis pessima*. The French consume vast quantities of bread; but its bad effects are prevented by their copious use of soups and fruits, which have little or no share in the diet of the common people of England.

One important use of bread is to form a mass fit for filling up the alimentary canal, and carrying the nutritious juices along that passage in such a state, as to render them fit to be acted upon by the

lacteal absorbents, which take up the nourishment and convey it to the blood. In this light bread may be considered as a soil from whence the nourishment is drawn. I do not say that bread contains no nourishment, but that its use, as an article of diet, does not solely depend on the quantity of nutriment it contains, but in some measure on its fitness as a vehicle for conveying the nutritious particles through the intestinal tubes. Hence it follows, that the finest bread is not always the best adapted for answering the purposes of nutrition.

The richest food will not nourish an animal, unless the alimentary canal is sufficiently distended. A dog has been fed on the richest broth, yet could not be kept alive; while another, which had only the meat boiled to chip and water, throve very well. This shews the folly of attempting to nourish men on alimentary powders and other concentrated food.

The great art therefore of preparing food, is to blend the nutritive part of the aliment with a sufficient quantity of some light farinaceous substance, in order to fill up the canal, without overcharging it with more nutritious particles than are necessary for the support of the animal. This may be done either by bread, or other farinaceous substances, of which there is a great variety, as will appear from the sequel.

Bread is one of the most expensive modes of using grain, and not adapted to the narrow circumstances of the lower orders of the people, as it is burthened with two heavy additional charges, in passing through the hands of both the miller and the baker. Besides, the former often grinds down extraneous matter with the wheat, and the latter as frequently bakes it up with the addition of lime, chalk, alum, and other pernicious substances. Since the articles of diet have become branches of manufacture, the public neither know what they eat, nor what they drink.

People imagine, as the finest flour contains the greatest quantity of nourishment, that it must therefore be the most proper for making into bread; but this by no means follows. The finest flour comes the nearest to starch, which, though it may occasionally prove a good medicine, makes bad bread. Household bread, which is made by grinding down the whole grain, and only separating the coarser bran, is without doubt the most wholesome.

The best household bread I ever remember to have eat, was in the county of York. It was what they call *meslin bread*, and consisted of wheat and rye ground together. I am not quite certain as to the proportion; but I think there might be two parts of the former to one of the latter. This bread, when well fermented, eats light, is of a pleasant taste, and soluble to the bowels. After using it for some years, I found that bread made entirely of flour was neither so agreeable to the palate, nor so conducive to health.

Bread is often spoiled to please the eye. The artificially whitened, drying, stuffing bread, though made of the heart of the wheat, is in reality the worst of any; yet this is the bread which most people prefer, and the poorer sort will eat no other.

All the different kinds of grain are occasionally made into bread, some giving preference to one and some to another, according to early custom and prejudice. The people of South Britain generally prefer bread made of the finest wheat flour, while those of the no-

thern counties eat a mixture of flour and oatmeal, or ryemeal, and many give the preference to bread made of oatmeal alone. The common people of Scotland also eat a mixed bread, but more frequently bread of oatmeal only. In Germany the common bread is made of rye, and the American labourer thinks no bread so strengthening as that which is made of Indian corn; nor do I much doubt but the Laplander thinks his bread, made of the bones of fishes, is the best of any.

Bread made of different kinds of grain is more wholesome than what is made of one only, as their qualities serve to correct one another. For example, wheat flour, especially the finer kind, being of a starchy nature, is apt to occasion constipation. Bread made of ryemeal, on the other hand, proves often too slippery for the bowels. A due proportion of these makes the best bread.

For the more active and laborious I would recommend a mixture of rye with the stronger grains, as peas, beans, barley, oats, Indian corn, and the like. These may be blended in many different ways; they make a hearty bread for a labouring man, and to use his own language, they lie longer on his stomach than bread made of wheat flour only. Barley bread passes too quickly through the alimentary canal to afford time for conveying the proper nourishment; but bread made of barley mixed with peas is very nourishing.

When potatoes, or boiled grain, are used, bread ceases to be a necessary article of diet. During the late scarcity of bread, I made it a rule not to eat above one half the quantity I used to do, and I found no inconvenience whatever from the change. Nay, some told me, that for a considerable time they had left off the use of bread altogether, without experiencing any change in the state of their health.

A great part of the bread consumed in this country is by children. It is always ready, and when the child calls for food, a piece of bread is put into its hand, to save the trouble of dressing any other kind of victuals. Of many children this is the principal food, but it is far from being the most proper. Children are often troubled with acidities of the stomach and bowels; and it is well known that bread mixed with water, and kept in a degree of heat equal to that of the human stomach, soon turns sour.

During the late scarcity, many of the labouring men, and even artificers, could not earn as much money as was sufficient to keep their families in the article of bread only. It is certain, however, that on a different plan, such families might have lived very comfortably. Many of the articles of diet are cheaper than bread, and equally wholesome. Above one half of the expense of living might be saved by a due selection of the article of diet.

The English labourer lives chiefly on bread, which being accompanied with other dry, and often salt food, fires his blood, and excites an unquenchable thirst, so that the perpetual cry is for drink.

But the greatest consumption of bread is occasioned by tea. It is said that the subjects of Great-Britain consume a greater quantity of that herb, than the whole inhabitants of all the other nations of this quarter of the globe. The poorest woman in England must have her tea, and the children generally share it with her. As tea contains no nourishment, either for young or old, there must of course be bread and butter to eat along with it. The quartern loaf will not go far among a family

of hungry children, and if we add the cost of tea, sugar, butter, and milk, the expense of one meal will be more than would be sufficient to fill their bellies with wholesome food three times a-day.

There is reason to believe that one half the bread consumed in England is used to tea, without one hearty meal ever being made of it. The higher ranks use tea as a luxury, while the lower orders make a diet of it. I had lately occasion to see a striking instance of this in a family that was represented to me as in distress for want of bread. I sent them a little money, and was informed that they ran with it directly to the tea-shop.

To a heavy, sluggish, phlegmatic man, a moderate use of tea may not prove pernicious; but where there is a debilitated stomach and an irritability of fibre, it never fails to do much hurt. With many it has the effect to prevent sleep.

Tea will produce a total change of constitution in the people of this country. Indeed it has gone a great way towards effecting that evil already. A debility, and consequent irritability of fibre, are become so common, that not only women, but even men, are affected with them. That class of diseases which, for want of a better name, we call nervous, has made almost a complete conquest of the one sex, and is making hasty strides towards vanquishing the other.

Did women know the train of diseases induced by debility, and how disagreeable these diseases render them to the other sex, they would shun tea as the most deadly poison. No man can love a woman eaten up with vapours, or washed down with diseases arising from relaxation.

It is not tea taken as a beverage after a full meal, or in a crowded assembly, that I so much condemn, though I think something as elegant and less pernicious might be substituted in its place. The mischief occasioned by tea, arises chiefly from its being substituted for solid food. This is so much the case at present, that, had I time to spare, I think it could not be better employed than in writing against this destructive drug.

OF BOILED GRAIN.

THOUGH farinaceous substances of one kind or another, make a necessary part of the food of man, yet there can be no reason why such substances should always assume the name and form of bread. Many of them are more wholesome, and not less agreeable in other forms. Bread is often used merely to save the trouble of cookery: and being portable, is the most convenient article of diet for carrying abroad.

It does not, however, admit of a doubt, that more grain is eaten boiled, though not in this country, than is made into bread; and that this mode of cookery is the most wholesome. Simple boiling precludes all adulteration, and is an operation much less laborious and artificial than baking.

The most general article of diet among mankind, is rice. This may be made into a variety of dishes; but simple boiling is all that is required, to render it a proper substitute for bread. It may either be eaten alone or with milk. In the east, it is used with meat, in the same manner as we do bread. The people of this country believe that rice proves injurious to the eyes, but this seems to be without foun-

dation; as it has no such effect on those who make it the principal part of their food.

Many other kinds of grain will, when boiled, make good substitutes for bread. Even those which make a harsh and unpleasant sort of bread, are often rendered very palatable by boiling. This is the case with all the leguminous class of plants, as peas, beans, &c. Even oats and barley are more agreeable, as well as more wholesome, when boiled, than made into bread.

All allow that peas and beans boiled, when young, are a great luxury. But when old, they are equally wholesome, and, when properly cooked, by no means unpleasant. There are few who do not relish peas pudding, and even prefer it to bread. Beans are not so fit for this purpose; but they make an excellent ingredient in the poor man's broth, and whoever eats this broth, will find little occasion for bread.

Peas and beans contain an equal quantity of sugar with wheat, oats, or barley, and at the same time a greater proportion of oil, consequently are more nourishing. This fact is confirmed by daily experience.

On those farms where peas and beans are raised in great abundance, the labourers are much fed on that sort of grain; but when removed to farms where they are fed with other kinds of grain, they soon complain of a diminution of strength, and request a supply of peas meal as formerly.

Nature seems to have pointed out the propriety of the extensive use of peas and beans, it being a fact, that when crops of that kind are duly alternated with crops of wheat, barley, or oats, the fertility of the soil may be maintained, without rest or manure, for many years together; whereas, if the latter be raised on the same soil for several years successively, they render it barren, so that, without rest or manure, its fertility cannot be preserved.

The people in England are but little accustomed to the use of boiled grain, though in many countries it is eaten as a luxury. Boiled barley is a great favourite with the Dutch, and is eaten with milk, butter, or molasses. It is the principal food of the Dutch sailors, who, in general, are both healthy and robust.

Barley is one of the best ingredients in soup. Count Rumford says, it possesses the quality of lithing, or thickening soups, in a superior degree to any other grain. We have reason, however, to believe, that grits, or coarse oatmeal, will answer that purpose still better.

Oatmeal is frequently made into bread; but it is a much more wholesome, as well as agreeable food, when made into hasty pudding, and eaten with milk. The peasants in many parts of Britain make two meals a day of it, while their children almost wholly subsist on it; and it is well known that both old and young who are thus fed, are healthy and robust.

The opinion of oatmeal being heating, and occasioning skin diseases, is wholly without foundation. Bread made of oatmeal, when not leavened, will sometimes occasion the heart-burn; but this is no proof of its heating quality. Unleavened bread, of wheat or any other grain, produces the same effect on a debilitated stomach. Oatmeal thoroughly boiled seldom gives the heart-burn.

Persons who are fed on oatmeal bread, or hasty pudding, are not more subject to diseases of the skin, than those who live on wheat

meal. Cutaneous disorders proceed more from the want of cleanliness, than from any particular aliment. The French, so far from thinking that oatmeal is heating, speak of it as possessed of a cooling quality; and even the English give oatmeal, or grit gruel, to lying-in women, and sick people of every description, which shews that they are inconsistent with themselves, in alleging that the blood is fired by the use of oatmeal.

A lieutenant of the army, residing at a country village within a few miles of Edinburgh, with a wife and ten children, having no other income than his half pay, fed the whole of his children with hasty pudding and butter-milk only, from a conviction that it was the most wholesome and full diet, that fell within the reach of his narrow circumstances. They grew apace, and it was the universal remark of the neighbourhood, that they were as sprightly, healthy, and robust as other children, and at the same time perfectly free from all skin diseases.

Children are seldom well, unless when their bodies are gently open. But this is more likely to be the case when fed on oatmeal and milk, than when their bellies are crammed with a starchy substance made of the finest flour; yet this in England is the common food of children. I have seen an infant stuffed four or five times a-day with this kind of food. There needs no conjurer to tell the consequence.

A late author, a man of learning, but the dupe of prejudice, has, by a ridiculous definition, endeavoured to represent oats as proper food for horses only. I wish the horses in England devoured a smaller quantity of that grain, and the people more. Few things would have a greater tendency to lessen the expense of living. The oats in North Britain are of a superior quality, and I hope the people will long have the sense to use them as an article of diet.

Indian corn is likewise said to make the best food when boiled. Count Rumford observes, that of all things it makes the best pudding, and that he has made a hearty meal of it, sauce included, for five farthings. What makes good puddings will make good dumplings and these will, at any time, supply the place of bread. The Count also remarks, that the negroes in America prefer Indian corn to rice; and that the Bavarian peasants prefer it to wheat; that it might be imported from North America at about four or five shillings *per* bushel; that, when made into flour, it would cost only one penny *farthing per* pound; and that it is highly nutritious, and the cheapest food known. During the late scarcity a large quantity of this grain was imported; but such is the aversion of the common people of this country to every sort of food to which they are not accustomed, that they refused to purchase it, and the merchants were very great losers by the importation. On the same principle the Germans, till within these few years, could not be induced to eat potatoes, though now they are become extremely fond of them.

The American, the Italian, and the German, all cook Indian corn in the same way as the North Britain does his oatmeal, by making it into hasty pudding. It may be eaten in a variety of ways. Some eat it with a sauce composed of butter and brown sugar, or butter and molasses. Others eat it with milk only. In either way it makes a good, cheap and wholesome diet, by no means disagreeable to those who are accustomed to it.

The only other grain we shall mention as best when boiled, is buckwheat: It is of a very mucilaginous nature, and of course highly nutritious. In several parts of Europe it constitutes a principal part of the food of the lower people. In former times it was eaten in Russia, not by the lower classes only, even the nobility made use of it. Boiled and buttered, it was so great a favourite of the great Czar Peter, that he is said to have seldom supped on any thing else.

OF BUTTER.

IT has been said that the English have a thousand religions and but one sauce. It must be allowed that they use butter with almost every kind of food. Butter, though a good article of diet may be used too freely, and in this country, I am convinced, that is the case. To weak stomachs it is hurtful, even in small quantities, and when used freely it proves prejudicial to the strongest.

Butter, like other things of an oily nature, has a constant tendency to turn rancid. This process, by the heat of the stomach, is greatly accelerated, insomuch that many people, soon after eating butter, complain of its rising in their stomach, in a state highly disagreeable.

Oils of every kind are with difficulty mixed with watery fluids. This is the reason why butter floats on the stomach, and rises in such an unpleasant manner.

Persons afflicted with bile should use butter very sparingly. Some sceptical authors doubt whether or not aliment of any kind has an effect on the bile. One thing, however, is certain, that many patients, afflicted with complaints, which were supposed to be occasioned by bile, have been completely cured by a total abstinence from butter.

The most violent bilious complaints that I ever met with, were evidently occasioned by food that became rancid on the stomach, as the cholera morbus and the like. Nor can such complaints be cured, till the rancid matter is totally evacuated by vomiting and purging.

But supposing butter did not possess the quality of becoming rancid on the stomach, it may nevertheless, prove hurtful to digestion. Oils of all kinds are of a relaxing quality, and tend to impede the action of digestion. Hence the custom of giving rich broths and fat meats to persons who have a voracious appetite.

The free use of butter, and other oily substances, not only tends to relax the stomach, and impede its action, but to induce a debility of the solids, which paves the way to many maladies. In a country where two thirds of the inhabitants lead sedentary lives, a debility of fibre must predominate. Whatever increases that debility ought to be avoided.

Children, without exception, are disposed to diseases arising from relaxation. Butter, of course, ought to be given to them with a sparing hand. But is this the case? By no means. Bread and butter constitute a great part of the food of children, and I am convinced that the gross humours with which they are frequently troubled, are partly owing to this food. As children abound with moisture, bread alone is, generally speaking, better for them than bread and butter.

I have been astonished to see the quantities of butter eaten by gross women who lead sedentary lives. Their tea bread is generally contrived so as to suck up butter like a sponge. What quantities of crumpets and

muffins they will devour in a morning, soaked with this oil; and afterwards complain of indigestion, when they have eaten what would overload the stomach of a ploughman. Dr. Fothergill is of opinion, that butter produces the nervous or sick head-ache, so common among the women of this country. As a proof of this, it is often cured by an emetic.

Oils in certain quantities, excite nausea, and even vomiting. They most of course prove unfriendly to digestion. A Dutch sailor, we are told can digest train oil. So may an English sailor; but it would be very improper food for a London lady.

To some of the leaner farinaceous substances, as the potatoe and the like, butter makes a very proper addition; but eating it to flesh and fish of almost every description, is certainly wrong. The flesh eaten in this country is generally fat enough without the addition of butter, and the more oily kinds of fish, as salmon or herrings, are lighter on the stomach, and easier digested when eaten without it.

Butter is rather a gross food, and fitter for the athletic and laborious, than the sedentary and delicate. It is less hurtful when eaten fresh than salted. Salt butter certainly tends to induce skin diseases, and I am inclined to think, the free use of it at sea may have some share in bringing on that dreadful malady, so destructive to our brave sailors, *the sea scurvy*.

There is a method of rendering salt butter less hurtful, but it seems not to be known in England. What I mean is to mix it with an equal quantity of honey, and keep it for use. In this way it may be given to children with greater freedom. In north Britain this method of mixing butter with honey is well known, and from a common proverb, I take the custom to be very ancient.

Butter, in itself, is not near so hurtful, as when combined with certain other things. For example: bread made with butter is almost indigestible, and pastries of every kind are little better: yet many people almost live upon pastry, and it is universally given to children. It is little better, however, than poison, and never fails to disorder their stomachs. The fond mother cannot pass a pastry shop, without treating her darling boy with some of the dainties, and then wonders how he got the cough, or cholic.

I have know a man seemingly in perfect health, who, by eating a penny-worth of pastry, as he passed along the street, was seized with such an asthmatic fit, that he was obliged to be carried home, and had nearly lost his life. This occurred whenever he inadvertently ate any thing baked with butter.

Every thing that proves very injurious to health ought, as far as possible, to be prohibited, by laying a high duty upon it. A duty on pastry would be serving the public in more respects than one. It would save many lives, and lessen some tax on necessaries.

Cheese, as a diet, is likewise injurious to health. It should never be eaten but as a desert. It occasions constipation, fires the blood, and excites a constant craving for drink. It is very improper for the sedentary, and hardly to be digested even by the athletic.

If men will live on dry bread, poor cheese, salt butter, broiled bacon and such like parching food, they will find their way to the ale-house, the bane of the lower orders, and the source of half the beggary in the nation.

OF FRUITS AND ROOTS.

FRUITS and roots form a large class of substitutes for bread. The latter, being produced underground, are less liable to suffer from the inclemency of the seasons than grain. Men who wish to inflame the minds of the multitude may inveigh against the substitutes for bread; but reason and sound sense say, the more substitutes for bread the better. When one fails, recourse can be had to another.

In warm climates the inhabitants have many substitutes for bread, and as their seasons are more uniform than ours, they can generally depend on the plant, or whatever it is, proving productive. The plantain-tree, commonly called the Indian-fig, which has from time immemorial been cultivated in South America, bears fruit of a sweetish taste, which will dissolve in the mouth without chewing. It is eaten either raw, fried or roasted. When intended to supply the place of bread, it is gathered before it is ripe, and eaten either boiled or roasted. The banana is nearly of the same nature, but its fruit is greatly superior both in taste and flavour.

The inhabitants of the South Sea, or Ladrone islands, are supplied with bread from a tree, which has been lately imported into our West-India islands, and will it is hoped, be found to answer the same purpose there. It has a slight degree of sweetness, but not much flavour. It resembles new bread, and requires to be roasted before it is eaten. Those who have tasted it say, that it is in no respect superior to the potatoe.

In some of the West-India islands the inhabitants supply the place of grain by making bread from the root of a shrub called the cassada, or cassava. Though, to my taste, this bread is very insipid, yet the natives are fond of it to such a degree that I have known some of them eat it, during their residence in England, in preference to the finest London bread.

But the most general substitutes for bread in the West-Indies are the yams. There are three different species of this plant, the roots of which are promiscuously used for bread. They are said to be very nutritious, of easy digestion, and, when properly dressed, are by some preferred to the best wheaten bread. The taste is somewhat like the potatoe, but more luscious. The negroes generally eat them boiled, and beaten into a mash. The white people have them ground into flour, and make bread and puddings of them. They can be preserved for several seasons, without losing any of their primitive goodness.

Of all the substitutes for bread in Europe, the potatoe is the most extensively useful. This plant is a native of Peru, and has been in Europe about two hundred years. Like most other important discoveries, it made but a slow progress, and is still far from being so generally cultivated as it deserves to be. It is indeed known in most parts of Europe, but its culture is best understood in Ireland and the northern parts of England. At Harwich, however, the preference is given to the Dutch potatoes, brought over by the packets between that place and Helvoet Sluys. There is a light sandy soil in Holland very favourable to the culture of that inestimable root.

As this plant thrives in every soil, and seldom suffers from the inclemency of seasons, we must blane ourselves if we suffer a famine to exist. Indeed no such thing ever can be, where due attention is paid to the

the culture of potatoes. A far greater quantity of farinaceous food can be raised on an acre of ground planted with potatoes, than sown with any kind of grain. It is not uncommon to have a return of forty for one. They are not so hearty a food as corn, but no man will ever perish for hunger who can have potatoes.

Potatoes abound with an insipid juice, which induces some to think that they are not very nutritious. Facts, however are against this opinion. Some of the stoutest men we know, are brought up on milk and potatoes. Dr. Pearson, who has bestowed some pains in analyzing this root says, that potatoes and water alone, with common salt, can nourish men completely. They differ in colour and consistence, but not materially with regard to their nutritive qualities.

Some think the firm kind are the most nutritious; but the Irish who must be good judges, give the preference to the mealy. The difference however, depends much on the mode of cooking them.

More than half the substance of potatoes consists of water, and experience shews, that that mode of cooking, which most diminishes their moisture, is to be preferred. In London they are drenched in water and washed before they are brought to market, which accounts in a great measure, for the bad quality of the London potatoes.

They are dressed in a variety of ways, but simple boiling or roasting seems to be all the cooking they require, to render them a proper substitute for bread. Some are fond of making bread of them. This, in my opinion, is marring both. Why manufacture any thing into bread, which requires only the aid of fire to make it such? Nobody thinks of making dough of the bread fruit; but the potatoe might with as great propriety be called the bread root, as it is made into bread by the same process.

Stewed mutton and potatoes make not only a nourishing but a very palatable dish. The excess of fat of the mutton, which when otherwise cooked sustains great loss is thus preserved, by being absorbed by the potatoes. It is, however, to be observed, that when potatoes are used in broth or stews, they ought previously to be boiled, and the water thrown away, as it contains something deleterious. Simple boiling or roasting is sufficient to prepare potatoes to supply the place of bread, but when they are intended to serve as a meal, they require something of a softening nature, as milk, butter, or both. What a treasure is a milch cow and a potatoe garden, to a poor man with a large family, who lives in the country! Yet, with a little attention from landlords and farmers, almost every man might be so accommodated. What a source of real wealth and population! Men would multiply, and poverty, unless among the profligate, be unknown. Horses are sometimes fed with potatoes, and become very fond of them. With the addition of a small quantity of hay, they are found to be sufficiently nourishing.

I would beg leave to recommend, both to landlords and farmers, a careful perusal of Earl Winchelsea's excellent letter to Sir John Sinclair, on the advantages of cottagers renting lands. This humane nobleman takes up the matter in a truly patriotic light, and shews that farmers, instead of lessening the number of poor, do every thing they can to multiply them; and I am sorry to say, that so far as my observation goes, it agrees entirely with his lordship's.

Some think that the potatoe, unless it is made into bread, will not keep. An accident taught me the contrary. Many years ago a friend

of mine sent me a potatoe, after it had been roasted in an oven, on account of its singular figure. I laid it on a shelf among some other things of the like kind, and was surprised, on removing them many years after, to find the potatoe quite fresh though as dry as a bone. On grating it down it was perfectly sweet; and as fit for making soup as the day it was roasted. I apprehend that nothing made into bread would have kept so long.

Posterity will hardly believe that a scarcity of bread could be felt in Britain, at a time when it was known that a sufficient quantity of farinaceous food could be raised in one county for the inhabitants of the whole island. Let proper encouragement be given to the culture of potatoes, and set famine at defiance.

Many other domestic roots, sprouts, &c. are very wholesome and may occasionally supply the place of bread. Of these Mr. Bryant of Norwich, reckons above forty; but we shall only take notice, by way of specimen, of the most useful and productive. It is worthy of remark, that no nation can be very populous, which does not draw a great part of its food from under ground.

The Jerusalem artichoke is a native of Brazil; but, having been long cultivated in this country, it is too well known to need any description. From its taste, which is like that of artichoke bottoms, it would seem to be nutritious, and is far from being unpleasant to the palate. Some reckon it windy, but this may be corrected in the cooking, by warm spices, and as the plant is very productive, we would recommend it to be used in the same manner as potatoes and the other farinaceous roots.

Of the esculent roots in this country, the parsnip is reckoned the most nourishing. It is likewise of easy digestion, and is agreeable to most palates. Some indeed dislike it on account of its sweetness; but that is a proof of its nutritive quality, sugar being the most nourishing thing in nature. We are told that, in the north of Ireland, the poor people make beer from this root.

There is not any plant that affords a more striking proof of the benefits of culture than the turnip. In its wild state it is good for little or nothing; but, when properly cultivated, it not only affords wholesome nourishment for man, but furnishes the principal winter food for cattle. There is a species of this plant which grows in North Britain, called the yellow turnip, which is sweet, and of a superior quality to those produced in the south, particularly about London, which are bitter and stringy. The yellow turnip is the most nourishing, and also the most hardy in sustaining the winter. It is eaten with milk to cure the consumption and scurvy. Margraaf says, he could extract no sugar from the turnip, which affords ground to conclude, that it is not so nutritive as certain other roots. Not only the root of the turnip, but the tops, when young, make very pleasant greens. The sprouts, if gathered when very tender, make an excellent salad.

The carrot, like the turnip, is good for little in its natural state, being small, tough and stringy. Manured, it grows large, succulent, and of a pleasant flavour. It ought, however, to be eaten young, otherwise it lies on the stomach, and is hard of digestion. It is an ingredient in several soups, and being solid, may in some measure supply the place of bread.

Salsafy, skirrets, and the several kinds of beets, are all pleasant and nourishing. They are likewise of easy digestion, and may be dressed

in a variety of ways. Margraaf has by experiments discovered, that both skirrets and beets contain a considerable quantity of sugar. Though the extracting a saccharine salt from these plants may be no object while we possess the West-India islands, yet it serves to shew that they possess a quantity of nutritious matter, sufficient to give them a rank among the articles calculated to supply the place of bread.

The onion, we are told, was a great favourite in Egypt four thousand years ago, and Dr. Hasselquest says, it is not to be wondered at, for whoever has tasted the onions of Egypt must allow, that none can be better in any part of the globe. There, he says, they are sweet, though in many countries they are strong and nauseous. There they are soft, whereas in northern countries they are hard; and their coats so compact, that they are difficult to digest. This very quality may however recommend them in countries where food is scarce. The Doctor observes, that the Turks eat them roasted with their meat as we do bread, and are so fond of them that they wish to be indulged with this dish in paradise.

From the Doctor's account one would be induced to believe, that the onion used in Egypt was of a different species from ours; but I am rather inclined to think it may depend on the mode of culture, as well as on the warmth of climate and the difference of soil, as we find in the southern parts of Europe they are milder than in the more northerly. In Spain they are very mild, and a root weighing two pounds will grow from a single seed.

Onions are dressed in a variety of ways, but in regard to wholesomeness, there is no method better than simple boiling. By this method of cooking, they are rendered mild, of easy digestion, and go off without leaving any disagreeable heat in the stomach or bowels. Many shun them on account of the strong disagreeable smell they communicate to the breath. Mr. Bryant says, this may be remedied, by eating a few raw parsley leaves immediately after, which will effectually overcome the scent of the onions, and likewise cause them to sit more easy on the stomach.

The leek is generally reckoned among pot-herbs; but as the root is the part chiefly used, the consideration of it comes under the present head of discussion. Indeed, it is as properly a root as the onion, which grows chiefly above ground. The leek, as well as the onion, is said to be a constant dish at the tables of the Egyptians, who chop them small, and eat them with their meat.

The leek is used as a pot-herb in most parts of Britain, especially in Wales, where the natives are said to be fond of it. In Scotland a full grown fowl and a small piece of salt beef, stewed with a large quantity of leeks, is a very favorite dish. In my opinion the leek is not so generally used any where as it deserves to be. There is no ingredient goes into soup that is more wholesome, or that gives it a better flavour, than leeks. They are in many respects medicinal, and to my taste, as an ingredient in soups, they are greatly superior to the onion, or any other pot-herb whatever.

It is a fact worthy of observation, that the boiling of vegetable substances thoroughly, extricates a considerable quantity of air, and makes them less liable to produce flatulency.

I could mention a great many more esculent plants which might occasionally supply the place of bread, but the above specimen is suffi-

cient to shew how liberal nature is in supplying man with food, provided he will take the trouble of cultivating and cooking it. Mr. Bryant, in his history of esculent plants, enumerates above four hundred and fifty, each of which affords a wholesome nourishment; and may occasionally be used in place of bread.

OF BROTHS AND SOUPS.

THESE may likewise be considered as substitutes for bread. If properly made they will serve both for bread and drink. Though broth is a dish of the greatest antiquity, and may be considered as extremely delicious, yet it is not a favourite in this country. Here the people are fond of what they call solids; yet those very solids they make into broth by swallowing as much drink after them as they can get. The only difference is, the foreigner makes his broth in a pot, and the Englishman makes his in the stomach.

A very sensible anonymous writer observes, that in England a pound of meat makes simply a pound of food; whereas in any other country in Europe, that quantity of animal food, when stewed down with vegetables and Scotch barley, will produce an ample meal for half a dozen people. Hence he justly infers that among the variety of schemes which may have been devised by the humane for relieving the distresses of the poor, a better and more extensive charity cannot be devised than that of instructing them in a new mode of cookery.

The same author adds, that the result of his experiments on this subject had exceeded his most sanguine expectations, and that each day gave him fresh proofs of the excellency of his plan for teaching the poor and needy to find themselves in a wholesome and palatable diet, at the cheapest rate, in which little or no bread was required. He concludes by asserting that there is scarce a place in this kingdom where twenty persons may not have a wholesome, hearty, and palatable meal for three shillings.

The writer who has paid most attention to the improvement of cookery for the benefit of the poor, is Count Rumford. In his economical and philosophical essays, he has given such a variety of forms for making wholesome, cheap and nourishing soups, stews, and other dishes for common use, that little more seems necessary to be said on the subject. I shall only observe that the mode of living on broths, soups, hasty-pudding, and such like, so warmly and justly recommended by the Count, has been practised in the northern parts of this kingdom from time immemorial. There the food of the common people is hasty-pudding with milk for breakfast and supper, and broth, with vegetables and meat, for dinner. The poorer sort often make broth without meat; but they all use vegetables in great abundance, and sometimes they supply the place of meat with butter. As the hasty-pudding and milk make a complete meal, no bread is necessary either at supper or breakfast; nor is much required at dinner, as the broth is made thick with barley, cabbage, and a variety of other vegetables or pot-berbs. Cabbage is a favourite ingredient in the Scotchman's broth. It is seldom made without this article, which is not eaten so early as in England. It is there suffered to grow to maturity, and when that is the case there is no plant more productive. This the Germans know well, and make it into *sour croul*, one of the best antidotes against the scurvy with which we are acquainted.

This kind of diet not only saves bread but drink. The labourer who lives on hasty-pudding and soups, seldom has occasion for drink; while he who is burnt up with dry bread and cheese, or salt meat broiled, has a continual thirst, and spends the greater part of his earnings in liquor. This, by acting as a powerful stimulus, may make him do more work for some time, but it generally cuts him off in the middle of his days. The English labourer, who works hard and drinks hard, seldom lives long, and is an old man when he should be in his prime.

The roasting of meat is a wasteful mode of cookery, which ought to be avoided by the poorer sort of people, as much of the substance, and the most nutritive parts, are lost by scorching, and fly off by evaporation.

I know it will be said, that I recommend slops in place of solid food. They are such slops, however, as the greatest heroes of antiquity lived upon; and though I have visited most parts of the island, I know of no better men than those who live in the manner described above, nor are the people any where more healthy, or longer lived.

Broth is not only a dish of great antiquity, but one that can be made in a great variety of ways. It receives into its composition, animal and vegetable substances of every kind that are used in diet, and it may be seasoned so as to suit every palate. Indeed, people early accustomed to eat broths properly made, are generally fond of them for their whole lives.

It would be difficult to assign a reason why the inhabitants of South Britain should dislike a dish so much relished by other nations. Custom, no doubt, settles all these things; but how customs arise is not so clear a matter. If an alteration in diet is to be introduced with effect, it must begin with children. Whatever men are accustomed to eat when young, they generally prefer for the rest of their lives. Were the children in South Britain taught to eat hasty-pudding, with 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 still less for drink; and would thrive better than on their present food.

What parents love themselves, they generally give to their children, without any regard to its being proper for them or not. I have seen a father who was fond of strong beer, make his son, an infant, guzzle it at every meal; and the mother who delights in tea, does not fail to give it to her daughter whenever she takes it to herself. By this conduct, the son becomes a tippler, and daughter sips tea in the place of solid food, until she is eaten up with vapours and other nervous disorders.

Count Rumford says, brown soup is the common breakfast of the Bavarian peasants, to which they occasionally add bread. This he avers is infinitely preferable in all respects to that pernicious wash, tea, with which the lower classes of the inhabitants of this island drench their stomachs, and ruin their constitutions. He adds, that a simple infusion of this drug, drank boiling hot, as the poor generally drink it, is certainly poison, which, though it be sometimes slow in its operation, never fails to produce fatal effects, even in the strongest constitution, where the free use of it is continued for a considerable length of time.

The German on his *polenta*, the American on his *mush*, and the North Briton on his *hasty-pudding*, can make a hearty breakfast for a tenth part of what a tea-breakfast would cost, while it is infinitely

more wholesome. It has likewise the advantage that no bread is necessary.

I have been often told, when recommending soups to the poor, that they had no time to make them, and that they could not afford fuel on account of its price, as it is dear in great towns. They can, however, find fuel twice a-day to boil a tea-kettle, and time to make the tea, which is a more tedious operation, by far, than making a mess of hasty-pudding. For a great part of the year even the poorest person must have a little fire: and it would require no more to make a comfortable mess of soup, which is always best when made with a slow fire.

The mode of living that I would recommend to the lower orders of the people, with a view to save expense and improve their health, is to substitute occasionally other farinaceous substances in the place of bread, as potatoe, &c. to give up in a great measure the use of roasted, baked, and broiled meats, and to supply their place with broths, soups, stews, and such like, made with a little meat and plenty of vegetables; to give to children, and to grown people who will eat it, for breakfast, milk-porridge, or hasty-pudding with milk, small beer, or molasses. This will be found a more wholesome breakfast, than tea, while it is much cheaper and requires no bread.*

CONCLUSION. §

AFTER a long attention to the cure of diseases, it is mortifying to reflect how much this arduous province is infested by a race of ignorant and shameless empirics, who are daily tampering with the public credulity, to the destruction of numbers of lives. It may be safely affirmed, that a considerable part of the annual deaths are occasioned by the profligate temerity of these unprincipled impostors. There is hardly a news-paper that does not teem with the audacious falsehoods, and pompous pretensions, of this imposing class of mercenary, and yet (I use not too harsh an expression) tolerated murderers. What man who is conversant with physic can peruse without indignation the public advertisements of these quacks, in which every one arrogates to himself the possession of superlative knowledge, and ascribes to his respective nostrum

* The celebrated Dr Huffland, in his Art of prolonging Life, says, a moderate use of soups is certainly not hurtful; and it is singular that people should imagine it tends too much to relax the stomach. Does not all our drink, even though cold, become in a few minutes a kind of warm soup in the stomach; and does not the stomach retain the same temperature during the whole day? Be careful only not to use it hot, in too great quantity at one time, or too watery. It is attended even with great advantages. It supplies the place of drink, particularly to men of letters, women, and all those who do drink very little except at table, and who, when they give over soup, receive into their blood too little moisture. And it is here to be remarked, that fluids used in the form of soups unite much better and sooner with our juices than when drunk cold and raw. On this account soup is a great preventive of dryness and rigidity in the body; and therefore the best nourishment for old people, and those who are of an arid temperament. It even supplies the place of medicine. After catching cold, in nervous head-aches, cholics, and different kinds of cramp in the stomach, warm soup is of excellent service. It may serve as a proof of the utility, or at least harmlessness of soup, when I remark that our forefathers, who certainly had more strength than we have, used soup; and that it is used by rustics, who are still stronger than those in refined life; and that all the old people with whom I ever was acquainted were great friends to it.

such contradictory and inconsistent qualities as were never yet united in any one medicine in the world?

To the disgrace, however, of the public credulity, not a few of these impostors attain to a degree of opulence that is seldom acquired even in the scientific and legitimate prosecution of medical practice. The artifices which they employ to delude the multitude are well known to many. Having picked up the name of some extremely active medicine, the bold and indiscriminate use of which must therefore be proportionably dangerous, they immediately resolve on converting it into a nostrum, and endeavour to disseminate its unrivalled praises either by advertisements or hand-bills. But being themselves totally illiterate, they have, for this purpose, recourse to some other person, whom they engage for a stipulated reward to fabricate the pernicious illusion. A hyperbolic panegyric on the wonderful remedy is accordingly vamped up, and preparations are made for commencing a lucrative trade with the public. Should the channel of communication be the public papers, it is a settled point, that if daily or frequent advertisements can be supported for the space of some months, the fame of the medicine, whatever be its real character, is established. The better to promote this purpose, innumerable authorities in favour of the nostrum are asserted in general terms; venality is again exerted to furnish specific testimonials in its support; and if, among the number of unfortunate purchasers, or patients, there exists any person who has not only taken it with impunity, but even with some advantage, (and what extremely powerful medicine may not sometimes by chance have good effects?) the fortuitous incident is immediately blazoned with all the ostentation of interested zeal and affected popularity; and a reference to uncorrupted testimony resounded through every channel of information. By a strange association, truth now is confidently adduced in support of falsehood; and the recovery of one or two persons is rendered the unhappy means of draining the purse, undermining the health, and destroying the lives of thousands.

Such, in fact, is the general progress of empiricism. Were the task not invidious, and the objects too despicable for any other than juridical cognizance, which they merit in a superlative degree, the representation here given might be supported by unquestionable authority. It is hoped, however, that enough has been said to influence the minds of the judicious with respect to this iniquitous practice, which becomes every day more alarming, and threatens the more credulous part of the community with the most fatal effects.

This country, through the blessing of Providence, has been exempted from the horrors of famine, and for years the sword; but the infatuation of a numerous body of the people has subjected it to the ravages of another public calamity, which, though generally more slow in its operation than any of the former, is equally destructive in the end. Humanity shudders at the horrible depredations committed on the human constitution by this empirical tribe, who subsist by public delusion, and riot, where they can, in the irreparable ruin of those whom they intice into their snares. What consumptive visages, what enfeebled frames, what mutilated bodies, and what palsied limbs, are the miserable monuments of that ignorance and criminal temerity by which they are actuated!

In certain diseases, it is doubtless an object of importance to the unfortunate patients, that their cure should be conducted with secrecy, and likewise to many, at the smallest possible expense; but they do not consider that, while they are economical in this article, they are fatally prodigal of health. They grasp with eagerness the pill-box or the phial, which they are assured contains the elixir of speedy and effectual convalescence; but, alas! the flattering hope proves of short duration. They may feel perhaps, for a little, a suppression of the symptoms of their disease; but the destructive embers are smothered, not extinguished; and, while preying upon the vitals, are acquiring a malignity which will again break forth with redoubled violence.

It is not, however, in one disease only, nor in the lower class of the people, that this infatuated credulity operates; we find it prevail even amongst those from whose superior situations in life more discernment might be expected; but who have nevertheless become voluntary dupes to the meanest artificers of empiricism. Witness the successful imposture practised with regard to the inspection of urine; the visionary notion of charms, &c.

But it is time that such chimerical doctrines should be consigned to the regions of barbarism, and flourish no longer in a soil where almost every other physical prejudice has been rooted up and explored by the progress of science. To effect this salutary purpose, nothing can have a more powerful tendency than the view which has been given, in the preceding pages, of the causes and cure of diseases. By removing the mysterious veil which for a long time concealed this useful branch of knowledge from the eyes of the public, it ought, on one hand, to preclude for ever all resources to empirical impostors, and on the other, to show in what cases it will be proper to call in the assistance of a physician. Within the bounds prescribed by this limitation any person of an ordinary capacity may act in conformity to the rules which have been delivered. By this means a prudent economy will be consulted, unhappy patients will no longer be shipwrecked on the dangerous rocks of empiricism, with all their deceitful allurements, but will be conducted through the safest and most direct road to the recovery of health, when that desirable object is practicable.

“ Ah! in what perils is vain life engag’d!
 What slight neglects, what trivial faults destroy
 The hardest frame! Of indolence, of toil,
 We die, of want, of superfluity:
 The all-surrounding heaven, the vital air,
 Is big with death. And though the putrid south
 Be shut; though no convulsive agony
 Shake, from the deep foundations of the world,
 Th’ imprison’d plagues; a secret venom oft
 Corrupts the air, the water, and the land.”



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 the 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.

Medicamentorum varietas ignorantiae filia est.

BACON.

INTRODUCTION.

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 cure 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 those 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, jalap, 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, is become 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 disgusting, 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 occasion requires.

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 of every medicine is as small as could be well prepared, both to prevent unnecessary expense, 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 or flavour, and often become quite insignificant.

In the preparations of medicines, I have generally followed the most approved dispensatories; but have taken the liberty to differ from them whenever 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 chiefly 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 price and bulk of the medicine, 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. Verdigrise, for example, is often mixed with ointment of elder 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 expense. Such ingredients as greatly increase the price of any composition, without adding considerably to its virtue, are generally either omitted, or somewhat less expensive substituted 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 ready to be 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 in which 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 dependance upon 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 to be 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 necessary. 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 patients; but, happily for mankind, mathematical exactness 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 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 have ventured to make use of the plainest English I could, and hope my prescriptions will succeed no worse for it.

N. B. The Apothecary's weights, and the English wine measures, are used throughout the whole book, the different denominations of which will appear from the following Table:

A pound	contains	twelve	ounces.
An ounce	- - - -	eight	drachms.
A drachm	- - - -	three	scruples.
A scruple	- - - -	twenty	grains.
A gallon	contains	eight	pints.
A pint	- - - -	sixteen	ounces.
An ounce	- - - -	eight	drachms.
A table spoonful	is the measure of	half	an ounce.
A tea spoonful	is one fourth of a	table	spoonful.
Sixty drops	make	one	tea-spoonful.

* The following TABLE OF DOSES FOR DIFFERENT AGES, is given by Dr. Thomson:

[The Common Dose being taken at one drachm.]

	Ages.	Parts of the Common Dose.	Proportions of a Drachm.	
Weeks	7	$\frac{1}{5}$	4	} grains.
Months	7	$\frac{1}{2}$	5	
	14	$\frac{1}{2}$	$7\frac{1}{2}$	
	28	$\frac{1}{5}$	12	
	$3\frac{1}{2}$	$\frac{1}{4}$	15	
Years	5	$\frac{1}{3}$	20	
	7	$\frac{1}{2}$	30	
	14	$\frac{2}{3}$	40	
	21	common dose.	one drachm.	
	63	$\frac{1}{2}$	55	
	77	$\frac{1}{5}$	50	
	100	$\frac{1}{6}$	40	

A LIST OF SIMPLES, AND OF SUCH MEDICINAL PREPARATIONS, AS
 OUGHT TO BE KEPT IN READINESS FOR PRIVATE PRACTICE.

AGARIC

Alum
 Antimony, crude
 ——— cinnabar of
 ——— sulphur of
 Balsam of Capivi
 ——— of Peru
 ——— of Tolu
 Bark, cascarilla
 ——— cinnamon
 ——— Mezerion
 ——— Peruvian
 ——— Winter's, or canella alba
 Borax
 Calamine stone, levigated
 Castor, Russian
 Caustic, common
 ——— lunar
 Earth, Fuller's
 ——— Japan
 ——— Armenian bole
 ——— French ditto
 Extracts of gentian
 ——— of guaiacum
 ——— of hellebore, black
 ——— of hemlock
 ——— of jalap
 ——— of liquorice
 ——— of Peruvian bark
 ——— of poppies
 ——— of wormwood
 Flowers of camomile
 ——— colt's foot
 ——— elder
 ——— rosemary
 ——— damask and red roses
 Fruits, almonds
 ——— bitter apple
 ——— cassia fistularis
 ——— Curassao oranges
 ——— Figs dried
 ——— French prunes
 ——— Jamaica pepper
 ——— Juniper berries
 ——— nutmegs
 ——— tamarinds
 Gum, aloes
 ——— ammoniac, in tears
 ——— arabic
 ——— asafetida

Gum 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
 —— of annise
 —— of cinnamon
 —— of juniper
 —— of lemon-peel
 —— of peppermint
 Oil, expressed, of almonds
 —— of linseed
 Oil of Olives, or Florence oil
 —— of palms
 —— of turpentine
 Orange-peel
 Oyster shells prepared
 Poppy-heads
 Resins benzoin
 —— flower of
 —— Burgundy pitch
 —— dragon's blood

Resins, frankincense

—— liquid storax

—— white, or rosin

—— scammony

Roots, birthwort

—— calomus aromaticus

—— contrayerva

—— garlic

—— gentian

—— ginger

—— hellebore, black, white

—— jalap

—— ipecacuanha

—— lily, white

—— liquorice

—— marshmallow

—— mezerion

—— rhubarb

—— sarsaparilla

—— seneka

—— squills

—— tormentil

—— tumeric

—— Virginian snake

—— wild valerian

—— zedoary

Saffron

Sal ammoniac, crude

—— volatile

Salt, Epsom

—— of Glauber

—— of hartshorn

—— nitre, purified, or prunel

—— Polychrest

—— Rochel

—— of tartar

Seeds, anise

—— caraway

—— cardamom

—— coriander

—— cummin

—— mustard

Seeds, sweet fennel

—— wild carrot

Senna

Spanish flies

Spermaceti

Spirits, ætherial, or æther

—— of hartshorn

—— of lavender compound

—— of nitre

—— ditto dulcified

—— of sal ammoniac

—— of sea salt

—— of vinegar

—— of vitriol

—— of wine rectified

—— volatile aromatic

Steel, filings of

—— rust of, prepared

—— soluble, salt of

Sulphur vivum

—— balsam of

—— flower of

Tar

—— Barbadoes

Tartar, cream of

—— emetic

—— soluble

—— vitriolated

Tin, prepared

Tutty, levigated

Turpentine, Venice

Verdigrease

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 compositious, 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, is intended to ease 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; Strasburgh turpentine and yellow wax, of each half a pound; red saunder, six drachms. Melt the wax with some part of the oil over a gentle fire; then adding the remaining part of the oil and the 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, hæmorrhages, 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 Berne*, *Wade's Balsam*, *Friar's Balsam*, *Jesuit's Drops*, *Turlington's Drops*, &c.

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 poudrous, 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 quinsy.

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; imple 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 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 Cataplastm.

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, and then add two drachms of the sugar of lead.

Ripening Cataplastm.

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 cataplastm. The galbanum must be previously dissolved with the yolk of an egg.

Where it is necessary to promote suppuration, this cataplastm may be used by those who chuse to be at the trouble and expense 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 recal the blood and spirits to a weak part, as in the palsy and 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 with 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 upon the stomach, and also in larger doses than at 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 cases where it may do much 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 by any other means whatever. This may easily be 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. Aliment 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 *Fetid 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 the 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. Liquify the jelly over a gentle 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 of laudanum may be 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 clyster 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 disorders, 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-WATERS.

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 are pretty 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 the water, it can be of little use. Boles and other earthy substances, as they do not dissolve in water, are likewise unfit for this purpose.

Collyrium of Alum.

Take of alum, half a drachm; agitate it well together with the white of one egg.

This is the Collyrium of Riverius: It is used in inflammation 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 on above three or four 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 often be 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 be occasionally added to this collyrium.

Those who chuse may substitute instead of this the collyrium 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 medicine very slightly.

Japonic Confection.

Take Japan earth, three ounces; tormentil root, nutmeg, olibanum, of each 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 ware-house. 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.

Conservees 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 stocks, 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 the 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, of 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 restraining in weakness of the stomach, and likewise in phthisical coughs, and spitting of blood. To have any considerable effects, 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 relaxation 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 useful 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 to 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, and in great 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 require hours, and sometimes days, to effect.

The medicines of this class are all intended for immediate use.

Decoction of Althaea.

Take of the roots of marsh-mallows, 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 defluations upon the lungs, this decoction may be used for ordinary drink.

The Common Decoction.

Take of camomile flowers, one ounce; elder flowers, and sweet fennel seeds, of each half an ounce, water, two quarts. Boil them for a little, 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 fermentation, 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 stronger 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 tea-spoonful of the weak spirit of vitriol be added to this medicine, it renders 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.

This dose is four spoonsful every fourth or sixth hour.

Decoction of Sarsaparilla.

Take of fresh sarsaparilla 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 saffras 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 flesh and vigour to habits emaciated by the venereal diseases. 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 the 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 Lisbon diet drink.

Take of sarsaparilla, three ounces; liquorice and mezerion root, of each half an ounce; shavings of guaiacum and saffras 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 Sencka.

Take of Sencka 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 heart-burn. 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 julep.

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 expense.

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 restlessness, 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 in an obstruction or deficiency of urine.

Purging Draughts.

Take of manna an ounce; soluble tartar, or Rochel 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 the other ingredients.

Swcating Draughts.

Take spirit of Mindererus, two ounces; salt of hartshorn five grains; simple cinnamon-water, and syrup of poppies, of each half an ounce. Make 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 chuse 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, or 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 virtues 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 a 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 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 jalaps, 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 marsh-mallows, 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 capevi, 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-spoonful of this may be taken three 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—cinnibar of antimony, levigated, an 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 this electuary may be taken twice a-day with considerable advantage.

EMULSIONS.

EMULSIONS, besides 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, raisins, 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 a 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 soft 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 it in 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-spoonful three or four times a-day.

Oily Emulsion.

Take of soft 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 it is joined with spirits, and at other times 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 spasm ; 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 therefore subjoin a few of the most useful medicated fomentations, that people may have it in their power to make use of them if they chuse.

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, 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 diarrhoeas, flatulent cholics, uneasiness of the stomach, and retchings 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: Smith's 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 alum in it.

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 often alleviate very 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 quinsy, or in fevers, for cleaning the tongue and fauces.

Common Gargle.

Take of rose-water, six ounces; syrup of clove, 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 quinsy.

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 Gargle.

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 quinsy, or strangulation of the fauces, little 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-ammo-

zinc be added; by which the saliva is made thinner, and the glands 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 the 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 the 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 colt's foot 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 roses in the water 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 hæmorrhages, 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 an 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 perspiration.

If two or three ounces of the dried leaves of marsh-trefoil be used instead of mustard, it will make the *Antiscorbutic Infusion*.

JULEPS.

THE basis of juleps is generally common water, or some simple distilled water, with 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 suitable to the intention.

Camphorated Julep.

Take of camphor, one drachm; rectified spirit of wine, ten drops; double refined sugar, half an ounce; boiling distilled water, one pint. Rub the camphor first with the spirit of wine, then with the sugar; lastly, add the water by degrees, and strain the liquor.

In hysterical and other complaints where camphor is proper, this julep may be taken in the dose of a spoonful or two as often as the stomach will bear it.

Cordial Julep.

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 Julep.

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 julep may be taken every three or four hours.

Musk Julep.

Rub half a drachm of musk well together with half an ounce of sugar, and add 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, hickupping, convulsions, and other spasmodic affections, two table-spoonsful of this julep may be taken every two or three hours.

Saline Julep.

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 Julep.

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 julep 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 sto-

each, but likewise to promote the different excretions. Hence they are found in fevers to have nearly the same effect as Dr. James' Powder.

MIXTURES.

A MIXTURE differs from a julep 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 dysenterics 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 an half. Mix them.

In obstructions of the urinary passages, two spoonfuls 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 pepper-mint water, two ounces; simple syrup, one ounce.

Where fresh lemons cannot be had, this mixture may occasionally supply the place of the saline julep.

Squill Mixture.

Take of simple cinnamon water, five ounces; vinegar of squills, one ounce; syrup of marshmallows, 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 hogs' lard prepared, one pound. Strain the ointment while warm.

8 parts Laurel }
5 " Rosin } Edinburgh Dispensary
2 " Wax }
Ointment

This ointment is employed for cleansing and healing wounds and ulcers.

Ointment of Calimine.

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 *Athæa Ointment*. It may be used for anointing inflamed parts, &c.

Eye Ointment.

Take of hogs' lard prepared, four ounces, white wax two drachms, tatty prepared, one ounce, melt the wax with the lard over a gentle fire, and then sprinkle in the tatty, 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, verdigrise well prepared, of each two drachms, hogs' 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 the skin over the part, as in scalding, &c.

Mercurial Ointment.

Take of quicksilver, two ounces, hogs' lard, three ounces, mutton suet, one ounce. Rub the quicksilver, with an ounce of the hogs' 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 hogs' lard prepared, four ounces, flowers of sulphur an ounce and an 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 spermaecti, 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 Ointment.

Take equal parts of Florence oil, or fresh drawn linsced oil, and lime-water : shake them well together in a wide mouthed 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 excretion, where, on account of the largeness of the surface, the ointments with lead or calimine might be improper.

Liniment for the Piles.

Take of emollient ointment, two ounces, liquid laudanum, half an ounce. Mix these 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 the 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 quincy, 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 commodiously 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 upon the stomach, one, two, or three of these pills may be taken, as occasion requires.

Facil Pill.

Take of asafetida, 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 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 drachms 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 is different, according to the intention with which they are given. As an alterant, two or three may be taken daily. To raise a salivation, four or five will be necessary.

Equal parts of the above pill and powdered rhubarb made into a mass, with a sufficient quantity of simple syrup, will make a *Mercurial 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 the 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 Pill.

Take of Calomel, or sweet mercury, and precipitated sulphur and 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 sarsaparilla.

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, vitriolated tartar of each two drachms; syrup of ginger, as much as will make them a proper consistence for pills.

These pills may be taken in the same quantity as the above.

Pill 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 or mucilage.

These pills, as their title express, 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 is necessary to keep the body open. It will be proper, however, during their use, to interpose a vomit of ipecacuanha or tartar emetic.

Stomachic Pill.

Take 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 car-

* See a paper on this subject in the *Edinburgh Physical and Literary Essays*, by the ingenious Dr. John Gardener.

camom 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 them.

Strengthening Pills.

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 to the limbs should be firm and adhesive.

It has been supposed, that plasters might be impregnated with the virtues of different vegetable, by boiling the recent vegetables with the oil employed for the composition of the plaster; but this treatment does not communicate to the oils any valuable qualities.

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 the 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 with it 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 it 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 quick-silver, previously extinguished by triture, with three ounces of hogs' 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 on 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 together 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 Plaster.

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 proper 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 immediate flow of the *menses*, and other hæmorrhages, 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 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, $\frac{1}{2}$ oz.; 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 ounces; purified nitre, one ounce. Pound them together, and divide the whole into twenty-four doses.

During the first stage of the venereal diseases, 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, each two drachms. Let the ingredients be pounded, and afterwards mixed well together.

When flatulency 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, 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 Powders.

Take of tin reduced into a fine powder, an ounce; Æthiop'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 powder 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 purged 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 and constitution, of the root of the male fern reduced into a fine powder. About two hours afterwards 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 may be removed by sticking the juice of an orange or lemon.

This medicine which had been long 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 it, 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 upon as medicines of considerable value. They are at present, however, regarded chiefly as vehicles for medicines of greater efficacy, and are used for sweetening draughts, juleps, or mixtures; and 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 whatever 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 supply the place of diaeodium, or the syrup of poppies, and will be found a more safe and certain medicine.

The lubricating virtues of the syrup of marshmallows may likewise be applied, by adding to the common syrup a sufficient quantity of mucilage of gum arabic.

Those who chuse 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 menstrum 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 menstrum of the gummy, saline, and saccharine parts of medicinal 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 the more costly preparations of this kind. It is rather too hot to be taken by itself, but is very proper 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.

The 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 asafoetida 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 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 the 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 be infused along with the roots, to give the tincture a colour.

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, an 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 to green wounds.

Tincture of Opium or, Liquid Laudanum.

Take of crude opium, two ounces; spiritous aromatic water and mountain wine, 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.

As twenty-five drops of this tincture contain about a grain of opium, the common dose may be from twenty to thirty drops.

Sacred Tincture, or Tincture of Hirca Picra.

Take of succotorine 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 a languid and phlegmatic habit; but is thought to have better effects, taken in small doses as a laxative.

The dose, as a purge, is from one to two ounces.

Compound 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 salutaris*, 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.

A very good tincture of guaiacum, for domestic use, may be made, infusing two or three ounces of the gum in a bottle of rum or brandy.

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 tea-spoonful 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 chuse 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, colicky and such like complaints, they are frequently of great service. The dose is from half a spoonful to three or four spoonfuls 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, for 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 whooping-cough. The dose to an adult is from fifty to a hundred drops.

Sacred Elixir.

Take of rhubarb, cut small, ten drachms; succorine 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; Curassao oranges, one ounce; Virginian snake-root half an ounce. Let the ingredients be bruised, and infused for three or four days in two pints of French brandy, afterwards strain out the elixir.

This is an excellent 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 which 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 or 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*.

Take of volatile sal ammoniac, any quantity. Pour on it gradually, distilled vinegar, till the effervescence ceases.

Spirit of Mindererus.

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 vinous 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, where 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.

These 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 slaking 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 to be made in the following manner.

Take of litharge one pound; vinegar made of French wine, two pints. Put them together in 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 the 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.

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 head aches, &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: add to it about a twelfth part its quantity of proof spirits.

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

* See *Collyrium of Lead*.

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 quicklime, 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 stopt.

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 or two, or more of it, may be drank daily. Externally it is used for washing foul ulcers, and removing the itch, and other diseases of the skin.

Compound Lime-Water.

Take shavings of guaiacum wood, half a pound; liquorice root, one ounce; sassafra 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 be wanted, a double or triple 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 hæmorrhages, 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 with 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 medical 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 dilutents, suitable vehicles for medicines of greater efficacy or for rendering disgusting ones more agreeable to the palate and stomach. We shall therefore insert only 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 distill off one gallon.

This is an agreeable aromatic water, possessing, in a high degree, the fragrance and cordial virtues of the spice.

Penny-royal Water.

Take of penny-royal leaves, dried, a pound and a half; water from a gallon and a half to two gallons. Draw off by distillation one gallon.

This water possesses, in a considerable degree, the smell, taste and virtues of the plant. It is given in mixtures and juleps 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 penny-royal 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 effect 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 fevers, 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 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, brooklime, garden scurvy-grass, and water cresses.

A number of other wheys may be prepared nearly in the same manner, as; orange whey, cream of tartar 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 excretories, 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 *menstrum* 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 stomachs 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 a glass of antimony, reduced to a fine powder, half an ounce. Lisbon wine, eight ounces. 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 alternative and diaphoretic, it may be taken from ten to fifty or sixty drops. In a large 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 be as good if made with Lisbon wine, sharpened with half an ounce of the cream of tartar, or a small quantity of the 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 resides 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.

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.

- 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.
- Atrabiliarian**, 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.
- 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 digestion.
- CACOCHYMIE**, An unhealthy state of the body.
- Caries**, A rottenness of the 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**, Decisive or important.
- Critical Days**, The fourth, fifth, seventh, ninth, eleventh, thirteenth, fourteenth, seventeenth, and twenty-first, are by some authors denominated critical days, because febrile complaints have been observed to take a decisive change at these periods.
- DEBILITY**, Weakness.
- Delirium**, A temporary disorder of the mental faculties.
- Diaphragm**, A membrane separating the cavity of the chest from that of the belly.
- Diuretic**, A medicine that promotes the secretion of urine.
- Drastic**, Is applied to such purgative medicines as are violent or harsh in their operation.
- EMPHYEMA**, 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.
- Exacerbations**, The increase of any disease.
- FOECES**, Excrements.
- Fætid**, Emitting an offensive smell.
- Fætus**, The child before birth, or when born before the proper period; is thus termed.
- Flatulent**, Producing wind.
- Fungus**, Protud flesh.
- GANGRENE**, Mortification.
- Gummata**, } Venereal excrescences.
- Ganglia**, }
- Gymnastic**, Exercise taken with a view to preserve or restore health.—The ancient physicians reckoned this an important branch of medicine.

- HECTIC FEVER**, A slow consuming fever, generally attending a bad habit of body, or some incurable and deep rooted disease.
- Hæmorrhoids*, The piles.
- Hæmorrhage*, Discharge of blood.
- Hypochondriacism*, Low spirits.
- Hypochondriac viscera*, The liver, spleen, &c. So termed from their situation in the hypochondriac or upper and lateral parts of the belly.
- 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.
- LIGATURE**, Bandage.
- Lixivium*, Ley.
- MILIARY 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.
- NERVOUS**, Irritable.
- Nausea*, An inclination to vomit.
- Nodes*, Enlargement of the bones produced by the venereal disease.
- 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 basin.
- Peritonæum*, A membrane lining the cavity of the belly and covering the intestines.
- Pericardium*, Membrane containing the heart.
- Perspiration*, The matter discharged from the pores of the skin in form of vapour or sweat.
- Phlogiston*, Is here used to signify somewhat rendering the air unfit for the purposes of respiration.
- Phlegmatic*, Watery, relaxed.
- 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.
- REGIMEN**, Regulation of diet.
- Rectum*, The straight gut in which the feces are contained.
- Respiration*, The act of breathing.
- SALIVA**, The fluids secreted by the glands of the mouth.
- Sanies*, A thin bad matter, discharged from an ill-conditioned sore.
- Scirrhus*, 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.
- TABS**, A species of consumption.
- Temperament*, A peculiar habit of body, of which there are generally reckoned four, viz. the sanguine, the bilious, the melancholic, and the phlegmatic.
- VERTIGO**, Giddiness.
- ULCER**, An ill-conditioned sore.
- Ureters*, Two long and small canals which convey the urine from the kidneys to the bladder.
- Urethra*, The canal which conveys the urine from the bladder.

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FINIS.

ADVICE

TO

M O T H E R S,

ON

THE SUBJECT OF THEIR OWN HEALTH,

AND ON THE MEANS OF PROMOTING

THE HEALTH, STRENGTH, AND BEAUTY

OF THEIR OFFSPRING.

——— Audite voces, vagitus et ingens.
Infantumque animæ flentes in limine primo;
Quos dulcis vitæ exsortes, et ab ubere raptos,
Abstulit atra dies, et funere mersit acerbo.
VIRG. ÆNEID. VI.

BY WILLIAM BUCHAN, M. D.

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INTRODUCTION.

THE preservation of the lives of infants was the first subject I wrote upon at the opening of my medical career; after forty years practice, I now resume it with increased zeal and pleasure,—zeal, prompted by a just sense of its importance,—and pleasure, arising from the hope of its beneficial and lasting effects. I am sure of being listened to with kind attention by the tender and rational mother, while I am pointing out to her the certain means of preserving her own health, of securing the attachment of the man she holds dear, and of promoting the health, strength and beauty of her offspring. She will not take alarm at the idea of medical advice, when I tell her that my object is to enable her to do without medicine, and to obtain every desirable end without any painful sacrifice. The path along which I propose to conduct her is plain and easy, the prospects all round are delightful, and it leads to the purest sources of happiness.

The more I reflect on the situation of a mother, the more I am struck with the extent of her power, and the inestimable value of her services. In the language of love, women are called angels: but this is a weak and a silly compliment; they approach nearer to our ideas of the Deity: they not only create, but sustain their creation, and hold its future destiny in their hands: every man is what his mother has made him, and to her he must be indebted for the greatest blessing in life, a healthy and a vigorous constitution.

But while I thus speak of the dignity of the female character, it must be understood, that by a mother I do not mean the woman who merely brings a child into the world, but her who faithfully discharges the duties of a parent,—whose chief concern is the well-being of her infant,—and who feels all her cares amply repaid by its growth and activity. No subsequent endeavours can remedy or correct the evils occasioned by a mother's negligence; and the skill of the physician is exerted in vain to mend what she, through ignorance or inattention, may have unfortunately marred.

Several books have been written on the cure of diseases incident to children. The natural effect of such publications is to excite terror, and to prompt mothers and nurses to keep *dosing* poor infants with drugs on every trifling occasion, and to place more reliance on the efficacy of medicine than on their own best endeavours. One of the objects which I have in view is to relieve mothers from groundless fears,—to teach them how to prevent diseases that are almost always the consequences of mismanagement,—to inspire them with the fullest confidence in proper nursing, and with strong prejudices against the use of medicines, which do mischief twenty times for once that they do good.

Quackery in the nursery is not the only error in which I shall endeavour to undeceive mothers. The want of proper instructions at an early period of life betrays them into a variety of fatal mistakes respecting their own health, as well as that of their children. These mistakes, and the means of rectifying them, form a considerable part of the following work. The language is adapted to every capacity, it being of consequence that every woman should understand it; and the rules laid down are practicable in every condition, except that of cheerless poverty. With the hope of removing this exception, I shall point out the most effectual method of assisting women so circumstanced; and I do not know any manner, in which humanity, charity, and patriotism can be more laudably exerted, or even a part of the public revenue more usefully employed, than in enabling mothers to bring up a healthy and hardy race of men, fit to earn their livelihood by useful employments, and to defend their country in the hour of danger.

ADVICE TO MOTHERS.

CHAP. I.

HINTS TO WOMEN BEFORE MARRIAGE.

THE desire of preserving and improving personal beauty, which discovers itself at an early period in the female breast, is wisely designed by nature for the best and most important ends; it is a powerful check on excesses of every kind, and is the strongest incitement to cleanliness, temperance, moderate exercise, and habitual good humour. All that is necessary is to convince young people that these are the true means of rendering them lovely, because they are the only means of securing the enjoyment of health, the very essence of beauty; instead of sourly discouraging so natural a wish, let us point out the way to its full accomplishment, and thus prevent many amiable women from taking a wrong road, and from destroying both health and beauty by an absurd pursuit of the latter alone.

One of the first truths to be impressed upon the minds of young women is, that beauty cannot exist without health, and that the one is absolutely unattainable by any practices inconsistent with the other. In vain do they hope to improve their skin, or to give a lively redness to their cheek, unless they take care to keep the blood pure, and the whole frame active and vigorous. Beauty, both of shape and countenance, is nothing more than visible health,—the outward mirror of the state of things within,—the certain effect of good air, cheerfulness, temperance and exercise.

There is nothing perhaps, so pernicious to women as the use of creams, and pastes, and powders, and lotions, and numberless other contrivances to bleach the skin, or to produce an artificial white and red. All of them act with double injury, not only in destroying the surface which they were expected to beautify, but in poisoning the habit, and causing a fatal neglect of the great preservatives of life itself. A blotch or a pimple, however offensive to the eye, gives timely notice of the impure state of the fluids, and of the kind efforts of nature to expel the noxious matter. Ought not these efforts then to be assisted by a judicious plan of diet and regimen, instead of throwing back the impurity into the blood, and converting the very means of health into the seeds of infection and disease? Besides, lead or mercury is the chief ingredient in all those boasted cosmetics, and, being absorbed through the skin, cannot fail to occasion cramps, spasms, convulsions, colics, and the incurable train of nervous and consumptive complaints.

Beauty is impaired, and health too often destroyed, by other absurd practices, such as drinking vinegar to produce what is called a genteel or

slender form, and avoiding exposure to the open air, for fear of its injuring the fancied delicacy of a fine skin. Vinegar, used as a sauce and in moderate quantities, serves to correct the putrescent tendency of various articles of food, and is equally agreeable and wholesome; but when swallowed in draughts for the purpose of reducing plumpness, it proves highly injurious, causing excessive perspiration, relaxing the bowels imparting no small degree of acrimony to the blood, and very much enfeebling the whole system. The dread of open air is still more ridiculous and detrimental. Look at the healthy texture of the milk-maid's skin, and at the roses ever blooming on her cheek, and then consider whether the open air can be unfavourable to beauty. The votaries of fashion may affect to despise these natural charms, and to call them vulgar: the heart of man feels their irresistible attraction, and his understanding confirms him in so just a preference. Surely, the languid sickly delicacy produced by confinement, cannot be compared to the animated glow of a face often fanned by the refreshing breeze!

The woman therefore, who feels a laudable wish to look well, and to be so in reality must place no confidence in the silly doctrines, or the deceitful arts of fashion. She must consult nature and reason, and seek for beauty in the temple of health; if she looks for it elsewhere, she will experience the most mortifying disappointment: her charms will fade; her constitution will be ruined; her husband's love will vanish with her shadowy attractions, and her nuptial bed will be unfruitful, or cursed with a puny race, the hapless victims of a mother's imprudence. She cannot transmit to her children what she does not herself possess; weakness and disease are entailed upon her posterity; and even in the midst of wedded joys, the hopes of a healthy and vigorous issue are blasted for ever.

The only way to prevent such evils is, to pay a due regard to those rational means of promoting health which I have already hinted at,—temperance, exercise, open air, cleanliness, and good-humour. These subjects are pretty fully discussed in my "*Domestic Medicine*;" yet a few remarks may be proper on the present occasion.

In laying down rules of temperance, I do not wish to impose any restraint on the moderate use of good and wholesome food or drink: but under these heads we must not include spirituous liquors; relaxing and often repeated draughts of hot tea and coffee; salted, smoked-dried, and highly-seasoned meats; salt fish; rich gravies; heavy sauces; almost indigestible pastry; and sour unripe fruits, of which women in general are immoderately fond. We pity the green-sick girl, whose longing for such trash is one of the causes as well as one of the effects of her disease; but can any woman capable of the least reflection, continue to gratify a perverse appetite by the use of the most pernicious crudities? Fruit, in the season of its maturity, is no less salutary than delicious. By plucking and eating it before it is ripe, you defeat the benignant purposes of nature, and will severely feel her resentment. The morning is the best time to eat fruit, when the stomach is not loaded with other aliment. Even in the evening I had rather see it introduced, than the enervating luxuries of the tea-table, or the still worse preparations for a supper of animal food. A meal of this sort should not be made twice in one day. After a hearty dinner, a long interval is necessary before nature can require, or even bear without

injury, another substantial repast. Suppers are doubly prejudicial on account of the lateness of the hour, and the danger of going to bed with a full stomach. Apoplexies are often occasioned by such inconsiderate and unseasonable indulgence, but its certain effects are restless nights, frightful dreams, broken and unrefreshing slumbers, an incapacity of early rising next morning, head-achs, paleness of aspect, and general relaxation. Whoever sets any value on health or beauty, will always make very light repasts at night, and will go to bed early; that is to say, never later than ten or eleven o'clock, in order to enjoy sweet repose, and to rise betimes, with renovated strength and alacrity, to the pleasures and duties of the ensuing day.

Pure air and moderate exercise are not of less importance than food and drink. Women are much confined by their domestic employments and sedentary pursuits: for this very reason they ought to go out frequently, and take exercise in the open air,—not in a close carriage, but on foot or on horseback. When prevented by the weather from going abroad, dancing, provided it be not continued to fatigue, is the most cheerful and healthy amusement within doors. The only sedentary diversions proper for women are playing on some musical instrument, singing, and reading aloud delightful pieces of poetry or eloquence. Young ladies and mothers should wholly resign the card-table to old maids, who can only injure their own health, and who have no taste for any other mode of social intercourse.

It may seem a little strange that I should think it in any sort necessary to recommend cleanliness to the fair sex: I am far from intending to convey the most distant insinuation of their negligence in this respect; I only wish to heighten their idea of its utility, and to point out farther methods of increasing its benefits. They are rather too sparing of water, from an apprehension of its injuring the skin or giving it a disagreeable roughness. This is a great mistake. Pure water may be truly considered as a fountain of health, and its frequent use is the best means of improving the skin and strengthening the whole frame. The offices performed by the skin are of greater importance than most people imagine. It is not merely a covering or shield to guard the fine organs of feeling from irritation or external injury, but one of the grand outlets admirably contrived by nature for expelling the noxious and superfluous humours of the body. The perspirable matter thus thrown out will of itself clog the pores, and relax the skin, unless care is taken to promote its easy escape by keeping the entire surface of the body perfectly clean, well-braced and elastic, which can only be done by frequent washing, and instantly wiping the parts dry. Those who have not a bath to plunge into, should wash the face, neck, hands, and feet, every morning and night; and experience will soon convince them, that, the more they accustom themselves even to this partial application of clean water, the more comfortable and enlivening they will find it. If misguided tenderness has produced an extreme delicacy of habit as well as of skin, it will be proper to use luke-warm water for some time; and then gradually to diminish its temperature, till cold water can be employed, not only with safety, but with benefit. As a preservative of health, it is far more bracing and more invigorating than warm water, though the latter may be often advisable in cases of particular infirmity, indisposition, or disease.

All women of delicacy and good sense are sufficiently attentive to

remove any outward soil or visible dirt from their person; but they do not all know, that a vapour, too fine to be perceived by the eye, is constantly issuing from the pores, the little orifices or mouths of which must therefore be kept clean and unobstructed. For the same reason, the linen and interior articles of dress should be often changed, as they become impregnated with the perspirable matter, and, when foul, would not only prevent the escape of any more, but would even have a part of what they had received re-absorbed by the skin, and thrown back into the system. The whole dress also should be loose, and as light as may be found consistent with due warmth, so as not to increase perspiration too much by its heaviness, nor to check either that or the free circulation of the blood by its pressure.

Among many improvements in the modern fashions of female dress, equally favourable to health, to graceful ease and elegance, the discontinuance of stays is entitled to peculiar approbation. It is, indeed, impossible to think of the old straight waistcoat of whalebone, and of tight lacing, without astonishment and some degree of horror. We are surprised and shocked at the folly and perverseness of employing, as an article of dress, and even as a personal ornament, what must have checked youthful growth—what must have produced distortions and deformity—besides occasioning various irregularities and diseases. I need not point out the aggravated mischief of such a pressure on the breasts and womb in a state of pregnancy; but I must notice a defect very prevalent among young women of the present day in London, who, though they have not worn stays, may be fairly presumed to inherit from their mothers some of the pernicious effects of such a custom.

The injury to which I allude, is the want of nipples. This unnatural defect seems to have originated from the use of laced stays; and as children so often resemble their parents in outward form, it is not improbable that the daughter may bear this mark of a mother's imprudence, and may even transmit it to her own female children.—Where stays have never been used, the want of a nipple is as extraordinary as the want of a limb; and no mother is found thus disqualified from discharging one of her most sacred duties. But, in London, the instances are too frequent to be ascribed to accident, and cannot, perhaps, be accounted for more satisfactorily than in the manner here suggested.

In my summary of the means of promoting health and beauty, cheerfulness or good humour is mentioned the last, though certainly it is not the least in point of efficacy. It has the happiest influence on the body and mind; it gives a salutary impulse to the circulation of the blood, keeps all the vital organs in easy and agreeable play, renders the outward deportment highly pleasing, while the perpetual sunshine within spreads a fascinating loveliness over the countenance.—Its opposite, peevishness, or ill-humour, embitters life, saps the constitution, and is more fatal to beauty than the small-pox, because its ravages are more certain, more disgusting, and more permanent.

Such are the chief points which I wish to impress upon the minds of women before marriage. Objects of so much importance in every state or period of life, are deserving of peculiar regard when an union of the sexes is proposed. It is little short of intentional murder on the part of a weak, languid, nervous, or deformed woman to approach the marriage-bed. Improper passions may urge her to be-

come a wife ; but she is wholly unfit to become a mother. She risks her own life,—she disappoints the natural wishes of a husband,—and should she have children, her puny, sickly offspring, as I before observed, will have little cause to thank her for their wretched existence. The evil is not confined to her own family ; society at large is materially injured ; its well being depends on the vigour of the members that compose it ; and universal experience has fully proved, that the frame of a husbandman or a hero is not to be moulded or cherished in the womb of debility, and that the bold eagle will never be brought forth by the timid dove.

I cannot conclude these hints without adding a few words on the choice of a husband. Having endeavoured to prove that health is so indispensable a requisite in females before marriage, they may well suppose that I deem it no less necessary in the other sex. I am always sorry to see that precious blessing sacrificed in an alliance with infirmity, or youth and beauty consigned to the frozen arms of age. Misery must be the inevitable consequence of such unnatural matches. But I fear that my remonstrances will have little effect in restraining the undue exercise of parental authority, or in attempting to open the eyes of a woman to her certain destruction, when she suffers herself to be dazzled by the splendour of riches, or charmed by the sound of an empty title.

CHAPTER II.

RULES OF CONDUCT DURING PREGNANCY.

AFTER what I have already said on the subject of health, I hope I need not make use of any new arguments to convince women of its increased importance the moment they conceive,—a moment from which they may begin to date the real perfection of their being.—Nature has now entered upon her grandest work, and nothing is wanting but the mother's care to complete it. The exertions of this care are not left to whim, to caprice, or even to the strong impulses of parental love. The self-preservation of the mother is made dependant on the proper discharge of her duty, her own health, her strength, her very life are closely entwined with the well being of the embryo in her womb ; nor can she be guilty of the least neglect, without equal danger and injury to both.

I am sorry to think that any awful warning should be necessary to check the commission of so wicked an outrage upon nature, as an attempt to procure abortion. This can never be effected without either the probable death of the mother, or the certain ruin of her constitution : the stimulants which are used to force the womb prematurely to discharge its sacred deposit, must inflame the parts so as to cause a mortification ; or will convulse and enfeeble the whole system in such a manner as to leave no chance of future health or enjoyment to the destroyer of her own child.

In the ancient history of the Jews, we read of two harlots warmly contending for a living child. How different is the case with our women of that description !—Their wish, if they conceive, is to prevent

or to destroy the life of the embryo, even at the risk of their own. Is a monster of this sort to be pitied, when, in the execution of her shocking purposes, she brings on those deadly symptoms which must soon close her guilty career?

The unnatural mother, however, is not always the only monster concerned in those scenes of horror; her base seducer is too often the adviser of the desperate resolution, and crowns his guilty joys with double murder. Another ruffian, some male or female practitioner in midwifery, is also engaged in the hellish plot, and lends a hand to perpetrate the foul deed, alike regardless of the mother's danger, and deaf to the cries of infant blood! I never read, without shuddering, any advertisement of temporary retreats or pretended accommodations for pregnant ladies. I always view it as a wicked allurements to unfortunate women, and as a daring hint from some ready assassin of innocence. It is not long since one of those wretches was convicted of killing both mother and child; and I have myself seen a great number of embryos exhibited by a man, who, I firmly believe, obtained them in this way.

The dread of public shame or of private scorn, though no excuse for murder, may urge the victim of seduction to commit a crime at once so abominable and so dangerous. But is it possible that a married woman should madly and wickedly attempt to procure abortion, merely from an apprehension of a large family, or to avoid the trouble of bearing and bringing up children? Can she hope to taste the joys, and yet destroy the fruits of love? What a frantic idea!—The same poison puts an end to both. And in vain does she flatter herself that her guilt is concealed, or that no law exists to punish it. The laws of nature are never violated with impunity; and in the cases alluded to, the criminal is made at once to feel the horrors of late remorse, and the keenest pangs of a torn, disordered, and incurable frame.

But suppose that a miscarriage brought about by such detestable means did not endanger the health and life of the mother, suppose that an act held in such just abhorrence, both by earth and heaven, could possibly escape punishment: suppose a woman, deaf to the cries of nature, incapable of tender emotions, and fearless of any immediate suffering in her own person,—I have one argument more to make her stop her murderous hand: perhaps the embryo, which she is now going to destroy, would, if cherished in her womb, and afterwards reared with due attention, prove the sweetest comfort of her future years, and repay all her maternal care with boundless gratitude. It may be a daughter to nurse her in her old age, or a son to swell her heart with joy at his honourable and successful career in life. I only wish her to pause for a moment, and to consider, that by the wilful extinction of the babe in her womb, all her fairest hopes are extinguished also, and that the present danger is aggravated by the certainty of future despair.

A wish to prevent even one act of so much horror has induced me to dwell on this unpleasant part of my subject. But folly, ignorance, and carelessness, are often productive of as fatal effects as a criminal design; and though I may not be able to restrain the latter, yet I hope the former may be corrected by better information. With this view, I shall make some farther remarks on the great preservatives of health mentioned in the preceding chapter. The general rules

there laid down hold good in every condition of life; but a state of pregnancy requires a greater degree of care and judgment in their practical application.

Cheerfulness, or good humour, which before was placed last in the order of discussion, must now take the lead, being superior to all other considerations during pregnancy. In this state, more than in any other, the changes of bodily health seem to be almost wholly under the influence of the mind; and the mother appears well or ill, according as she gives way to pleasant or to fretful emotions. I admire that fragment of ancient history, in which we are informed, that the eastern sages, while their wives were pregnant, took care to keep them constantly tranquil and cheerful, by sweet and innocent amusements, to the end, that, from the mother's womb, the fruit might receive no impressions but what were pleasing, mild, and agreeable to order. So fine a lesson of wisdom, and of parental, as well as conjugal love and duty, cannot be too closely studied, or too diligently carried into practice, by the husband who sets any value on his wife's health,—who wishes to secure her affection and gratitude—and who pants for the exquisite happiness of being the father of a lively, well-formed, and vigorous child.

It is during pregnancy also that every woman should be doubly attentive to preserve the utmost sweetness and serenity of temper, to dispel the glooms of fear or melancholy, to calm the rising gusts of anger, and to keep every other unruly passion or desire under the steady controul of mildness and reason. The joy of becoming a mother, and the anticipated pleasure of presenting a fond husband with the dearest pledge of mutual love, ought naturally to increase her cheerfulness, and would certainly produce that effect, were not those emotions too often checked by a false alarm at the fancied danger of her situation. It is therefore of the utmost importance to convince her, that her terrors are groundless; that pregnancy is not a state of infirmity or danger, but affords the strongest presumption of health and security; that the few instances she may know of miscarriage or of death, were owing to the improper conduct of the women themselves, besides being too inconsiderable to be compared with the countless millions of persons in the like condition, who enjoy both then and afterwards a greater degree of health than they ever before experienced; and, lastly, that the changes which she feels in herself, and her quick perceptions of uneasiness, are not symptoms of weakness, but the consequences of an increased sensibility of her womb, and timely warnings of the effects of indiscretion or intemperance.

A late writer on this subject very justly observes, that, when such an increase of sensibility takes place in a woman of a very irritable frame and temper, it must certainly aggravate her former complaints and weaknesses, and produce a variety of feverish effects. She grows more impatient and fretful: her fears as well as her angry passions are more readily excited: the body necessarily suffers with the mind, debility, emaciation, and many hectic symptoms, follow. But the only rational inference to be drawn from these facts is, that the feelings are more acute in a state of pregnancy: and that any previous indisposition, either of body or mind, now requires a more than ordinary degree of care and tenderness.

Though the chilling influence of fear, and the depressions of melan-

choly, are very injurious to the mother's health and to the growth of the *fœtus* in her womb; yet anger is a still more formidable enemy. It convulses the whole system, and forces the blood into the face and head with a great impetuosity. The danger is increased by the usual fullness of the habit in pregnancy. When the blood runs high and rapid, a vessel may burst, and in such a part as to terminate, or bring into great peril, the existence of both the mother and the child. Cases often occur of the bursting of a blood-vessel in the brain, occasioned by a violent gust of passion. How much more likely is it to rupture those tender vessels that connect the mother and the child! Yet to the latter this is certain death. I knew a female who had the *aorta*, or great artery, so distended that it forced its way through the breast bone, and rose externally to the size of a quart bottle. This extraordinary distention was chiefly owing to the violence of her temper. I have also met with a most shocking instance of a fighting woman, who, in the paroxysm of rage and revenge, brought forth a child, with all its bowels hanging out of its little body. There is no doubt but that passionate women are most subject to abortions, which are oftener owing to outward violence or internal tumult, than to any other cause. An accident of this sort is the more alarming, as the woman who once miscarries, has the greatest reason ever after to dread the repetition of the same misfortune.

Cards or any kind of gaming, at all times, the worst of amusements, should be particularly avoided during pregnancy. The temper is then more liable to be ruffled by the changes of luck, and the mind to be fatigued by constant exertions of the judgment and memory. Old maids, as I before observed, are the only class of females who may be allowed to spend some of their tedious hours in such absurd and such unhealthy pastimes.

Without entering into farther details, it will be easy for the sensible mother, to apply the principle here laid down, to every passion and propensity which may tend to excite painful emotions of the mind, and to impair in the same degree the health of the body. She must learn to keep even natural desires within due bounds, lest pleasure itself, if immoderately indulged, may produce the same effect as pain. Among many excellent hints to pregnant ladies contained in a latin poem translated by *Dr. Tytler*, we meet with the following just admonition:

Subdue desires; nor let your troubled mind,
Immod'rate love, or fear, or sadness find:
Give not yourselves ev'n to the nuptial joy,
Or aught that may your strength or peace destroy.

And again,

—————Curb each loose desire,
Lest added fuel quench the former fire:
Lest ye should loose the fruits of pleasure gone,
And love itself undo what love had done.

The enjoyments of the table must also be kept under the nice controul of moderation, in a state of pregnancy. Any excess, or any deficiency of proper supplies, will now be most severely felt. The well being of both the mother and child will depend on her pursuing a happy medium between painful restraint or unnecessary self-denial, on

the one hand, and the indulgence of a depraved or intemperate appetite on the other. But, as the natural desire of aliment increases with the growth and increasing wants of the child, it will be proper to consider those variations as they appear in the different stages of pregnancy: and to shew how far it may be also adviseable to gratify the involuntary, and often very wild and whimsical desires, which are known by the name of *longings*.

Before I enter into particular details concerning the diet of pregnant ladies, I must beg leave to urge with increased earnestness my former general prohibition against strong liquors, unripe fruits, pastry, and all sorts of food that are high-seasoned, inflammatory, or hard of digestion. If these are improper before marriage, they must be doubly pernicious afterwards, when they may not only injure the mother's health, but poison, infect, or impoverish the fountain of life and nutriment, whence her child is to derive support. Every female, therefore, will see the importance of guarding against bad habits, or the indulgence of a vitiated taste at an early period; that she may not have any painful restraints to subject herself to when a mother, or be then under the necessity of making any great change from her former mode of living.

I have already laid it down as a fixed principle, that a state of pregnancy is not a state of infirmity or disease, but of increased sensibility; and that the changes which a woman then feels in herself, though sometimes accompanied with a little pain or uneasiness, are but notices of her situation, or warnings against indiscretion or intemperance. Let us now apply this principle to the regulations of diet, and we shall find it to be the most unerring guide to pregnant women in all their conduct, but more especially in the choice and quantity of their food and drink.

The whole term of pregnancy may be divided into two nearly equal parts, the one comprehending the four months that immediately follow conception, and the other, the remaining five months that precede delivery. During the first period, when there is in most women a strong tendency to an extreme fulness of the habit, nature gives the plainest cautions against improper indulgence, by a weakness of the stomach, frequent returns of nausea and vomiting; head-achs, costiveness; and the other symptoms and effects of indigestion. It is a very absurd and a very fatal mistake, to suppose that women are then in greater need of nourishing things; when, on the contrary, in consequence of the ceasing of the *menses*, and the redundancy of blood in the system, the strictest temperance is not only proper, but absolutely necessary to prevent illness. When this is neglected,—when no regard is paid to the hints of the state of the stomach and of the whole habit, so kindly given by nature,—bleeding becomes the only expedient to save the life of the thoughtless or obstinate glutton; but she should remember, that it is her own intemperance which renders that operation adviseable.

The alleged or fancied wants of the child may be urged as a plea for some little excess, or an incitement to more than ordinary gratification; but the frivolity of such an excuse will appear, upon considering, that the *fœtus*, for the first two months, does not exceed a hen's egg in size, and that its growth for the next two months, even to the ascent of the womb, or the usual time of *quickening*, is so small as to require very little nourishment. This is amply supplied from the natural fulness of

the system before noticed, without the dangerous aid of the mother's intemperance. It requires but a moments reflection on the part of any women of common sense, to be convinced that what disorders herself must injure the contents of her womb; and that the injury is the greater, in proportion to the delicacy and slow expansion of those contents. To overstep the bounds of temperance in the early stage of pregnancy, from an idea of the embryo's wanting such supplies, would be almost as frantic as to drown an infant for the purpose of quenching its supposed thirst, or to gorge it even to bursting, in order to satisfy the cravings of imaginary hunger.

But the absurd notion of the embryo's wants has been attended with incalculable mischief of another kind;—it has given a sanction to the most whimsical and the most pernicious desires. Green-sick girls do not indulge in such silly and such hurtful fancies as many pregnant women: yet the propensities of the former are checked by the force of ridicule, of argument, or of authority, while the *longings* of the latter bid defiance to all control; and it is even deemed the height of cruelty not to gratify them in their wildest extent. To the candid discussion of this very interesting part of my subject, I hope I need not request the serious attention of every female reader.

One of the natural consequences of conception is the ceasing of the *menses*, which is accompanied with a redundancy of blood greater or less in proportion to the previous fulness of the habit. Such a swell in the vital stream gives rise to feverish appearances; such as heat in the palms of the hands, flushings in the face, and a slight head-ach. But the stomach is most affected by the changes which then take place in the womb and the whole habit. It is often disturbed by the complaints already described,—nausea, vomiting, heart-burn, and the like. These, as I said before, are not symptoms of indisposition or disease, the most healthy woman being as subject to them in the early months of pregnancy, as those who are delicate and infirm. It is thus that every mother receives timely notice of her situation, with proper warnings not to overcharge her stomach, when its powers of digestion are so weak, and a fulness of the habit is so manifest.

Unhappily all pregnant women are not alike disposed to attend to those kind intimations of nature: and, perhaps, many of them do not know, that the uneasiness arising from the above causes would be removed by perseverance in a temperate cooling diet. They think they ought to eat more, instead of less, in their new state, and torture their invention to find out something to conquer the squeamishness of their appetite. This is a very fruitful source of whims and fancies, the indulgence of which is almost always injurious. It cannot indeed be otherwise; as the weakness or diminution of any woman's usual appetite, on such occasions, is not owing to a mere dislike of common or ordinary food, but to a real unfitness of the stomach to receive much of any food. What then are we to expect, when things equally improper, perhaps, both in quantity and quality, are forced upon it, to satisfy some artificial craving, or some imaginary want?

As soon as a woman begins to consult her caprice, instead of attending to nature, she is sure to be encouraged in absurdity by old nurses, or female gossips, who take a delight in amusing her credulity by the relation of many wonderful and alarming injuries, said to

have been done to children, through the unsatisfied desires of their mothers. Every fairy tale, however repugnant to common sense, gains implicit belief; for reason dares not intrude into the regions of fancy: and were a man bold enough to laugh at such fictions, or to remonstrate with a pregnant woman on the danger of giving way to any of her extravagant wishes, he would certainly be considered as a conceited fool, or an unfeeling monster. Argument is lost, and ridicule has no force, where people pretend to produce a host of facts in support of their opinion. Every woman, who brings into the world a marked child, can immediately assign the cause; yet no mother was ever able, before the birth, to say with what her child would be marked; and I believe it would be equally difficult afterwards, without the aid of fancy, to discover in a flesh-mark any resemblance to the object whence the impression had been supposed to originate.

On examining various instances of flesh-marks, and other dreadful events, said to be caused by disappointed *longings*, it has appeared that most of them were the effects of obstructions, of pressure, or some external injury; and that none could be fairly traced to the influence of imagination. Similar accidents are observable in the brute species; and even in plants unconscious of their propagation or existence. It is also well known, that several children are born with marks on their skin, though their mothers never experienced any *longings*; and that, in other cases, where women had been refused the indulgence of their *longings*, no effect was perceptible in the child, though the mother's imagination had continued to dwell on the subject for a considerable time.

The doctrine of imagination, like every thing founded in absurdity, confutes itself by being carried too far. The same power of marking or disfiguring the child is ascribed to the sudden terrors and the ungratified cravings of pregnant women. The abettors of this doctrine are not even content with a few specks or blemishes on the skin, but maintain that the mother's imagination may take off a leg or an arm, or even fracture every bone in the child's body. I have seen a child born without a head; but it was not alleged that the mother had been present at the beheading of any person, or had ever been frightened by the spectacle of a human body deprived of its head. If shocking sights of this kind could have produced such effects how many headless babes had been born in France during *Robespierre's* reign of terror!

In order to shew that the fancy, however agitated or strongly impressed with the dread of any particular object, cannot stamp its resemblance, or even the smallest feature of it on the child in the womb, *Dr. Moore* relates the following story of a remarkable occurrence within the sphere of his own knowledge:—

A lady, who had great aversion to monkies, happened unfortunately, during the course of her pregnancy, to visit in a family where one of those animals was the chief favourite. On being shewed into a room, she seated herself on a chair, which stood before a table upon which the favourite was already placed: he not naturally of a reserved disposition, and rendered more petulant and wanton by long indulgence, suddenly jumped on the lady's shoulders. She screamed, and was terrified; but on perceiving who had treated her with such indecent familiarity, she actually fainted; and through the remaining course of her pregnancy, she had the most painful conviction that her child would be deformed by

some shocking feature, or perhaps the whole countenance of this odious monkey.

“The pangs of labour did not overcome this impression, for in the midst of her pains she often lamented the fate of her unfortunate child, who was doomed through life to carry about a human soul in the body of an ape. When the child was born, she called to the midwife with a lamentable voice for a sight of her unfortunate offspring, and was equally pleased and surprised when she received a fine boy into her arms. After having enjoyed for a few minutes all the rapture of this change to ease and happiness from pain and misery, her pains returned, and the midwife informed her that there was still another child. ‘Another!’ exclaimed she, ‘then it is as I have dreaded, and this *must* be the monkey after all.’ She was however, once more happily undeceived, the second was as fine a boy as the first. I knew them both:—they grew to be stout comely youths, without a trace of the monkey in either their faces or dispositions.”

Having before enlarged on the dangerous effects of the passions, and of fear in particular during pregnancy, it cannot be supposed that I look upon frightful objects, scenes of horror, or any other causes of a sudden shock, as matters of indifference. On the contrary, I would have them very carefully avoided as they have often caused abortion, or otherwise injured the health both of the mother and child,* though they cannot discolour the skin, derange the limbs, or alter the shape of the latter. It is from this silly apprehension, in consequence of any fright, that I wish to relieve the minds of credulous and timid poor women, who may do themselves a real injury by the dread of an imaginary evil.

It was precisely with the same view that I endeavoured to expose the absurdity of believing that flesh-marks on a child were the consequences of his mother’s *fancies* or unsatisfied *longings*. This silly doctrine has been the cause of great uneasiness in many families, and has done much mischief to several pregnant women, sometimes by giving a sanction to the indulgence of their most improper whims, and at other times by making them pine for extravagant unattainable gratifications.

It is another great mistake to suppose, that the prevalence of such a belief can answer any one good purpose. Surely the fictions of ignorance, superstition, or imposture, are not necessary to secure to women in a state of pregnancy those kind compliances, and that tenderness of treatment, which their situation requires. The fond husband will embrace with eagerness every opportunity of supplying the real wants of the wife now doubly dear to him, and even of anticipating her silent wish for any rational enjoyment. But she should also know, that the tyranny of caprice will prove no less injurious to herself than disagreeable to others.

Let not pregnant ladies imagine that I am for confining the sphere of indulgence within very narrow limits. I should be more inclined to enlarge than to contract its boundaries, as far as nature and rea-

* I knew an instance of a mother, who not only lost the *fetus* through a fright, but was otherwise so much affected as never to enjoy an hour’s health. I cannot therefore too strongly censure the frantic impulse which so often urges pregnant women, and nurses with infants at the breast, to rush among crowds at a dreadful fire, an execution, or any other shocking spectacle.

son would allow. I would not even be particularly strict, except in cases of evident danger. While I discouraged capricious desires, or improper whims and fancies, I would distinguish them from *real* and *involuntary longings*, which are sometimes occasioned by that weakness and disorder of the stomach so usual, as I before observed, for three or four months after conception. There can be no doubt as to the cause of such longings; for a similar effect is known to take place at other times, and not only in women, but in men, when their stomachs are weakened or disordered by intemperance, illness, or any accident. I have often met with cases of this kind in fevers, epilepsies, and other nervous diseases; and where the craving often recurred, or steadily continued, I have always directed that it should be indulged, though the object of desire might not appear consistent with the regimen commonly prescribed in those complaints. When the longings are involuntary, and the feelings acute, a patient may suffer much from disappointment or delay; and cases frequently occur of persons who recovered from the most hopeless state, after having disobeyed the doctor's commands, and been freely indulged in what they had so ardently desired. I do not say that the cure was absolutely effected by the use of the forbidden food or drink; but I am convinced from repeated observations that the strong and sudden appetite for such food or drink, however strange it might seem, was a symptom of a favourable change in the complaint, and a sure indication of returning health.

On the same principle, therefore, that rigid prohibitions or denials might be attended with much pain in a state of pregnancy, a state of exquisite sensibility, I strongly recommend a speedy compliance not only with what may be deemed the natural and reasonable desires of the mother, but even with *all her involuntary longings*, which do not evidently arise from caprice, and are not directed to things of a noxious quality. I would pay little regard, for instance, to the whim of such a lady as is represented by *Smollet*, longing for a hair from her husband's beard, and what was worse, wanting to have the pleasure of plucking it out herself; or to the more disgusting wish of another lady, described by *Addison*, who longed to partake with a flock of carrion-crows, which she saw feasting on the flesh of a dead horse.

It would be also carrying my plan of compliance too far to let a pregnant woman live chiefly on unripe fruits, raw onions, or any other acid and acrimonious substances; which could not fail to injure her own health and that of her child. An opinion prevails that a woman in such a state can digest every thing she likes or longs for; but supposing this to be true, it does not follow that living on trash, or on improper articles of food or drink, will not be detrimental to the *fetus* in her womb. Slight or momentary deviations from the rules of wholesome diet or strict temperance may be occasionally allowed, but perverse habits are never to be indulged.

I hope therefore it will not be deemed *needlessly severe* to recommend, in the early period of pregnancy, a becoming check on absurd or pernicious desires, and a moderate use of such things as have been always found to agree with the stomach and constitution. I do not insist upon a total change from former modes of living; but unless the appetite be very much vitiated, it will direct women at that time to what is most proper and salutary. They have generally a dislike to animal food; and, if in-

duced to eat it freely, from a mistaken notion of their being then in greater need of such aliment, they are sure to suffer some inconvenience. On the contrary, their natural relish for ripe fruits and boiled vegetables may be safely gratified. Milk, jellies, veal-broths, and the like liquids, which afford easy nourishment, being converted into chyle without any great effort of the stomach, are also very allowable. Should a particular desire for solid animal substances be felt at dinner, fresh meat of the young and tender kind, veal, lamb, capons, pigeons, pheasants, and partridges, may now and then afford an innocent and grateful variety. But I must again beg, that temperance may always preside at the table; and that the refinements of cookery may never be exerted to raise a false appetite by artificial provocatives.

While I am thus tracing the boundaries of rational indulgence, which should not be overstepped by those who have it in their power to command every gratification, I see also the necessity of some admonitions to women whose narrow circumstances may appear to require no additional restraint. It has been very truly observed, that, in the lowest classes of society, especially in great cities, we often meet with a sort of luxury more baneful than any which prevails in high life,—a luxury that consists in the immoderate use of strong liquors; to which the miscarriages, the fevers, and the death of so many poor married women in London and other populous towns must be ascribed. There is nothing, in fact, so pernicious to the mother, and to the *fœtus* in her womb, as drinking ardent spirits, especially when carried to excess. It is administering poison to the embryo, and is certainly a species of murder.

The taste of such persons is not more depraved with regard to their drink than their food. The latter perverseness is indeed very frequently the consequence of the former. Spirituous liquors destroy the natural appetite, and leave no relish but for bacon, or other salted and smoke-dried meats, salt fish, or red herrings, than which nothing can be much more stimulating, inflammatory, and indigestible. But suppose that their fondness for this worst of aliment is not always the effect of swallowing *liquid fire*, but of habit; and that the stomach, strengthened by the hardy employments of some of those poor women, may be able to digest any thing; why should its powers be exerted in such unproductive efforts? A greater quantity of food is certainly requisite, in proportion to the greater quantity of labour; but let that food be of the most wholesome kind. Plenty of vegetables with the addition of a little fresh meat, will satisfy every natural craving, and will afford both the mother and child the purest supplies of health and vigour.

After the fourth month of pregnancy, the growth of the *fœtus* becomes very rapid, and the demands for nourishment, made by a thriving child on the constitution of its mother, are proportionably strong and incessant. Nature now, with wonderful care, invigorates the organs of digestion to answer those increasing demands. The stomach is no longer so apt to be disordered as before; its functions are performed with ease and effect; and a more liberal mode of living is not only allowable, but necessary. All the restraint which should be imposed is a little attention to the quality of the food. Provided it be cooling and nutritious, it may be used freely, and as often as the appetite requires. I need not repeat what I have already said in favour of ripe fruits, boiled vegetables, milk, jellies, veal-broth, and animal substances of the young and

tender kind. The bill of fare may be enlarged rather than contracted at this time; and variety may be allowed to present her sweetest stores to the taste and fancy, but without the aid of any pernicious seasoning.

I have just hinted at the propriety of indulging the appetite *as often* as the desire of food is strongly felt. It is even advisable to prevent importunate cravings. Emptiness is more to be dreaded in the advanced stages of pregnancy than a little excess. Instead, therefore, of continuing my former prohibition against suppers, I would now recommend agreeable repasts, consisting of biscuits, fruit, oysters, eggs not boiled hard, or any other light food and easy of digestion.—But meat suppers must never follow a late or hearty dinner: an unseasonable load would oppress the stomach: moderate supplies, on the contrary, are necessary to satisfy the child's strenuous demands for sustenance, which do not cease even by night. These, if neglected, will cause uneasy sensations in bed, and often prevent sleep. It is justly remarked by *Dr. Denman*, when speaking of this restlessness, which is generally troublesome towards the conclusion of pregnancy, that those women who suffer most from it, though reduced in appearance, bring forth lusty children, and have easy labours. But if the mother has little uneasiness, and grows corpulent during pregnancy, the child is generally small; and if the child should die before the time of parturition, the inquietude entirely ceases. In the first case, as this judicious writer observes, the absorbing powers of the child seem too strong for the parent; but, in the latter, the retaining powers of the parent are stronger than the absorbing ones of the child; so that, on the whole, it appears natural that women should become thinner when they are pregnant.

One direction more is necessary with regard to suppers. They should never be later than nine o'clock; after which an hour may be spent in cheerful conversation, as the best means of preparing for the enjoyment of sound repose. I hope that the custom of going to bed early, and of rising early, which is one of the best preservatives of health at all times, will be particularly adhered to during pregnancy. Women in this condition should not, upon any account, be tempted to sit up after ten, and they will find no difficulty in rising at six, though, towards the conclusion of their term, they may safely remain an hour longer in bed every morning.

In my former hints to women before marriage, I pointed out the peculiar importance of open air and frequent exercise to females, who, in general, spend too much of their time in domestic and sedentary employments. I recommended a variety of active diversions both without doors and within, according to the state of the weather. I would have young ladies dance and jump about as much as they please, and as nature wisely prompts. But, when they become wives and mothers, their deportment must be different, or they will risk the loss of the embryo in their womb,—a loss always attended with irreparable injury to their own health. Miscarriages are often occasioned by great bodily exertions, though in the form of amusement, as well as by the straining efforts of hard labour. It was not without the justest reason that *Hippocrates* forbade dancing and all violent exercise during pregnancy: he himself had been witness to a foetus being dropt on the stage by a performer in the dancing line.—Let not pregnant women then attempt to vie with other females in the lively dance: the former should even avoid all crowded

assemblies, whether gay or serious; for besides the impurity of the air in such places, of the bad effects of which they are very susceptible, they are exposed to great danger from any accidental pressure. I have known a lady to suffer abortion in consequence of an elbow at entering a church door. How much more likely is this to happen at balls, at play-houses, and other places of amusement, which are commonly more frequented than places of worship!

When I say that violent exertions and hard labour are apt to occasion miscarriages, I do not mean to recommend indolence and inactivity to pregnant women. This would be running into the opposite extreme, which is still more dangerous than the other. Indolence in pregnancy is not only one of the great causes of abortion, but of the puerperal or child-bed fever, so fatal to delicate mothers. A woman who lives fully, and neglects exercise, cannot fail to bring on a plethora, or a fulness of the habit and redundancy of humours, which must be productive of very bad effects. The whole frame becomes languid: all the vital organs seem to lose their energy: the powers of the womb in particular, are weakened or perverted; and though a miscarriage should not take place, the labours are sure to be long, severe, and dangerous; and the offspring puny and deformed. In order, therefore, to secure the blessings of a happy delivery, and a healthy child, a pregnant woman ought to take every day a moderate degree of exercise, such as she has been most accustomed to, only using less exertion, and guarding against fatigue.

Some writers on midwifery have asserted, that in the early months of pregnancy, the exercise should be very moderate, but might be safely increased in the latter months. The absurdity of such a notion has been very ably exposed by the fairest reasoning, and the incontrovertible evidence of facts.

The example of the brute species has first been referred to, as, in every thing that respects the preservation of life, their instinct is more unerring than the fanciful speculations of man. It is observable of the quadrupeds in our fields and parks, that the most frisky of them, when pregnant, assume a grave and steady deportment: their natural fondness for going together in herds and flocks is suspended; and, if left to their own inclinations, they gradually lessen their usual exercise as they advance in pregnancy.

The same thing is well known to be equally true of wild animals. In a state of pregnancy, they take no more exercise than is necessary to procure their food. If forced to greater exertions in self defence, or when hard pursued, they often drop their young; and though beasts of prey have no claim to pity, yet surely the harmless and timid hare ought not in that state to be worried, merely to gratify a cruel or inconsiderate sportsman's fondness for the chase. It is still more inexcusable to overload, or to strain by ill-timed labour, a mare in foal, which has frequently caused a premature expulsion of her young.

From these remarks on the instinctive conduct of brutes, a very wise lesson has been drawn for the guidance of pregnant women.—They are not, for some time after conception, more sensible of fatigue than at any other period, nor have they any certain proofs of their own condition. What then, it has been reasonably asked, should direct them to make any change in their customary exercises?

These may be continued, but never to a violent or immoderate degree, for at least four months, not only with safety, but with the utmost benefit. When the contents of the womb begin to increase very perceptibly, the same degree of exercise, which pregnant women before enjoyed with pleasure, will now make them faint and weary; a strong hint to diminish it. Their own feelings will direct them better than the caprice of others; and no subtlety of argument should induce them to believe, that nature in this case alone deviates from her uniform course of action, and requires them to exert themselves more in proportion as they are less capable of it; or, in plainer words, to run the faster the greater weight they carry. Slow, short walks in the country, or gentle motion in an open carriage, must be far better suited to the advanced period of pregnancy, by uniting the advantages of fresh air with those of agreeable and salutary exercise.

In order to leave no doubt upon this subject, an appeal has been made to facts, and particularly to the experience of women who follow very hard occupations in the country. They feel no inconvenience from the usual employments in the early months of pregnancy, and require no indulgence, but a little abatement of their toil when they become unwieldy. They know nothing of artificial precepts which would teach them to invert the order of nature. Temperance and moderate exercise, proper periods of labour and of rest, the country air, and the cheering influence of a contented mind, insure to them the continuance of health in every stage, an exemption from the common diseases of pregnancy, an easy lying-in, and a speedy recovery from child-bed. The vigour also of their offspring is justly proverbial.

It would be painful to contrast with this picture the enervating effects of indolence and luxury in high life, or the truly pitiable condition of poor married women in manufacturing towns, and in great cities. The confined impure air which they breathe in these places, relaxes the frame and destroys its activity. What they eat, what they drink, is often improper, sometimes pernicious. Their meals and their hours of rest are equally irregular. The victims of poverty are seldom able to procure the means of scanty subsistence, without the sacrifice of necessary sleep. Their condition is really more distressing than that of female slaves in the West Indies. These experience a little mercy when pregnant, their owners being actuated by the double impulses of self-interest, and of humanity towards breeding women: but, in London, the wretched hireling experiences no lenity on account of her pregnancy; she is even obliged to conceal her situation as much as she can, in order to get employment: and has often no alternative but to perish with famine, or to run the risk of miscarrying by continued exertions at the washing-tub, or at some other toilsome work, for sixteen or eighteen hours, according to the caprice of the sordid views of her unfeeling employer. To impose such tasks on the hungry and distressed,—to cause abortion by oppressive labour,—under what pretence the inhuman mistress may strive to justify her own conduct,—is certainly *murder!*

Though my former remarks on dress may be easily applied to a state of pregnancy, yet this is a matter of so much concern to mothers and to their children, that I hope my female readers will pardon me for troubling them with some farther observations on the subject. Before marriage, errors in dress can only injure their own health, or

disfigure their persons; but, after conception, the form, the health, and the very existence of the child, will greatly depend upon the mother's dress. Indeed, were I to assign a cause not only for the diminutiveness, debility, and distortion of infants, but for those *flesh-marks* which are superstitiously ascribed to *disappointed longings*, I should be much more inclined to impute these evils to pressure upon the womb, than to the alleged influence of the mother's fancy. The gradual ascent of the womb, after the fourth month, is wisely designed by nature, to acquire more space for easy growth and expansion. But her benignant purposes are defeated, if the body be girded by tight bandages, or squeezed within the narrow circle of a whale-bone press.

I need not stop to explain a thing in itself so obvious, as the operation of such fatal checks on the increasing size of the *fetus*; but how they should be productive of flesh marks and deformity may require some little illustration. It is well known that young trees and plants, and, in a word, vegetables of every kind, when confined in their growth, get distorted, or take on a bad shape; and that the tender bark as well as the fruit will be marked, if they suffer the least compression or restraint. Why should not compression have similar effects on the *fetus* in the womb, where it is almost in the state of jelly? The great wonder is, that it should ever escape bearing the marks of a tight-laced mother's indiscretion.

The doctrine here laid down does not rest solely even upon the fairest reasoning by analogy, but is supported by facts. Nations that go almost naked are strangers to flesh-marks and deformities, except what may arise from accidental injury, or external violence. But in proportion as men remove from a state of nature, and false refinement introduces, as personal ornaments, tight and oppressive incumbrances of dress, we see a pigmy or deformed race crawl about, to publish their mother's folly, and to reproach them with having thwarted or cramped nature in her operations.

In my "Domestic Medicine," as well as in a former part of the present work, I felt great pleasure in paying a just compliment to the taste and good sense of the ladies, so admirably displayed in the present fashions of dress. The high-heeled shoes, in which they used to totter about as upon stilts, and the tight-laced stays, which gave them the appearance of insects cut almost asunder in the middle, are happily exploded; the poet's fiction is realized,—the philosopher's wish is gratified, in seeing Beauty arrayed by the Graces; and health, ease, and elegance, alike consulted in the dresses of our fair country-women.

But as fashion is very changeable;—as there is nothing however ridiculous or hurtful, to which it cannot give a sanction;—and as the return to old absurdities and old prejudices may be dreaded unless the propriety and importance of the present reform are strongly impressed upon the mind, I shall endeavour to heighten these by a view of the dreadful evils which arose from the former system of tight bandages, and of stiff and cumbrous clothing.

It is not many years since the sugar loaf shape was universally admired, and the small waist, though contrary to nature, was looked upon as the distinguishing mark of elegance. Husbands used often to make it their boast, that, when they married their wives, they could span them round the middle. It was then thought that nothing

could produce a fine shape but tight lacing, though it never failed to have the contrary effect. Not only deformity without measure, but death itself was often the consequence. Ladies were known to drop down lifeless in the dance, when no other cause could be assigned but the tightness of the dress. Miscarriages were frequently occasioned by the same cause; and various other injuries to the *fetus* must have far exceeded all power of calculation.

Yet, during the prevalence of so strange an infatuation, while deformity was deemed beauty, all remonstrances on the subject would have proved unavailing. It would then have been useless to employ such arguments as now carry conviction to the unprejudiced mind. We may at present observe, with the hope of being listened to, that nature when left to herself, gives every animal, except those that are formed for swiftness, a promincy about the middle. If this is not only compressed, but the belly squeezed close to the back-bone, obstructions of the viscera must ensue: and no great knowledge of the human frame is necessary to satisfy any person, that such obstructions must prove fatal to health. When the vessels that take up and convey the nourishment to the body, have their functions by any means impeded, the whole system must suffer, and at length perish by a gradual decay. But nothing can so effectually impede the functions of those soft parts as pressure. The stomach becomes incapable of performing the grand office of digestion: the midriff is forced upwards: the cavity of the chest is thereby lessened, and sufficient room is not left for a proper play of the lungs. A difficulty of breathing, coughs, and pulmonary consumptions are the natural consequences.

All those dangers occasioned by tightness round the waist, are obviously increased during pregnancy, when the heart, the lungs, the stomach, and all the adjoining parts are in a state of tender sympathy with the womb; and when the growth of the *fetus* necessarily requires more room as before observed, for easy expansion. To confine it at that period must evitably produce weakness, deformity, or abortion. "Remember," says the ingenious author of *Pædotrophia*.

——Remember not to gird too tight
Your swelling waist, though pleasing to the sight;
Nor for a shape, within the straighten'd womb;
Like Gallic mothers, the poor child entomb.—

But young English wives have often been guilty of the same fatal imprudence, not indeed, so much for the sake of "a shape," as from impulses of false modesty, and for fear of appearing either indecent, or too proud of the happy proofs of their fecundity.

I hope, however, that the days of folly and of absurdity in those respects are past; and that the evils, which were then so frequent will operate as a warning against any possible restoration of that most awkward and most pernicious contrivance called *stays*. Let me also very earnestly forbid the use of tight necklaces, tight garters, or any ligatures which may restrain the easy motion of the limbs, or obstruct the free circulation of the blood and juices. I should farther observe, that it is not enough to have discontinued the high-heeled shoe, unless the shape of the foot and toes is a little attended to. Trifling as this circumstance may appear, the neglect of it has often been attended not only with pain, with cramps, and with corns,

but with many still more distressing consequences. Of these I shall have occasion to speak more fully in my observations on the dress of children.

To sum up in a few words the chief part of my advice on this subject to pregnant women, and to the fair sex in general, I need use but a single assertion, that a flowing dress, sustained by the shoulders, and gently compressed by a zone round the middle, with only as much tightness as is necessary to keep the clothes in contact with the body, ever was, and ever will be, the most healthy, comfortable, and truly elegant habit that females can wear, or fancy invent.

The hints concerning cleanliness, which are given in the last chapter, will be found no less useful after marriage than before, with this single exception, that during pregnancy, lukewarm water, is preferable to cold, not only for a total immersion of the body, but also for partially bathing the upper and lower extremities, more especially the latter. I have indeed, known many pregnant women, who always used cold water on these occasions, and who plunged into the sea two or three times a week during the summer months, without injury. Yet I think their example too bold, and too dangerous to be recommended to general imitation.

CHAP. III.

A FEW REMARKS ON CHILD-BIRTH.

THERE is not any part of medical science which has been cultivated with greater assiduity, and finally with greater success, than midwifery. The errors of ignorance, the rashness of presumption, the amusing theories of ingenious fancy, have at length given way to the unerring dictates of reason and experience. By these it has been clearly proved, that, in every healthy and well-formed subject, the powers of nature alone are fully adequate to the accomplishment of her greatest work, the preservation of the human species; and that the busy interference of a man is more likely to disturb and impede than to assist her efforts. Whatever differences of opinion may prevail on other points merely speculative, as well informed practitioners are now agreed in this, that the regular process of a labour must never be hurried on by artificial means, nor interrupted by the meddling hand of indiscretion or officiousness.

It is painful to reflect on the numbers that must have perished, while a contrary method was pursued. People had taken it into their heads, that a woman in labour could not use too much exertion on her own part, nor be too much aided by others, to quicken delivery. In the poem before referred to, this notion is inculcated in the form of medicinal precept, The poor woman is there desired,

“To grasp some strong support with all her pow’r,
“T’ increase her efforts in that painful hour.”

A happy revolution has now, however, taken place in the system of midwifery; and the most eminent professors have made it the first

object of their public duty to reprobate the abominable custom of *giving assistance*, as it was called, by dilating the internal and external parts artificially; and of exciting patients, not only by the strongest persuasions, but by the stimulus of hot cordials, *to help themselves*, as they termed it, and to exert all their voluntary force beyond the dictates of nature; "as if," says *Dr. Denham*, "a labour was a trick to be learned, and not a regular process of the constitution."

Though the writer now quoted, and many others of no less celebrity have omitted nothing of importance in their directions both to midwives and lying-in women, yet as their books, from being deemed works of professional science, are seldom read by the latter, I shall select a few of their most useful remarks, and exhibit them in the plainest form I can, to guard women in labour against the fatal consequences of their own errors, on the improper advice which may be given them by others.

On the first signs of approaching labour, pregnant women are too apt to take alarm, and instantly prepare as for a work of the greatest toil and danger. Their fears are as groundless as their preparation is unnecessary. If they have nothing to injure their health during the previous state of pregnancy, they may rely with perfect confidence on the admirable resources of nature. When left to herself, her efforts are always adapted to the constitution of the patient, and to the state of those delicate and acutely sensible parts, which would suffer the greatest injury from sudden or ill-timed violence. All that is required of women in labour, is a becoming submission to her course of operations. The steps, by which she advances to her great end, are sometimes slow, but always safe; and she is not to be hurried or disturbed, with impunity.

It is true in almost every situation, but particularly in child-birth, that those who are most patient actually suffer the least. If they are resigned to their pains, it is impossible for them to do wrong; but if, from too much eagerness to shorten those pains and to hasten the final effect, a woman should keep in her breath, and strain with all her might to increase, as she may imagine, the instinctive action of the womb, the consequences must always be injurious, and often fatal.

In the first place, such improper efforts of the patient may exhaust her strength, so as to render her incapable of undergoing the necessary fatigue which attends the complete expulsion of the child. On the other hand, if the parts are not duly prepared, violence is more likely to tear than to dilate them; and accidents of this kind have often occasioned a fever, or have rendered a woman miserable for the remainder of her life.

The imprudence of taking hot and cordial nourishment during labour, is no less reprehensible. In plethoric habits, it must have a feverish effect: in any constitution, it is at that time a dangerous stimulant. The nature of the principle, which should actuate the womb, is immediately changed;—the pains are rendered disorderly and imperfect;—and the foundation of future mischief and difficulties, in some form or other, is invariably laid. A labour may be so slow, or of such long duration as to render a little refreshment from time to time necessary; but this should always be of a mild and cooling quality, the very reverse of inflammatory food or spirituous liquors.

I have already intimated, that, all *ordinary* cases, the chief duty of a midwife is to let nature take her regular course without busy in-

terference ; to restrain, rather than encourage the exertions of the patient's strength ; and, when these may be involuntarily carried too far from the impulse of acute pain, to resist them by the application of some equivalent force. But I am very sorry to add, that the contrary method is too often pursued, especially by practitioners in country-places, where the patients are so widely scattered, that dispatch is the first object of consideration, and the dictates of humanity are disregarded from stronger views of interest. The moment an order comes for the man-midwife, he packs up his bag of tools, which may be justly called the instruments of death ; he mounts his horse, and gallops away, resolved to hasten the process by all practicable means, that he may be the sooner ready to attend to another call. At whatever stage of labour he arrives, he spurs on nature with as much eagerness as he had before spurred on his horse, though the closely entwined lives of the mother and her offspring may be endangered by his precipitancy. Yet such, perhaps is the impatience of the poor woman herself, and such very often the ignorance of the bystanders, that the quicker he is in getting through his work, if no obvious injury be done at the moment, the greater reputation he undeservedly acquires, and the more he enlarges the sphere of his murderous practice. Instruments are sometimes necessary, but they should be used as seldom as possible.

One method of preventing the evils which must always arise from the hurry of professional men, would be to pay them more liberally for their patient attendance. They have nothing but the full employment of their time to trust to for the means of support : and it is just that they should have an adequate compensation for so valuable a sacrifice. But as this cannot be generally expected, I would recommend the cheaper encouragement of female midwives, none of whom, however, ought to be permitted to practice, without a regular license, obtained—not by money—but by proofs of real qualifications. Such persons could spare more time, and would be found much fitter assistants to lying-in women than any surgeon, whatever may be his skill or talents. I do not insist on the point of delicacy, but of absolute safety, being persuaded that hundreds of lives are destroyed for one that is preserved by the use of instruments in a labour.

At such times also, it is highly improper to admit any person but the midwife and a discreet nurse into the apartment. To say nothing of the noxiousness of the breath and perspiration of several people in a close room, the officious folly, the silly tattle, the inconsiderate language, the fluctuating hopes and fears of so many gossips, must be productive of the very worst effects. Let me therefore, conjure pregnant women never to comply with the request, however well-meant, of their female friends, to be sent for at the moment of labour ; they are sure to do some harm ; it is impossible they can do any good. The patient will find quietness and composure, of far greater service than the noisy rallying round her of her friends, to awaken and cherish the idea of danger.

After delivery, when repose is the chief restorative of fatigued nature, and when the purity of the air in the patient's chamber is the best preservative from fever, the exclusion of visitants must be still more strongly insisted upon. The whisper of fond congratulation from the man she holds dear, and whom she has made happy, is all that should be allowed even for a moment. With the same view of

quieting any flutter of the spirits, and of preventing the uneasiness which a mother naturally feels from the cries of her child, the operation of washing and dressing the infant should for a few days be performed in an adjoining room.

As the pains of labour, however regular in its progress, and happy in its issue, must produce some irritation of the system, and a tendency to fever, external quietness, and perfect composure of mind as well as of body, are certainly the first objects. But our care should be extended to some other points also. Too much attention cannot be paid to cleanliness: all impurities are to be instantly removed. It is equally necessary to change the linen often, on account of its retaining the perspirable matter, which would soon be thrown back into the habit, and there produce the worst effects. Whenever the weather permits, the upper sashes of the windows are to be let down a little to admit the fresh air; yet so as not to expose the patient to its direct current, for fear of checking the gentle and salutary perspiration, which naturally follows the fatigue of a labour, and is designed to abate any inflammatory or febrile symptoms. It would be no less dangerous to think of increasing or of forcing this natural discharge by large fires, a load of bed-clothes, closely drawn curtains, or the still more pernicious heat of caudle impregnated with spices, wine, or spirits. A fever is almost sure to be the consequence of such ill-judged expedients, in whatever manner they may act. Sometimes they will put a total stop to perspiration, though they set the body on fire, and thus produce the very evil which they were foolishly employed to prevent. At other times they cause so profuse and violent a sweat, as must not only exhaust the strength of the patient, and frequently destroy the power of suckling her child, but prepare the way for the ready attacks of a fever upon the least exposure to cold.

A temperate degree of warmth, therefore, will best promote that disposition both to sleep and to perspire, which every woman feels after labour. The fires should be suited to the season, or rather to the state of the weather, and made barely sufficient to counteract the effects of cold, and of dampness or moisture. The drinks should be mild and diluting; and the bed-clothes should be light and porous, to favour the escape of the perspirable matter, while they afford a comfortable covering. A due regard to this regulation is the more necessary, as the patient must not be in a hurry to quit her bed, even when she may fancy her strength and spirits perfectly recovered. She should be informed, that the womb does not resume its natural state for two or three weeks; and that her lying in bed for that time is most conducive to so desirable a purpose. A sofa is very convenient to recline upon, while her bed is at any time adjusting, or to afford some relief from a long continuance in the same position. But I would by no means advise sitting up in a chair, or removal into another room for the reception of company, till the end of the third week, and then only in case of the most perfect consciousness of health and vigour.

The opposite extreme of too much indulgence is, indeed, more prevalent. It is a lamentable truth, that numbers of women, after having been safely brought to bed, are killed by imaginary kindness. They are smothered, instead of being kept moderately warm. The action of heat from without, is increased within by inflammatory food and drink. Neither of these should be in any case allowed. Women of strong and

full habits have nothing to fear from emptiness or fatigue; but may be said to invite danger and disease by improper gratifications of the palate. They should confine themselves for at least three or four days, to barley-water, gruel, and beef-tea. Very weak and delicate women may be allowed something more nutritious, such as calves-feet jellies, or veal and chicken broths, which are much better suited to the weakness of their stomachs, and will sooner afford the wanted nourishment than solid animal substances.

If the rules of temperance before laid down have been followed during pregnancy, the patient will be easily reconciled to abstemious living for a few days. Indeed the relaxed state of the stomach at this time commonly prevents any natural craving for animal food. But, if a woman has been unhappily accustomed to luxuries, or if soups should disagree with her, she may be indulged in a little fish, a little boiled veal or chicken, and bread pudding. Every succeeding day will render such indulgence safer. Hot spices, however, and ardent spirits in any form or mixture, are to be absolutely prohibited during the whole time of lying-in. Wine itself is liable to do much mischief till every symptom of fever or inflammation disappears; and, even then, should be very sparingly used, not more than a glass or two being allowable at the principal meal only.

But though quietness, repose, the admission of fresh air, strict cleanliness, and a temperate cooling regimen, must contribute very much to prevent fever, and to promote a woman's safe and speedy recovery from child-bed; yet all these prudent measures will often fail, without her own faithful discharge of one of the most sacred duties of a mother, that of suckling her infant. Unless the milk, which is ready to gush from her nipples, finds the proper vent, it will not only distend and inflame the breasts, but excite a great degree of fever in the whole system. Every attempt to disperse it by artificial means, being an act of flagrant rebellion against nature, is as dangerous to the mother herself, to say nothing of her child, as an attempt to procure abortion. The evident determination of the blood to the breasts, for the wisest and most benignant purpose, can never be repelled with safety. It is either deposited upon some other part, there to produce inflammation: or, if purgatives and sudorifics are used to carry it off by different outlets, the violence of their action must be attended with dangerous shocks, even to the firmest habit.

It may be said, that there are instances without number, of mothers who enjoy perfect health, though they never suckled their children. I positively deny the assertion; and maintain, on the contrary, that a mother, who is not prevented by any particular weakness or disease from discharging that duty, cannot neglect it without material injury to her constitution. The same midwives who would assist her in procuring a miscarriage, if she wanted it, may now also undertake to disperse her milk with the utmost ease and safety. Let her not trust to the wicked delusion. The mischief is not the less certain from its being perhaps unperceived at the time, and cruelty to one child, often destroys the power of procreating another.

If we take a view of all animated nature, it is shocking to find, that woman should be the only monster capable of withholding the nutritive fluid from her young. Such a monster, however, does not exist among savage nations. They cannot separate the idea of bringing forth a child, from the necessity of giving it suck. The wives of

the American savages are said to extend this mark of motherly tenderness and solicitude even to infants that die upon the breast. After having bestowed upon them the rites of burial, they come once a-day for several weeks and press from the nipple a few drops of milk upon the grave of the departed suckling. I have seen a drawing taken from nature by a gentleman at Botany Bay: it represented a female of that country, after having opened one of her veins, and made an incision in the naval of her sickly child, endeavouring to transfuse her blood into its body, and hoping thereby to restore its health, and to prolong its existence. Observation and experience had taught her that the umbilical cord, or naval-string, was the medium through which the *fetus*, while in the womb, received nourishment from its mother: she fancied, therefore, that she could transfuse her blood through the same channel, and renovate a life which was dearer to her than her own! Let the mother in civilized society, who, from motives of selfish ease and imaginary pleasure, denies her infant the vital stream with which she is abundantly supplied for its sustenance, think of the poor savage and start with horror at her own unnatural depravity.

It is also a great mistake on the part of such selfish mothers, to fancy that they can take more pleasure by abandoning their infants to the care of hirelings. Some of them may be callous to all reproaches of conscience for the frequent diseases of those children; but leaving moral sentiment and natural tenderness out of the question, pleasure is inseparably connected with the enjoyment of health; and I have already shewn how much this is endangered by a mother's unwillingness to become a nurse. I need not repeat what I said of the inflammation and suppuration of the breast; but my hint on barrenness, as one of the probable consequences of an attempt to disperse the milk, may be farther enforced by observing, that the womb is the part most likely to be affected in such cases: the repelled humour has often been deposited on that delicate organ, and has there produced deep seated and frequently incurable ulcers. Many instances of this sort, as well as of other disorders arising from the same cause, and equally fatal to fecundity, gave rise to my former assertion, however harsh it may sound in the ear of fashionable perverseness.

But I can with equal confidence assure the fond parent, faithful to her trust, and eager to cherish her infant with the vital fluid which nature has kindly given her for that purpose, that nothing else can so effectually promote her recovery from child-bed, the speedy return of good health, and the long continuation of that invaluable blessing. Besides, all nurses concur in declaring, that the act itself is attended with sweet, thrilling, and delightful sensations of which those only who have felt them can form any idea.

I have already admitted, that a mother may be prevented from giving suck, by some particular weakness or disorder; and in touching on the same subject in another work, I observed that women of delicate constitutions, subject to hysteric fits, or other nervous affections, made very bad nurses. Lest that remark might give too great a scope to excuses, on the ground of pretended weakness or delicacy, I added, that every mother who *could, ought* certainly to perform so tender and agreeable an office. I now go farther, and maintain that every woman who is not able and willing to discharge the duties of a mother, has no right to be-

come one. The same personal defect, or constitutional infirmity, which may disqualify her for nursing, ought to be considered as an equally strong disqualification for marrying. But if, after marriage, any subsequent disease or accident should render the discharge of a mother's first duty impracticable or dangerous, she is, in such cases only blameless for calling in the aid of another to suckle her child.

In the next chapter, I shall have occasion to speak of the salutary effects of the mother's milk on the new born infant. The aim of my present observations is to convince lying-in women, that the free and natural discharge of that precious current is essential to their own health and safety. But as some young mothers, however well-inclined, may be discouraged from persevering in their attempts to give suck, by the difficulty, awkwardness, or pain, attending the first experiments, I shall subjoin for their direction in such cases, a few rules laid down by the most approved writers on midwifery.

The first advice given by those eminent practitioners is, to put the child to the breast as soon after delivery and due repose as the strength of the mother will permit, care having been previously taken to wash the breasts with a little warm milk and water, in order to remove the bitter viscid substance, which is furnished round the nipple to defend the parts from excoriation or soreness. When the woman has never nursed before, the nipples at first are sometimes not sufficiently prominent to afford a proper hold for the child. The ends also of the small tubes, through which the milk passes, are contracted, to prevent its flowing out spontaneously. From these circumstances, as well as from the inexpertness both of the mother and the infant, some pain and difficulty may arise. But the common practice of having the breasts drawn by an old child, or some grown person is deemed improper, because the degree of violence used on these occasions will often irritate and inflame the parts, and frighten the woman against the renewal of such painful experiments. Much gentler means will produce the desired effect. The breast should be fomented with flannels dipt in warm water; and then a glass or ivory cup, mounted on a bag of elastic gum, ought to be applied in such a manner to the nipple, that it will draw it out gently and gradually, while, by moderate pressure on the sides of the breast with the hands, the milk will be pushed forward. In obstinate cases, instruments of more attractive power may be used, though with caution, for fear of injuring the breast.

If the difficulty be not owing to a flatness of the nipple (upon the principal cause of which I before hazarded a conjecture), but to a little rigidity of the milk vessels, nothing more is necessary than the warm fomentation above recommended. The stiffness or contractions of the necks of those fine tubes will gradually yield to the natural efforts of the infant. They will soon become straight, so as no longer to impede the egress of the milk, which is drawn into them by the suction. Impatience or excessive eagerness, in these cases, as in all others, defeats its own end. The attempts at first should neither be too often repeated, nor too long continued; and when the child is put to the breast, the mother ought to be supported by pillows in bed, in a reclining posture, and with due precautions against catching cold.

Such are the dictates of enlightened practice, of which I am happy to avail myself, as an additional incitement to mothers not to shrink

from their duty. A little pain is easily surmounted, and is followed by lasting pleasure. I must not omit another caution given by the same writers, in case of any particular soreness of the nipples, always to procure the best medical assistance, as the modes of treatment pursued by ignorant persons are, in these instances more especially, no less injurious than absurd.

CHAP. IV.

OF THE NURSING AND REARING OF CHILDREN.

EVERY thing is perfect, says *Rosseau*, as it comes out of the hands of God; but every thing degenerates in the hands of man. This is particularly true of the human species. If the mother during pregnancy, has not suffered any injury from accident, or from her own imprudence; and if, after the accession of labour, neither she nor the midwife has disturbed or impeded the efforts of nature: the offspring of strong and healthy parents is sure at the birth to be well-formed, healthy and vigorous. Any instances to the contrary are so rare and extraordinary, as almost to leave some doubt of the possibility of such an event: yet it appears from the best calculations, that at least one half of the children born, die before they are twelve years old. Of the surviving half at that period, how many perish before they attain to maturity! How many others are stunted in their growth, distorted in their figure, or too much enfeebled ever to enjoy the real sweets of life! What a train of ills seem to await the precious charge, the moment it is taken out of the hands of nature! But as the most of these calamities are the consequences of mismanagement or neglect, I shall endeavour to shew how they may be prevented by tender and rational attention.

SECTION I.

Of the influence of Air on the Health and Lives of Children.

THE first want of a new-born infant is clearly manifested by its cries, not arising from any sense of pain, but from a stimulus or impulse to expand the lungs, and thereby open a free passage for the circulation of the blood, and for admission of air, so essential to the existence of every living creature. While the child lay in the womb, its lungs were in a collapsed or shrivelled state: it received all its supplies through the medium of the naval-string. But at its birth a very obvious change takes place. The pulsation or throbbing of this cord first ceases at the remotest part, and then by slow degrees, nearer and nearer to the child, till the whole string becomes quite flaccid, all circulation being confined to the body of the infant. It is then that the cries of a healthy child are heard; in consequence of which the air rushes into the lungs; their tubes and cellular spaces are dilated; the bosom heaves; the cavity of the chest is enlarged; and the blood flows with the utmost ease. But as the air passes out, the lungs again collapse, and the course of the blood

receives a momentary check, till a fresh influx or inspiration of air in concurrence with the action of the heart and arteries, renews the former salutary process, which never ceases during life.

The air thus inhaled, after imparting its vital properties to the whole frame, takes up the perspirable matter constantly issuing from the interior surface of the lungs, and carries off, on its expulsion, a considerable part of the noxious and superfluous humours of the body. Its purity is of course destroyed, and, in consequence of being frequently breathed, it becomes unfit for respiration. In a confined place, therefore, it is not air we inhale, but our own effluvia; and every other cause, which tends to waste or pollute the air, renders it in some degree injurious to the strength and health of those who breathe it.

In this account of one of the most important of the vital functions, I have avoided the minute details of anatomical science, which would, indeed, have made it more accurate, but less intelligible to the generality of my female readers. I thought it far better to explain to them, in as familiar language as I could, the cause of an infant's cry at the moment of its birth, with the hope of rendering them attentive to the purity of what nature so strenuously demands. The quality of the air we breathe, is of much greater consequence than our food or drink, at every period of life, but particularly in infancy, a state of the utmost delicacy and weakness. Good air braces, bad air relaxes, the tender frame; the former is a source of health and vigour, the latter of infirmity and disease.

It should therefore be the first object of a pregnant woman's care, to secure, at least for the time of her lying-in, a wholesome situation. Instead of flying from the country to town, as many do, she should fly from town to the country. If her circumstances will not admit of this, she must fix her abode in as open and airy a street as she can, and at as great a distance as possible from noise, from tumult, and from those nuisances which contaminate the atmosphere of great cities.—Let her apartments be lofty and spacious, dry rather than warm, and exposed to the sun's morning rays. I have already explained the importance of cleanliness, and of occasionally letting down the upper sashes of the bed-room windows in fine weather, to admit fresh air, and to prevent fever. An attention to these points is not less necessary on the new-born infant's account, than on his mother's. Let not the first air he breathes be foul from confinement, too much rarefied by heat, or charged with any noxious exhalations. The mild temperature to which he has been used in the womb, renders it very proper to preserve for some time the same moderate degree of warmth in his new place of residence. But he is not, on that account, to be roasted before a great fire, or kept panting in steam and pollution.

If the room be kept properly ventilated and free from impurity, the infant will soon get hardy enough to be taken out into the open air, not only without the least danger, but with the greatest advantage; provided always that the season of the year, and the state of the weather, encourage such early experiments. A month spent within doors, is confinement long enough in almost every case; and the nursery is then to be frequently exchanged for green fields and sunny eminences. There your child will drink, as it were, the vital stream pure from its source; he will draw in at every breath fresh

supplies of strength and alacrity ; while the bracing action of the air on the surface of his body, will give a degree of firmness unattainable by any other means.

In the course of a few months, the state of the weather need not be much regarded ; and its unfavourable changes, unless the heat or cold be intense, must not operate as a check on those daily excursions from the nursery. Our climate is very fickle ; we shall suffer much from its rapid variations, if we are not freely exposed to them in early life : do not therefore sacrifice the future comfort and safety of the grown man, to mistaken tenderness for the infant. If your child be accustomed from the cradle to go out in all weathers, he will have nothing to fear from the bleak north, or the sultry south, but will bear every change of season, of climate, and of atmosphere, not only without danger, but without pain or inconvenience.

What is here said of the importance of fresh air, and of frequent exposure to all sorts of weather, in early life, must derive additional weight from a consideration of the bad effects of confinement and of unwholesome air upon children. This part of the subject is pretty fully discussed in my "Domestic Medicine." I there explained the reason why so few of the infants that are put into hospitals or parish work-houses live. Such 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 young children. I also took notice of one of the worst afflictions of poverty in great towns, where 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 live in such situations, yet they generally prove fatal to their offspring, few of whom arrive at maturity, and those who do are weak and deformed.

While I was considering the hard lot of the poor, most of whose children perish, because the wretched parents are not in a condition to take them often out into the open air, I could not but observe that the rich were without any excuse for neglecting so essential a part of their duty. 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 ?

In the same chapter I had farther occasion to censure a very bad, though a very prevailing custom, of making children sleep in small apartments, or crowding two or three beds into one chamber. Instead of this, the nursery and the sleeping-rooms ought always to be the largest and most airy apartments in the house. When children are shut up in small rooms, the air not only becomes unwholesome, but the heat relaxes their solids, renders them delicate, and disposes them to colds, and many other disorders, particularly of the convulsive kind. All medical men, who have had much practice in the treatment of children, agree in opinion, that convulsion-fits, of which so many infants die, are to be chiefly ascribed to a confined and impure air. I wish to impress this truth on the minds of mothers and nurses, to make them sensible of the danger of small or close rooms, and of the pernicious folly of covering an infant's face in bed, or the front of its

cradle, and thereby making it breathe the same air over and over all the time it sleeps.

It may be of no less consequence to repeat and enforce my cautions to parents against sending their children, while very young, or indeed at any age, to crowded schools, the atmosphere of which is really a floating mass of putrid effluvia. The breath and perspiration of so many persons in a room, even supposing them all to be in good health, must waste and corrupt the air, destroy its vital properties, and of course render it wholly unfit for the support of animal life. But should any one child happen to be diseased, all the rest are very likely to catch the infection. When I see a poor baby, before it can well walk, carried in a nurse's arms to school, I really feel stronger emotions of pity, and of alarm for its safety, than if I had seen it conveyed to a pest-house. In the latter place, children would be kept separate, and proper means would be used to prevent the spreading of contagion: in the former, all are thrown together, and there remain with relaxed lungs, open pores, and steaming bodies, so as to render it almost impossible for any to escape.

As thousands of children die every year the victims of diseases caught at schools, and as the health and constitutions of still greater numbers are irretrievably ruined by the confinement and the bad air of such places, parents must not be offended at the seeming harshness of my language in reprobating so absurd, so cruel, and so unnatural a practice. I know that as soon as children begin to run about, they require the most watchful care to prevent mischief. Will any mother urge this as a reason for being tired of them, and for confining, as it were in stocks, that restless activity which is wisely designed by nature to promote their growth and vigour? Will she, from a wish to save herself some trouble, or to gain time for other business infinitely less important, send her little babes to school, under the silly pretence of keeping them out of harm's way? I hope what I have already said is sufficient to convince persons of common understanding, that they cannot be exposed to greater harm, than by being fixed to a seat in the midst of noxious steam for six or seven hours a day, which should be spent in the open air and cheerful exercise.

Should it be alleged, that children are sent young to school, from a becoming zeal for their early improvement, I need only reply, that learning, however desirable, is too dearly bought at the expense of the constitution. Besides, learning can never be acquired by such preposterous means. Confinement and bad air are not less injurious to the mind, than to the body; and nothing so effectually prevents the growth of the intellectual faculties, as premature application.—Sending a child to school in his nurse's arms, is the sure way to make him an idiot, or to give him an unconquerable disgust to books: the only book he should then look at, is the great volume of nature.—This is legible at every age, and is as gratifying to a child as to a man: It abounds with the most delightful and most useful information: it is equally conducive to pleasure, health, and knowledge.

A thousand absurdities in the fashionable modes of education present themselves now to my view; but I must only take notice of errors in the physical treatment of children: and surely no error of this sort can be more reprehensible, than that which I have been just describing. Debility of body and mind is the certain consequence of sending very young children to school; and of sending them, at any

age, to crowded or confined schools. The terms of instruction are in general so low, that a master or mistress of a school is obliged to take a great number of scholars, in order to get a living: and can seldom afford to rent a spacious room in an open and elevated situation. Yet not only this is as absolutely necessary for health, but a large play-ground also: where even day-scholars should be permitted to go out frequently to taste the freshness of the vital breeze.—The plants of genius and of manhood cannot flourish but by frequent exposure to the enlivening rays of the sun.

SECTION II.

Of warm and cold Bathing.

IN observing the regular succession of an infant's wants, after the supply of air procured by it's first cries, it's seeming uncleanliness attracts our notice. The skin appears covered with a slippery glue which soon dries and forms a kind of scurf. This should be washed off very gently with a soft sponge and warm water, having a little soap dissolved in it. Nurses, in general, are as eager to remove every speck of it, as if it was the most offensive impurity, though it is perfectly harmless, and will easily come away in three or four washings, without the danger of hard rubbing, or the aid of improper, and sometimes very injurious, contrivances. Ointments or greasy substances cannot fail to fill up the little orifices of the pores, and to put a stop to insensible perspiration. Spirits of any kind are still worse, on account of their inflammatory effect. Even *Galen's* advice to sprinkle the child's body with salt, that the glutinous matter may be more effectually rubbed off, is at best unnecessary. I have no particular objection to the modern improvement on that hint, which consists in dissolving salt in the warm bath, with a view of giving it the agreeable stimulus, as well as the cleansing and bracing properties of sea-water; but I would not encourage any solicitude in this respect, as the easiest and simplest mode of proceeding will fully answer the desired end.

In the hardy ages of antiquity, we are told that the Germans used to plunge their new-born infants, into the freezing waters of the Rhine, to inure them betimes to the severe cold of their native country. I need not take any pains to point out the danger of following such an example in our times, when mothers and nurses are too apt to run into the opposite extreme of unnerving effeminacy. In this, as in every thing else, the golden mean is the line of wisdom—the line to be pursued by rational affection. It would be extremely hazardous to dip the tender body of a child, reeking from the womb, in cold water, and to keep it there during the necessary operation of washing: but the use of the cold bath may be safely brought about by degrees in five or six months after the birth, and will then be found not only one of the best means of promoting health and strength, but of preventing also many of the most distressing complaints to which children are subject. The following method I can confidently recommend, having had frequent opportunities of observing its salutary effects.

The temperature of the bath proper for a new-born infant, should approach nearly that of the situation which she has just quitted. It is proper to acquaint these who may not have an instrument to ascertain the

degree of heat, that absolute precision in that respect is by no means necessary; their feelings will inform them with sufficient exactness when the water is rather warmer than new milk: a little solution of soap, as I before observed, is all that is wanted to increase its softness and its purifying effect. The operation of washing should be performed in a vessel large enough to allow room, for the expansion of the infants limbs, and for easily discovering any defect in its structure, or any accident which may have happened to it during labour: either may be often remedied by timely care, but may become incurable through delay or neglect. The child should not be kept in the bath longer than five or six minutes; and the moment it is taken out, it should be wrapped up in a soft warm blanket, and there kept for a few minutes in a state of gentle motion.

I would not have any difference made, either in the temperature of the bath, or the time of the infants continuance in it, for the first month. The uncleanness of young children renders frequent washing necessary. It should be the first object of attention in the morning, and the last at night; but it should not be performed with a full stomach, even when the child receives all its supplies from the breast. This is the only caution which need be added to those already given concerning gentleness in the manner of washing, space enough in the bathing vessel, and strict care to wipe the child dry, and wrap it warm the instant it is taken out of the bath, when exposure to cold would be doubly dangerous, from the natural delicacy, of the infant, and from the immediately preceding warmth and the openness of the pores.

After the first month the warmth of the water may be lessened, but almost imperceptibly so as to guard against the risk of sudden changes or too rash experiments. The mildness of the weather and the evident increase of the child's strength, must be taken into consideration; for, though cold water is very serviceable, in bracing weak and relaxed habits, yet, if tried too soon, its stimulus on the surface may be too strong, and the powers of reaction within too weak, so that the worst consequences may follow. These will be prevented by a gradual diminution of the temperature of the water, and by close attention to its effects, when reduced nearer and still nearer to a state of coldness. If immersion in the bath be quickly followed by a glow all over the body, and a perceptible liveliness in the child, we may be sure that the water has not been too cold for his constitution, and that we have proceeded with due care. But should it produce chilliness, evident languor, and depression, we must make the water a little warmer next time, and not venture upon the cold bath till we are encouraged by more favourable appearances.

It would tend rather to increase than to clear up the doubts of mothers and nurses, were I to enter into a detail of all the infirmities and diseases, in which the cold bath would be serviceable or injurious, not only during infancy, but at a more advanced period of life. There are many nice distinctions in a variety of complaints, where the greatest medical skill and experience are necessary, to decide on the propriety or impropriety of resorting to so powerful, but at the same time so hazardous, a remedy. I must, however, forbid its use in complaints of the bowels; affections of the lungs; eruptions on the infant's skin; and in cases of extreme weakness, indicated by the before-mentioned symptoms of chilliness and apparent loss of strength and spirits after im-

ersion. With such restraints on indiscreet rashness, it is hardly possible that a woman can do wrong in pursuing the plan which I have pointed out, for reducing the warmth of the water by very slow and almost imperceptible degrees, till it can be employed quite cold with safety and benefit.

There is no doubt but a great deal of mischief has resulted from the too early and injudicious use of the cold bath. I perfectly agree with *Dr. Underwood* in his equally sensible and humane remark, that "to see a little infant, three or four days old, the offspring perhaps of a delicate mother, who has not strength even to suckle it, washed up to the loins and breast in cold water, exposed for several minutes, perhaps in the midst of winter, (when children are more inclined to disease than those born in summer) itself in one continued scream, and the fond mother covering her ears under the bed-clothes, that she may not be distressed by its cries, has ever struck me as a piece of unnecessary severity, and savours as little of kindness, as plunging an infant a second or third time into a tub of water, with its mouth open and gasping for breath, in the old-fashioned mode of cold bathing: both of which often induce cramps and pains in the bowels, and weakness of the lower extremities, but rarely an increase of strength."

I hope the advice which I have given respecting the proper temperature of the bath during the first months of infancy will operate as a check on the "unnecessary severity" so justly censured in the first part of this observation. But the error pointed out in the old-fashioned mode of cold bathing, may not be so easily corrected, unless some strong and clear reasons are assigned for discontinuing the dangerous part of that practice.

Women should therefore be informed that the immediate effect of immersion in cold water, at any age, is a sudden contraction of the pores and blood-vessels of the skin, and a general repulsion or throwing back of the fluids towards the internal parts. The chilling sensation excites the most vigorous efforts of the organs of life, particularly the heart and arteries, to increase the heat within the body, and resist the shock given to the surface. This is what is called action and re-action, the degree of the latter being always in proportion to the violence of the former, and to the strength of the constitution. Hence arises that delightful glow, which follows the first impression of cold; and, so far, the full play of the vital organs is as pleasant as it is salutary. But, as the increased heat soon passes off from the body, if it be continued in the water, or taken out and directly plunged into it again, the animal powers are liable to be exhausted by incessant or repeated efforts to produce more heat, and to overcome the action of the external cold. Grown persons have often experienced the fatal consequences of too long a stay in the water. What then must the effects of a second and third dip be upon the tender and delicate frame of an infant, whose vital power is proportionally feeble? Besides the risk of extinguishing the faint sparks of life, an accumulation of humours in the head, stagnations of the blood in other parts, and convulsion fits, are very likely to take place. But though none of these melancholy circumstances should happen at the moment, a stoppage of growth, and a puniness of habit, must certainly follow so inconsiderate an abuse of the very means best calculated, under proper management, to promote health, expansion, and vigour.

In cases of previous indisposition, or disease; where the cold bath may be prescribed as a remedy, the danger to a poor infant must be still greater from an injudicious mode of proceeding. I took no small pains in my "Domestic Medicine," to expose the whims and prejudices of nurses in this respect. They would be objects of ridicule, were they not often attended with the most serious consequences. I should smile, for instance, at the remains of superstitious weakness, in believing that the whole virtue of the water depend upon its being consecrated to a particular saint, were it not that most of those *holy wells*, as they are called, are very unfit for bathing, and, what is worse, that the child is kept too long in the water, and that due attention is not paid to friction and warmth afterwards. Some of those silly women place their confidence in a certain number of dips, as three seven or nine, though every dip after the first, at each time of bathing, not only defeats the hope of benefit, but increases the strong probability of much mischief. This may indeed be avoided, by dipping the infant only once at a time; but even in that case, the magical number of dips is very insufficient for any desirable purpose. I have also known nurses who would not dry a child's skin after bathing, lest it should destroy the effects of the water; others will even put cloths dipt in the water upon the child, and either put it to bed, or suffer it to go about in that condition. This is sometimes done with impunity by grown persons, who resort to the famous spring at Malvern in Gloucestershire, for the cure of particular complaints of the cutaneous class; but it would be little short of frenzy to make such an experiment upon children.

The only way of securing to an infant all the salutary effects of the cold bath, without the least possibility of harm, is to prepare him for it in the slow and cautious manner before recommended. This may be accomplished, under favourable circumstances, in five or six months. Rain or river water is fitter for the purpose of bathing, than pump or spring water; though the latter, in case of necessity, may be used, after having been exposed for some hours to the sun or the atmosphere. The child must not be dipped when its body is hot, or its stomach full, and should be put only once under the water at each time of bathing. All the benefit, as before observed, depends upon the first shock, and the re-action of the system. In order to prevent a sudden and strong determination of the blood to the head, it is always advisable to dip the child with this part foremost, and to be as expeditious as possible in washing away all impurities. I have been already so particular in my directions to have the young bather instantly wiped dry, and wrapped up in a soft warm blanket that I need not repeat them; but I must add another injunction, which is, not to put the child to bed, but to keep it for some time in gentle motion, and to accompany the whole process with lively singing. It is of far greater importance than most people may be aware of, to associate in early life the idea of pleasure and cheerfulness with so salutary an operation.

During the use of the lukewarm bath, the whole body is to be immersed in it every night as well as morning. But when recourse is had to cold bathing, it must be used in the manner above prescribed in the morning only. At night, it will be enough to wash the lower parts; and even for this purpose a little warm water may be added to the cold in severe weather. Every danger will thus be avoided; eve-

ry benefit will be secured; and the habit of personal cleanliness being rendered familiar in childhood, will be retained through life, and will contribute very much to its duration and enjoyment.

SECTION III.

Of Children's Dress.

THERE is not any part of my professional labours which I review with greater pleasure, than my exertions in early life to rescue infants from the cruel tortures of swathing, of rollers, and of bandages. When I first ventured to take up the subject, about half a century ago, it certainly required the ardour, the courage, the enthusiasm of youth, to animate my opposition, not only to the prevalence of custom and the stubbornness of old prejudices, but to the doctrines of the Faculty themselves. Absurd as we may now think the practice of swaddling and wrapping up a child, till it was as stiff as a log of wood; the arguments in favour of a loose and easy dress, which I made use of in my *Inaugural Dissertation*,* were vehemently combated by the most eminent men, who at that time taught medicine in the University of Edinburgh. The reform which has since taken place, though not carried to the extent that it ought to be, is an encouragement to use less reserve in condemning the remains of so pernicious a system.

It cannot be deemed a matter of astonishment, while medical men declared themselves advocates for such a mode of clothing, that it should be carried to the most dangerous excess by ignorant, busy, or self-conceited women. They fancied that the shape, beauty, and health of the infant depended wholly on the expertness of the person employed in dressing it. The midwife was to new-mould the head, and to shape every limb, according to her own fancy, and then to retain the parts, in the form she gave them, by close pressure. Her stupid presumption was farther encouraged 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 see it made up in perfect trim, and 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 those cruel ligatures 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 the progress of folly and vice, when the influence of depraved society had extinguished in the breasts of many mothers every spark of natural affection, and had prompted them to abandon their children to the care of hirelings, the mercenary nurse was glad, for the sake of her own ease, to follow what physicians taught and midwives practised. The infant was kept swathed in the form of an Egyptian mummy, as incapable of motion as the latter, and almost as destitute of every symptom or indication of life, except its unavailing cries.—

* De infantum vita conservanda.

Though dwarfishness, deformity, diseases, or death, must have frequently been the consequence, yet the nurse escaped all blame, as the bandages prevented any limbs from being broken, and the poor victim bound hand and foot, might be thrown any where, and there left with the utmost indifference, while she attended to her private concerns.

The only thing relating to the dress of infants which seemed to arise from any tenderness, was a regard to its warmth: Unfortunately this was carried too far: and children suffered from the quantity, as well as from the tightness of their clothes. Every child has some degree of fever after the birth; and if it be loaded with too many clothes, the fever must be increased, often to such a degree, from the concurrence of other causes of heat, as to endanger the life of the infant. Even though no fever should be excited, the greatest debility must be the consequence of keeping a child in a state of perpetual waste by excessive perspiration. Besides, in such a condition, a child is liable to catch cold upon exposure to the least breath of air; and its lungs, relaxed by heat, and never sufficiently expanded, are apt to remain weak and flaccid for life, so that every cold will have the most alarming tendency, and probably terminate in an asthma, or a consumption.

All the former evils, arising from the fallacy of medical theories, from the presumption of midwives, the folly of parents, the unwillingness of some mothers to do their duty in becoming nurses, the selfish views of hirelings, and the quite opposite, though no less fatal suggestions of misguided tenderness, were farther aggravated by the imperious dictates of fashion. Reason, experience, and true taste, would have long since triumphed over silly speculations, ignorance, and caprice, had not every consideration been sacrificed to prevailing forms; so that from the infant to its swaddling clothes, to its grand-mother in her shroud, dress must be wholly regulated by the etiquette of fashion. Against this species of hitherto unshaken tyranny, I shall therefore point the chief force of my arguments; after a few more strictures on the absurdity and perniciousness of the other cause,—of tight and oppressive clothing, which has really inflicted deeper wounds on population, than famine, pestilence, and the sword.

To begin with the error of physicians: it is almost inconceivable, how any set of men, who professed to be the admirers and followers of nature, should have been so totally blind to her obvious mode of proceeding in the preservation of infant life. She forms the body soft and flexible, to facilitate its future growth: she surrounds the *fœtus* in the womb with fluids, to prevent its receiving any injury from unequal pressure, and to defend it against every thing that might in the least cramp or confine its motions; she adapts the same means to the safe delivery of the child, all whose bones are so gristly and elastic as to yield with surprising pliancy to every obstruction in the act of labour, and afterwards to resume their proper form, unless restrained or distorted by the busy interference of man. Yet people of pretended science have been bold enough to assert, that a child, when it comes into the world, is almost a round ball; and that *it is the nurse's part to assist nature in bringing it to a proper shape*. We should rather say, let the meddling hand be amputated, which dares to offer violence to the works of nature. If, through the inexpert

ness or impatience of the midwife, any of the child's delicate limbs have been fractured or put out of joint, they will require immediate care and proper bandages: but let not presumptuous folly attempt to mend what nature has made perfect, or perversely confine what was formed for the utmost freedom of motion and expansion.

I have often had occasion to observe that the instinct of brutes is an unerring guide in whatever regards the preservation of animal life. Do they employ any artificial means to mould the limbs of their young, or to *bring them to a proper shape*? Though many of these are extremely delicate when they come into the world, yet we never find them grow weak or crooked for want of swaddling-bands. Is nature less kind or less attentive to the human species? Surely not: but we take the business out of nature's hands, and are justly punished for our arrogance and temerity.

This argument may be rendered still more unanswerable by an appeal to the conduct of those nations that approach nearest to a state of nature. They have no idea of the necessity of rollers or bandages to strengthen the imaginary weakness, or to *bring to a proper shape* the imaginary deformities of their infants. They allow them from their birth the full use of every organ; carry them abroad in the open air; wash their bodies daily in cold water; and give them no other food or physic but the truly medicinal and nutritive fluid, with which the mothers are benignantly supplied by nature. Such management tends to render their children 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. I reserve some remarks on the perfect shape of those savages for a distinct chapter, in which I mean to contrast it with the dwarfishness and deformity of civilized nations.

Instead of considering a child at its birth as a round ball, which ought to be *brought to a proper shape* by a midwife's or a nurse's assistance, I would have both these descriptions of people look upon its little body as a bundle of soft pipes, replenished with fluids in continual motion, the least stoppage of which is attended with imminent danger. Tight pressure always weakens, and may sometimes suspend, with deadly effect, the action of the heart, the lungs, and all the vital organs: it impedes the circulation of the blood, and the equal distribution of nourishment to the different parts of the body; it distorts the pliant bones, cramps the muscular powers, prevents growth, and renders the whole frame equally feeble and misshapen.

Even were reason silent on those points, and were we unwarned of the bad effects of swathes and fillets by past experience, humanity ought to restrain us from putting a helpless innocent to the most cruel torture, squeezing its tender body into a press at the instant of its release from former confinement, and loading it with chains as the first mark of our attention. I have often been astonished at the insensibility of midwives and nurses to the cries of infants while dressing—cries that seldom ceased till the powers of the poor creatures were exhausted. Yet so far from feeling any emotion of pity, it is usual for the midwife or the nurse to smile at such cries, and to endeavour to persuade the mother, if within hearing, that the violence of the scream is a subject of joy, not of sorrow, as it proclaims the child's health and vigour. I have already explained the cause and important purpose of a new-born infant's first cry, to promote respiration and circulation. The loudness of that cry is indeed a proof

of the strength of the child's lungs; but every subsequent cry is the language of pain, the expressive tone of irritation and suffering. If you do not instantly attend to it, you may be guilty of murder. Think of the immense number of children that die of convulsions soon after the birth; and be assured, that these are much oftener owing to galling pressure, or some external injury, than to any inward cause. I have known a child seized with convulsion fits soon after the midwife had done swaddling it, and immediately relieved by taking off the rollers and bandages. A loose dress prevented the return of the disease; and though this will not always cure fits produced by tight clothing, as the effect of the injury may continue after the removal of the cause, yet it is one of the necessary means of relief, it being impossible that a patient can recover, as long as the cause which first gave rise to the disorder continues to act.

It may be proper in this place to give as clear, simple, and concise an account as I can of the nature of convulsions, that midwives and nurses may learn to shudder at the idea of occasioning, by their misconduct, the most fatal, as well as the most frequent diseases incident to childhood. The heads of infants being proportionably larger, and the nervous system more extended than in grown persons, their nerves are more susceptible of irritation; and convulsion fits are the consequences of keen irritation, however excited. The great Boerhaave was of opinion, that most of the disorders of children might be ranged under the class of convulsions. It is certain that all the different causes of uneasiness to a child, form but one general or undistinguished sensation of pain, which he has also but one way of expressing, namely, by his cries; and if these are not attended to, and no relief is or can be given, acute and unmitigated pain commonly produces a fit. If any stronger reason need be urged for immediately attending to an infant's cries, it is that they are almost always owing to mismanagement.

I admit that the most incurable convulsions are those which proceed from some original fault in the structure of the brain itself, whence the nerves issue. But such cases seldom occur, though the brain has unquestionably been often injured, and convulsions occasioned, by a midwife's presumptuous attempts to model the skull of the new-born infant. I have already hinted at this detestable practice, and shall presently make some farther remarks on its baneful prevalence, and its horrid effects.

Children are also subject to convulsions from cutting the teeth with difficulty, or from a feverish irritation of the system at the approach of the small-pox, measles, and other eruptive diseases. I am far from being disposed to blame nurses for what they cannot prevent; though I believe that the dangerous symptoms, which often attend teething in particular, are chiefly, if not wholly owing to the previous improper and enervating treatment of the child. The other convulsions here alluded to generally go off as the eruptive disease, of which they may be called the forerunners, makes its appearance.

There is another cause of convulsions, for which midwives and nurses flatter themselves that they are not in any sort blameable, I mean acute pain in the stomach or bowels. But whence does this pain arise? either from the tight pressure of those parts; from the relaxing effect of a hot and impure atmosphere; or from some acrid substance in the shape of food or of physic conveyed into the stomach,

and irritating the alimentary canal. If you attend to the directions before given on the subject of air, washing, and cleanliness;—if you pour nothing down the infant's throat but the wholesome unvitiated juice, designed for him by nature;—if you slacken, instead of bracing your wrappers round his body; you may depend upon it that his stomach and bowels will never be disordered as to occasion convulsions.

The only part of an infants dress or covering which may be applied pretty close, is a broad piece of thin flannel round the naval, to guard against any protrusion there, from the accidental violence of the child's cries. But take care not to make the pressure too tight, or you will not only hurt the bowels, but, perhaps, cause in another place a much worse rupture than that to which your precaution is directed. This is what happens in many similar cases, when people act from narrow or contrasted views of the subject, and in their eagerness to prevent some trifling and merely possible inconvenience, too often occasion irreparable mischief. Again, then let me caution midwives and nurses against retaining any part of the old system of tight swathing. as the injury it must do is certain, and the good or inconvenience, to which it may seem adapted, is imaginary. I am now speaking of its immediate bad effects, in squeezing the infant's delicate body, fretting his tender skin, keeping his little limbs in a state of painful confinement, exciting his cries, and, by all these causes of nervous irritation, throwing him into convulsions. The female who can hear and see these effects of her own folly, and will yet persist in it, after it is pointed out, certainly does not deserve the name of a mother.

But the most censurable part of the usual conduct of midwives and nurses still remains to be minutely examined and reprobated. It is not enough for them to keep up the show of *helping nature*, as they call it, during the process of a labour, though she has been truly said to *disdain and abhor assistance*; but they presume to mend her work after delivery, and to give a more proper form to the heads of new-born infants. The midwife will tell you, that the soft bones of a child's skull, are often so displaced and squeezed together in coming into the world, that the head would be shapeless and frightful, were it not for her improving touches. Another reason is assigned to the nurse for her meddling. She takes alarm at the imperfect indentation of the bones on the crown of the head, and not only strives to press them closer and to brace them by means of fillets, but is careful to keep the head warmly covered, to prevent the poor baby, as she says, from *catching his death* by the exposure of those open parts to the air. Deformity is the least of the evils that attend such acts of astonishing infatuation. The delicate texture of the brain is peculiarly liable to be affected; and though neither convulsions nor any other perceptible complaint may immediately follow, yet a weakness of understanding, or a diminution of the mental powers, is often the consequence, and defeats all the efforts of the best education afterwards.

The ossification or growing hardness of the bones of a child, and particularly those of the skull, is incomplete in the womb, to favour the purposes of easy and safe delivery. In consequence of their softness and pliancy, they admit of being squeezed together, and even of lapping over without injury, so as to make the head conform to the shape and dimensions of the parts through which it is to be expelled. They will soon resume their proper place, if left to the kind management of nature, and

not tampered with by the profane finger of a conceited midwife or a silly nurse.

As to the opening or imperfect indentation of the bones of the skull, it is owing to the same cause, and designed for the same important purpose, to facilitate the birth of the infant. The free action of the external air is then necessary to promote the firmness and compactness of those bones, and to make them press into each other, and form sutures for the perfect defence of the brain, not only against blows and bruises, but colds and defluxions. Warm and tight covering directly counteracts all these benignant intentions of nature, and renders the skull a very weak shield for the security of its precious contents.

The curious distinction made by *Heredotus* in the field of battle, between the skulls of the Egyptians and the Persians, has often been quoted to illustrate and confirm this doctrine. That historian having visited the scene of action, where the slain of those two nations had been separated, says that on examining their remains, he found the skulls of the Egyptians so firm that the largest stones could hardly crack them, while those of the Persians were so thin and weak as to be easily fractured by a small pebble. After stating the fact, he accounts for it by observing, that the Egyptians were accustomed from their infancy to go bare-headed; whereas the Persians, on the contrary, always wore thick tiaras. These were like the heavy turbans which they still use, and which some travellers think the air of the country renders necessary. I believe with *Rousseau*, that the generality of mothers will pay more regard to the suggestion of such travellers than to the remark of the judicious historian, and will fancy the air of Persia to be universal.

In opposition, however, to silly conceits and prejudices, I must assure my female readers, that there is no part of the human frame which suffers more from heat and pressure than the head, and none of course which ought to be kept cooler and less encumbered. A thin, light cap, slightly fastened with a bit of tape, should constitute the whole of an infant's head-dress, from the moment of its birth till the increased growth of the hair renders any other protection unnecessary. As soon as nature supplies your child with this best of all coverings, never think of any thing more, even when you take him out into the open air, unless rain or intense heat or cold should make the occasional use of a very light and easy hat advisable. I must also forbid the use of stay-bands to keep the poor infant's head as fixed and immovable as if it were placed in a pillory. One would suppose that our heads were so badly secured by the Author of our being, that they would fall off if they were not held fast by those pernicious contrivances. It is strange that women should be so blind to the importance of letting the head move freely in every direction, in order to facilitate the discharge of the fluid excretions voided at the mouth.

It is not necessary to enter into minute details respecting the other parts of an infant's dress. Any nurse of common sense and docility will easily catch the spirit of my former arguments on the subject, and will pay due regard to the following general direction, with the writer's very plain and sensible remarks, "Rational tenderness," says the author, "shews itself in making the dress *light, simple, and loose*. By being as light as is consistent with due warmth, it will neither encumber the infant, nor cause any waste of his powers;—in consequence of its simplicity, it will be readily and easily put on, so as to

prevent many cries and tears, an object of infinite importance :—and its looseness will leave full room for moving and stretching those little limbs which have been long heaped together, and for the growth and expansion of the entire frame.” I before desired the nurse to have always a soft warm blanket in readiness to wrap up the infant on being taken out of the bath. In that wrapper the child should be kept for at least ten minutes, in gentle motion and then dressed. A piece of fine flannel round the navel, a linen or cotton shirt, a flannel petticoat, and a linen or cotton robe, are soon put on ; and where fastenings are requisite, they should consist of tape, without the dangerous use of pins. Their punctures and scratches are very irritating ; and I believe the fact Mentioned in my “*Domestic Medicine*” is far from being singular or extraordinary, where pins were 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.

No part of an infant’s dress should hang down above two or three inches lower than the feet. Long robes and long petticoats serve only to conceal the nurses inattention to cleanliness, and are, even on that account, very improper, as well as cumbersome. The night clothes should be much lighter than those worn by day, from a due regard to the situation of the infant, who should at all times either in bed or out, experience nearly the same degree of warmth. Every moisture or impurity should be instantly removed, and as those parts of the dress which are next the skin are constantly imbibing perspirable matter, they should be changed frequently. Indeed, the same clothes ought never to be kept on for many days together. Away with finery ; but take care that the child is always clean and dry.

I wish I could here close my remarks on dress, without having any just cause to apprehend a stronger resistance to all my precepts from fashion, than from folly, ignorance and prejudice. Folly may be laughed out of its errors ; ignorance may be instructed ; and even the stubbornness of prejudice may be borne down by the irresistible force of argument. But fashion bids defiance to the combined efforts of ridicule and reason. The only favourable circumstance is, that, being fickle as well as imperious, it may in its changeful whims, sometimes fall in with the dictates of true taste, and give both ease and elegance to the human form. This has been happily the case in the discontinuance of some of the most painful, awkward, and disfiguring articles of female dress ; I mean the high-heeled shoe, and the whale-bone stays, which I hope, will never again make their frightful appearance.

But though fashion has lately carried the loose and light attire of our fair country women almost to the extreme of nudity, yet it cruelly and absurdly retains too much of the bracing method in childhood and youth, when the tender and growing frame requires the utmost ease and freedom. It is true, we no longer see the once familiar spectacle of a mother laying her daughter down upon a carpet, then putting her foot upon the girl’s back, and breaking half a dozen laces in tightening her stays, to give her a slender waist. But the absurdity of the contrivance is only changed from stays, to diagonal bandages, or ribbands, fastened across the breast and shoulders with straining violence, to cause an unnatural prominence before, a frightful indention behind, and a wirey stiffness in the motions of the pinioned arms. Yet this is called grace and

elegance. The poor sufferer in such chains feels no relief from the discontinuance of the whalebone press, when she finds that "silken fetters bind as fast."

The breast and shoulders are not the only parts which are thus corded. The necks of young females seldom escape some ligature, that must impede the free access of the blood to the head, and its return thence. Ribbands or other fastenings of gloves above the elbow, bracelets on the wrists, and garters either above or below the knee, seem as if purposely contrived to obstruct circulation in the upper and lower extremities. The toes also, the motion of which is as free and easy in infancy as that of the fingers, are soon squeezed together, for fear of the young ladies becoming splay-footed. Even this is not enough, without occasionally putting the feet into wooden stocks, to make a child turn out her toes, after all power of motion has been previously destroyed in them!

Boys, indeed, escape some of those partial baudages; but they are subjected to a general pressure no less injurious in the tight hussar dresses before alluded to. Silly mothers are very impatient to strip them of their loose frocks, and to make them look like little men, which is often the cause of a much nearer resemblance to monkeys. It is really astonishing that health and growth should be perversely sacrificed to fashionable smartness. All that nature requires in dress, is ease and comfortable warmth. In the progress of society to refinement, decency and elegance are united with the former. At length, false taste becomes dissatisfied with natural simplicity and beauty, and introduces in their stead fantastic finery and cumbrous ornaments. The way to reform is plain and easy, if we have courage enough to shake off the tyranny of fashion, and to consult our reason and our feelings. To mothers so disposed, the following details will not appear uninteresting.

The proper dress of infants has been already described with sufficient minuteness. Very little alteration need be made for five or six years, except that of shortening the frocks and petticoats, when children begin to learn to walk; and soon after supplying them with easy shoes, adapted to the natural shape of the foot, neither too large, which would cause a shuffling kind of pace, nor too small so as to cramp motion, give present pain, and prepare the parts for greater sufferings. Were this caution respecting the proper form of shoes to be attended to during life, it would not only prevent corns, and the painful consequences of nails growing into the flesh, but many excruciating maladies which may be traced to the tight pressure of the toes, and suspended circulation in the feet. A well made shoe answers the two-fold purpose of cleanliness, and of defence against external injuries, including cold and moisture. But when fashion is more regarded than ease, we have no reason to wonder at the number of cripples we meet with tottering about, the victims of their own folly. Whatever changes may be thought necessary in the substance or material's of shoes, according to the age of the wearer, the difference of exercise, of weather, or of the ground for which they are intended, the grand principle of having them made easy, and suited to the shape of the foot, should never be lost sight of. The different direction also of the toes on each foot, renders it advisable to have a corresponding difference in the form of each shoe, which should not be afterwards changed from one foot to the other. It may be said, that shoes will thus get a little

crooked, and will the sooner wear out on one side; but surely ease and health are infinitely superior to such trifling considerations.

It being of the first importance to keep the feet always clean, dry, and warm, children should wear flannel or worsted socks in cold and wet weather. Besides the other advantages attending this practice, it will be found one of the best preservatives from chilblains, especially if children, when cold, are not permitted to run to the fire, but are accustomed to warm themselves with proper exercise. The socks should be fitted to the foot, as well as the shoes, and should touch every part with gentle pressure. If too short or too tight, they will produce the effect already described; and if too big, so as to make folds within the shoes, they will gall and irritate the skin. It is farther desirable to have socks and the feet of stockings made with different divisions or spaces, like the fingers of gloves, to absorb the perspirable matter between the toes, and thus prevent the equally unpleasant and unwholesome effect of its setting there. Will the trouble of having the toes as well as the fingers fitted with proper covering, be deemed, an objection of any consequence by people who take infinite pains to adapt their dress, in a thousand other instances, to the most inconvenient and unhealthy fashions?

I leave grown persons to be as silly as they please in the covering of their feet and legs, and in predisposing those parts for the gout, rheumatism, dropsy, and a variety of other complaints. But it is the height of cruelty to make children suffer through the ignorance, folly, or perverseness of their parents. I must therefore insist on the importance of woollen socks and of woollen stockings, as soon as this additional article of dress shall be found necessary. Silk, cotton, or thread stockings, are far from being so well calculated to promote insensible perspiration in the lower extremities, or to favour the motion of the fluids to the upper parts. They are even injurious in case of sweat, either from exercise, or the nature of any individual's constitution. Instead of suffering the offensive moisture to escape, as worsted would, they retain it in close contact with the skin, increase its putrescent tendency, and not only check all farther perspiration, but cause a re-absorption of a part of the matter already perspired. Worsteds stockings may be worn thicker or thinner according to the state of the weather; and if the show of greater finery be thought indispensable for young gentlemen or young ladies in their *teens*, a pair of silk stockings may be drawn over the woollen ones, to gratify parental vanity. Instead of garters, the bad effect of which I have already noticed, stockings may be easily kept up by slips of tape fastened to the band that encircles the waist in the dress of either sex.

My former remarks on the tight hussar dresses of little boys, who ought to be kept much longer in petticoats, and on the diagonal braces of young ladies, who are thus cramped and distorted, preclude the necessity of any farther observations concerning the due degree of ease which should always be consulted in the body-clothes of both sexes. But it is proper to say something of the changes in point of warmth, which may be requisite in different states of the weather. I have met with several plausible arguments in favour of an uniformity of dress in all seasons: and the example of the great *Newton* has been urged, to induce us, like him, to wear camlet in winter as well as in summer. But though that illustrious philosopher made himself immortal by his amazing discoveries, yet his

natural life did not greatly exceed the ordinary period of threescore years and ten. He cannot therefore be mentioned as a remarkable instance of longevity; and even had he lived many years longer, the number of his days might be more reasonably ascribed to his temperance, his regularity, the habitual sweetness of his disposition, and the exquisite pleasure arising from his successful researches, than to the unvarying sameness of his dress.

It does not therefore imply the smallest diminution of our reverence for the great *Newton*, if we look upon nature as a more unerring guide than any philosopher. Observe how kindly she varies the covering of animals, according to the temperature of the climate, and the difference of seasons. Their hairy coat is longer and thicker in cold countries than in hot; and its growth and warmth are evidently increased, at the approach of winter, in the chilly regions of the north. Her care of the feathered race is displayed in a different manner. She gives the instinctive impulse that makes them anticipate the rigours of winter, and wing their way to milder climates. Though men cannot shift their places of abode at every season with the facility of birds of passage, they can profit by the example of nature's kind protection of other animals, and can accommodate their clothing to the sensible changes of the season and weather.

Let it not be supposed that I am for recommending those periodical fashions of dress which are regulated by the dates of an almanac, in such a country as ours, where the weather is so changeable,—where the close of autumn is frequently severe,—and where, not only in the spring, but even after the commencement of the summer months, we may say in the words of the poet,

That winter oft at eve resumes the breeze,
Chills the pale morn, and bids his driving sleets
Deform the day delightless.

I should be still less inclined to encourage a ridiculous attention to every little change of the air and weather, as indicated by barometers and thermometers. Our senses will afford us all necessary information on this head, without the aid of mathematical instruments. It is only in case of considerable transitions from heat to cold, or the contrary, that our feelings will direct us to guard against danger, by suitable changes of apparel. Poor nervous, delicate beings, are affected by a passing cloud, or a shifting breath of wind. But my rules are intended for healthy children, habituated to the cold bath every morning, and thus prepared to bear without uneasiness or injury, any slight variations of the weather which may take place in the course of the day. Yet even such children are not to be exposed in thin cottons to the keen action of the winter's cold, nor smothered with woollens in the sultry heat of summer. Both those manufactures, which are carried to great perfection in England, are well suited to the different seasons. But I must observe, that fine linen is at all times the most proper covering next the skin on every part, except the feet and legs, for the reasons before mentioned: it sufficiently increases internal warmth, without any unnecessary stimulus, or disagreeable friction. Particular infirmities, or a defective perspiration natural in old age, may render flannel or fleecy hosiery advisable; but linen next the skin is best suited to early life, and requires little trouble to keep it always clear.

The upper parts of the human frame do not stand in need of much covering. Nature takes care of the head; so that even the thin cap, recommended at an infant's birth, becomes wholly unnecessary, either by day or by night, in three or four months. When children are taken out, according to my former intimation, a light, easy hat, made of straw or beaver-fur, is very proper; and if the under side of the brim be dyed green, it will afford a pleasing relief to the eyes, and prevent the injurious effects of two glaring a light. The pink, or vivid colours, sometimes used by females in the linings of their hats or bonnets, may give for the moment a seeming freshness to the cheek, but must very much impair the sight by their dazzling brilliancy.

We should not apply any covering whatever to the necks of young persons of either sex. When they grow up, in order to avoid being pointed at for singularity, they may preserve some little show of conforming to fashion, but without checking the circulation in so dangerous a part. Females must never be induced to wear tight necklaces; nor must males brace their collars, or use any stiffening in their stocks or cravats, through weak compliance with the whim of the day. Even keeping the neck very warm, though without any close pressure, increases its delicacy, or rather its sensibility, and renders it susceptible of cold upon the least exposure.

The sleeves of frocks, gowns, and coats, should be made loose, to leave the motion of the arms perfectly free and unconfined. Though gloves are unnecessary except in very cold weather, yet I have not any strong objection to their use, provided they slip on easily, and are made of porous materials, to facilitate the evaporation of the perspirable matter. Leather is of all substances the least adapted to this important purpose.

I shall conclude these observations on dress, with a picture of fashionable absurdities given in the last edition of my "Domestic Medicine." It is not from an over-weening fondness for my own remarks, that I occasionally refer to, or make extracts from that work; but as some of the points there touched upon are here more fully discussed, it would be the effect of false delicacy on my part, to suppress now any thing useful or pertinent which then occurred to me.

After having applauded the judicious reforms of female dress, for their attention to health, simplicity, and real elegance, I expressed some concern at not being able to pay my own sex the same compliment; "An affectation," I observed, "of what is called military smartness, seems to have converted their whole apparel into a system of bandages. The hat is as tight as if it was intended for a helmet, or to defy the fury of a hurricane. Its form also being by no means suited to the natural shape of the head, it must be worn for a considerable time, with very painful and unequal pressure, before it can be made to fit its new block. The neck is bolstered up and swathed with the most unnatural stiffness. Easy motion without, and free circulation within, are alike obstructed. Blotches and eruptions in the face, head-achs, apoplexies, and sudden deaths, may be often traced to this cause; and if we view its effects in another light, we shall not be surprised at any inconsistency in the language or conduct of people, who take so much pains to suspend all intercourse between the head and the heart."

"The close pressure," I added, "of the other articles of dress is equally reprehensible. Narrow sleeves are a great check upon the

muscular exercise of the arms. The waistcoat in its present form may be very properly termed a *strait* one, and no doubt is, in many instances, an indication of some mental derangement. The wrists, and knees, but more particularly the latter, are braced with ligatures or tight buttoning; and the legs, which require the utmost freedom of motion, are screwed into leathern cases, as if to convey an idea that the wearer is sometimes mounted on horseback. To complete the whole, and in order that the feet may be kept in as tight a press as the head, when shoes are to be worn, the shape of the foot and the easy expansion of the toes are never consulted, but fashion regulates the form of the shoe sometimes square-toed, more frequently pointed, and always sure to produce cramps and corns, the keen, the sensible announcers of every change of the weather. I have so long employed serious argument upon these subjects in vain, that I am now accustomed to view them with pleasantry; and when I meet with such figures, disguised, and rendered truly awkward both in their motions and appearance, I cannot help thinking with SHAKSPEARE, "*that some of Nature's journeymen had made them, and not made them well, they imitate humanity so abominably!*"

SECTION IV.

Of the injury done to Children by the too early and unnecessary use of Medicines.

OF all the absurdities that prevail in the treatment of infants, there is none so grossly repugnant to common sense, as the frenzy of giving them physic before we give them food. They scarcely begin to breathe, when some purgative slop is forced down their throats, and the tender stomach and bowels are thrown into a state of the most unnatural irritation. It often appeared to me very strange, how people came to think that the first thing given to a child should be drugs; but after duly considering the matter, I perceived it to be the effect of superficial knowledge. The more I examined this point, the more I was struck with the truth of the philosopher's remark, *that mere ignorance hath never done any material injury; that error alone is destructive; and that we do not err, in things we are professedly ignorant of, but in those which we conceive we know.* To begin with medicines at the birth, is a strong illustration of the mischief of conceited skill.

It would never enter into the minds of persons wholly unacquainted with medical science, that evacuations ought to precede the first supplies of nourishment. But a little smattering of physic gave rise to the idea of cleansing the first passages as soon as possible, in order to bring away the black, viscid, syrup-like substance contained in the intestines of a new-born infant. The fallacy of such a suggestion can only appear upon a more accurate and comprehensive view of the subject.

In the first place, the *meconium*, as it is called, generally passes soon after the birth, without any excitement but the mere effort of nature. When this does not take place, every desirable purpose is sure to be effected by the thin, waterish, and purgative quality of the mother's milk. Do you suppose that any chemical process can equal this? Or do you imagine that the retention of the *meconium* for a few hours, can do half so

much mischief, as your oils and your syrups, your indigestible or your acrimonious trash, must occasion? But it was enough for midwives and nurses to hear physicians, who knew very little more of the matter than themselves, prescribing things of an opening nature to purge off the remains of the *meconium*. This acquisition of imaginary science was too flattering to female vanity, not to be displayed upon every occasion; and many a severe twinge have poor infants suffered, from a midwife's desire to shew her profound skill in physic.

I was once sent for by an intimate friend, to look at a new-born infant who appeared to be in great agony. I soon discovered that the complaint was the belly-ache, caused by some injudicious purgative. As the midwife was present, I remonstrated with her on the rashness of thus tampering with an infant's delicate constitution. She replied in a tone of self-sufficiency and surprise, "Good God! Doctor, I only gave the proper physic to bring away the *economy*." I should have smiled at her affectation of medical cant, and her ridiculous attempt to catch at the sound of the word *meconium*, had not the serious mischief she had done suppressed every emotion of laughter. I reprimanded her in very pointed terms, and made her feel the burning blushes of confusion, when I shewed that poison was as likely to be used for physic, as *economy* for the word *meconium*, from the same impulse of conceited folly.

But the whole blame in such cases, is not, as I have already intimated, to be laid to the charge of midwives and nurses; the faculty themselves have paid too little attention to the medical treatment of children; and, in consequence of their superficial knowledge of these important subjects, have sanctioned errors of the most fatal tendency. I once heard a medical professor of great celebrity say, that he had met with a case, where the *meconium* was not brought away for three months after the child's birth, and then only by means of strong drastic purges. Though one of the first anatomists in Europe, he was led into this mistake by the blackish colour of the child's stools, which, for want of practical observation and experience, he could not account for but by ascribing it to the supposed remains of the *meconium*. There is nothing so absurd, says an ancient writer, which has not been uttered by some philosopher. I am sorry to add, that a similar assertion might be made with still greater truth concerning the professors of physic.

It would be well, however, if the idea of the necessity of giving medicines to children, was confined to one open dose to purge off the *meconium*. Unfortunately, the error committed at the birth is repeated again and again; and seldom ceases but with the poor creature's life. Opiates are deemed necessary to make it sleep; carminatives to expel wind, or to cure the gripes; laxatives and emetics, to cleanse the stomach; and ten thousand other unavailing and pernicious contrivances to relieve complaints, which are entirely the effects of bad nursing, and which admit of no remedy but by a complete reform in that department.

When a medical man is sent for to attend an infant, his first duty is to inquire into the conduct of the nurse; and if there are faults, to have them rectified. He will seldom find occasion to prescribe any thing else. There cannot be a greater error than to suppose that the faults of nurses may be repaired by drugs. Medicine, however skillfully administered;

cannot supply the place of proper nursing; and when given without skill, which I fear is too often the case, it must be productive of much mischief. The following facts will place this matter in the clearest light.

About forty years ago when I undertook the charge of a large branch of the Foundling hospital at Ackworth in Yorkshire, I found that the children at nurse had till then been attended by the country apothecaries, who, sure of being paid for their drugs, always took care to exhibit them with a liberal hand. Every cupboard and every shelf in the house was filled with phials and gallipots. Under such treatment half the children died annually. As it was evident to me, that this mortality could not be natural, I suggested to the governors, that the children had little or no occasion for medicines, and that with proper care they would thrive and do well. A new arrangement took place. The nurses were forbidden, at their peril, to give any medicine, but what should be ordered by me; and were advised to rely more on the faithful discharge of their duty than on doses of physic. The consequence was, that the expense for drugs did not amount to a hundredth part of what it had been before, and that not above one in fifty, of the children died annually. An opportunity of making experiments on so extensive a scale seldom occurs. I had at that time the sole superintendance of an immense number of children spread over a fine healthy country, where the nurses found it their interest to do in every respect what I desired, as they lost their appointment in case of the least neglect. The happy result of the plan left no doubt of its propriety. It was theory verified by practice.

A little reflection would soon satisfy an attentive observer of nature, that she never designed the young of any species to be brought up by the aid of medicine. Other animals, following the guidance of instinct, never fail in this important business: but man becomes in all things the creature of art, and is misled by it. I have frequently met with instances of families, who had lost every child while they trusted to physic and employed the faculty, but who at length becoming wise through despair, and considering that their offspring could only die, left off the use of medicine altogether, and from that time never lost a single child. If we wish for a more general illustration of the effects of those two different modes of treatment, we shall find it in that part of the island where I was born (North Britain) and where the common people have a strong and very just aversion to giving their children medicines. The fruits of their good sense are displayed in a numerous and healthy progeny. But puniness, sickness, and death, find their way, in company with the doctor, into the houses of parents of higher rank. As the children of the latter are often observed not to thrive, the common remark is, *No wonder! they gave the poor things physic.*

It is indeed possible, that cases may occur to justify the use of medicines; but this very seldom happens when children are properly nursed, unless the poor creatures may have inherited debility from the enervated constitutions of their parents. I may go farther and assert, that even when the frequent or continued use of medicines is deemed necessary, a child kept in existence by the help of drugs has little reason to thank its parents for preserving its life. It lives only to be a burthen to society; and never can be said to enjoy life so much as to render the possession of it a blessing. In all other cases of slight and accidental indisposition I do

not hesitate to give a decided opinion that medicines do injure at least twenty times for once that they do good.

A late writer on the management of children (NELSON) thinks it a matter of regret that they can seldom be brought to take physic without force. When I consider the almost infinite number of young martyrs to medicine, instead of lamenting the circumstance here stated, I rejoice at it, from the fullest conviction, that if children had no reluctance to swallow drugs, we should lose a great many more of them. I know it is a common practice with many mothers, to lay a child on its back, to stop its nose, and force the medicine down its throat. This is adding the danger of suffocation, and the certainty of disgust, to the hazard of a dose too often in its own nature injurious. Bribing and coaxing children, as soon as they become susceptible of such impressions, are almost equally bad. Telling a child, that, if it will take its physic, it shall have a reward, is informing it before-hand, that the potion is unpleasant; and, after that, the child is sure to refuse it, be it rendered ever so palatable. Where medicine is absolutely necessary, which, as I said before, is very seldom the case, it may be so contrived as to make a part of the child's food. Besides a child should be accustomed very early to refuse nothing, and it will not refuse to take medicine. It will act from habitual submission to authority,—not from the cruel impulse of force, or the pernicious allurements of a bribe.

I could here point out many easy contrivances to make children take physic, were I not assured that they are already too often poisoned by it. If drugs do not directly produce infirmity, diseases, or death, these are sure to be ultimately the consequence of substituting medicine in the place of proper nursing, and foolishly supposing that the former can supply the defects of the latter. Art opens all her resources in vain; nor can the greatest efforts of human ingenuity make amends for the want of good air, cleanliness, healthy breast-milk, wholesome food, and proper exercise. The neglect of any of these essential points is attended with irreparable mischief; and on the contrary, a due attention to these precludes the necessity of any medical aid. Yet so strangely addicted, are some women to drench infants with drugs, that when I employed nurses in my own family, it was with difficulty I could prevent them from giving medicines privately to the children. I hope that fathers will profit by this hint, to exert their utmost vigilance and authority in the like situation.

There is not any notion which I have found it more difficult to root out of the minds of mothers, than that children abound with ill humours, and that these can be carried off only by purging medicines. If a spot appear on the skin, the child must have his guts scoured out, to make the offensive pimple vanish, and to *sweeten his blood*, as the mother calls it. They little know, and can hardly be made to conceive, that all purgatives, however mild in their operation, throw the stomach into immediate disorder, weaken its digestive powers, vitiate the juices designed for the solution of food, and thus prevent the due preparation of the chyle whence the blood is formed. This is the sure way to generate noxious humours, instead of expelling them, and to taint or impoverish the vital stream, instead of purifying it.

The other medicines, which the fears and follies of mothers have introduced into the nursery, are almost as pernicious. Had I leisure to

make out the long list of them, with a description of their effects at an early age, it would appear that they ought to be more properly denominated poisons than remedies. They always do some injury; they cannot do any good: they are administered either frivolously, or for the relief of complaints which are caused by bad nursing, and which do not admit of a *medical* cure. To trust to physic for what physic cannot effect, is aggravating the evil of former errors by a still greater one, and quickening a poor infant's career to the grave. Were a law to be made and strictly enforced, which should absolutely prohibit the administering of drugs to children, I am sure it would save the lives of thousands every year in this metropolis alone.

I have elsewhere made a few remarks on the usual conduct of London mothers, whose faith in medicine does not seem in the least abated by the most striking and the most lamentable proofs, not merely of its inefficacy, but of its perniciousness. Whenever any of their children appear indisposed, or do not seem to thrive, which must be frequently the case where they are so badly nursed, away the mothers run to the apothecary. His candor is too often checked, and even his judgment is liable to be biassed by his immediate interest. He derives his support from the sale of his drugs, and will seldom resist the temptation to send large supplies where he knows the parents are in a condition to pay. Physic, in a variety of forms, is substituted for the only rational means of restoring the child's health, some necessary change of air, exercise, clothing, or diet: the mischief begun by the nurse is completed by the doctor; and death comes sooner or later to put an end to the sufferings of the tortured victim.

It gives me pain to write any strictures on the interested views and reprehensible practice of even the lower orders of the faculty: but the evil is of such magnitude, and so truly alarming, that it cannot be passed over in silence, nor mentioned without bursts of strong indignation. The weakness and the fears of mothers bring in the apothecary; and it requires an effort, to which not one in a thousand is equal, to get him out again. A bold busy man of that profession wants only a few timid mothers to make his fortune. But, mercy on the poor babes who, to make his chariot roll, must swallow drugs every day! Yet, such is the infatuation of mothers, that, if this be not done, they think their children neglected, and dismiss one apothecary to make way for another, who administers medicines with a more liberal, or rather a more destructive hand.

If the apothecary be a dangerous man, the quack is still more so. Yet I hardly ever knew a mother or nurse who had not by her the nostrum of some quack, with which she every now and then kept dosing the infant.

Were the boasted specific, like the anodyne necklace, a mere chip in porridge, it would do no harm to the child, and would serve only to amuse the mother, and to levy a contribution on her credulity. But it is very often made up of active ingredients, which ought to be administered with the greatest circumspection. Most of the nostrums given to children are strong opiates or purgatives, of a nature very different from the innocent efficacy of a good nurse's lullabies. They may quiet or compose the infant, and seem to give it ease for a time, but they never fail to destroy the powers of digestion, and to induce universal debility, with all its baneful consequences.

There is, however, another class or description of quack medicines, which, though they cannot kill with greater ultimate certainty than the former, are more sudden and violent in their fatal mode of operation, I mean the cakes and powders, and various other compositions, which are advertised for the pretended cure of worms. A child's pale looks frighten the mother into a belief that worms are the cause; and she goes immediately to the *worm-doctor*, who administers his drastic doses, without the least regard to the delicacy of the patient's constitution. His sole aim is to expel worms; and if any appear, he triumphs in the show of success, though always attended with great danger, and sometimes with death. I have known a nostrum of this kind to kill in twenty-four hours:—but that was nothing to the quacks; he had sold his medicine; and he gave himself little concern about the injury it might do in particular cases.

I would not have said so much of this shocking indifference to murder, had I not seen proofs of it, and in some too, who pretended to eminence in that line. I once told a lady, that her daughter was in a deep consumption, and that she ought to go into the country, to take exercise on horseback, drink asses' milk, and use a light restorative diet. But, instead of following this advice, she took her daughter to a very celebrated worm-doctor, who soon relieved her from all her trouble.

Here I cannot help lamenting that confidence in worm powders or worm-cakes is not confined to the weakest of the fair sex, but is discovered even in men of rank and talents. I have seen, though with heartfelt concern, names of the first respectability subscribed to the certificates of the efficacy of some of these nostrums. I am far from questioning the integrity of the persons who signed such papers; but they certainly knew not what they did. They fancied they were only attesting a plain matter of fact, though the thing was far beyond the possible reach of their judgment or knowledge. They had seen a quack medicine given to a child, and had also seen worms afterwards voided by that child. What then? As the same effect might be produced by very dangerous poisons, how could people, wholly ignorant of the ingredients, tell whether the operation ascribed to them was not at the risk of the child's constitution, or of its life? Even supposing that some apparent good and no *perceptible* mischief attended the experiment in one or two cases, are they sufficient grounds for the general recommendation of any secret medicine, to which the lives of thousands of children yet unborn may be sacrificed? I hope these remarks will prevent men of character from rashly giving a sanction to the possible deceptions of quackery, and will also lessen the respect which individuals or the public at large may feel for such inconsiderate testimonials.

To resume now my detail of various instances of maternal weakness; I have to observe, that the strangest, and not the least mischievous infatuation of all, consists in giving medicines to children in good health, with the silly view of preventing diseases. The spring and fall are the periods consecrated to physic in the calendar of mothers and nurses. At those seasons, if children are ever so well, they must have a dose or two of what is falsely called an innocent purge, to keep them pure and hearty. Thus they are made really sick, for fear they should become so; and their constitutions are enfeebled by the perverse means employed to strengthen them. I have already said so much of the bad consequences which must result from the use of laxatives, especially in

childhood, that no farther dissuatives against so absurd a practice seem necessary, except this one remark; that purging, like bleeding, induces a habit which cannot be left off with safety. Every purge paves the way for another, till the bowels are destroyed. Such medicines, therefore, should never be administered but in cases of actual illness, and to expel some greater poison than themselves.

As this is a point which cannot be too strongly enforced, I shall lay before the reader Mr. Locke's sentiments on the same subject. They derive double weight from his medical skill, and from the extraordinary precision of his manner of reasoning upon any topic. As he was regularly bred to physic, he is exempt from the suspicion incurred by some later philosophers, of having written under the influence of prejudice against the faculty. "Perhaps," says he, "it will be expected that I should give some directions of physic, to prevent diseases; for which I have only *this one, very sacredly to be observed, never to give children any physic for prevention.* The observation of what I have already advised will, I suppose, do that better, than the *ladies' diet-drinks, or apothecaries' medicines.* Have a great care of tampering that way, lest, instead of preventing, you draw on diseases. Nor even upon every little indisposition is physic to be given, or the physician to be called to children, especially if he be a *busy man*, that will presently fill their windows with gallipots, and their stomachs with drugs. It is safer to leave them wholly to nature, than to put them into the hands of one forward to tamper, or that thinks children are to be cured, in ordinary distempers, by any thing but diet, or a method very little differing from it; it seeming suitable both to my reason and experience, that the tender constitutions of children should have as little done to them as is possible, and as the absolute necessity of the case requires."

To add any thing by way of comment or illustration to language at once so clear and so forcible, would betray the greatest weakness. It is enough for me to quote so unexceptionable an authority in support of my favourite doctrine. The chief design of the present treatise is to supercede the use of medicines in early life, and to shew how health may be effectually preserved by good nursing alone. An attention to the rules here laid down is the only method of preventing diseases, with which I am acquainted. A child used to the cold bath, and to the full enjoyment of fresh air, cannot be liable to coughs, colds, sore eyes, or defluxions. A clean dry skin, never relaxed by foulness or heat, will favour the escape of noxious or redundant humours, while exercise will not suffer the seeds of corruption to lurk in any part of the frame. Instead of baneful physic, let your infant have the aliment prepared for him by nature; and you may be sure that the milk of a healthy, temperate nurse, will never give him the gripes or the cholick; it will nourish, but not inflame him; it will keep the habit pure, the action of the blood regular, and the surface of the whole body free from blotches or eruptions. Indeed, I know of no disease against which a child may not be secured by the rational conduct of his nurse. The pre-disposing causes of all the complaints of infants, are the weakness of all the digestive powers, and the irritability of the nervous system. Both are obviated by the method I propose. The stomach is supplied, but not over-charged, with such food as is suited to its strength; and every thing

that may irritate the nerves, or give rise to convulsions, is averted with all possible care. Even in the midst of contagion, or of epidemical distempers, the purity of a well-nursed child's habit will correct the malignity of the infection, and disarm it of its usual terrors.

The earnestness with which I have recommended inoculation in another work, may seem a little inconsistent with the doctrine here laid down: but it is because very few children are nursed according to my plan, that I think it advisable to guard them all against the possible danger of catching the small-pox by accident. Besides, it is of importance to be able to command time, place, and circumstances, particularly as I have shewn in my "Domestic Medicine," with what ease and safety the operation may be performed by mothers and nurses, without the least occasion for any farther medical advice or assistance.

SECTION V.

Of the food proper for Children.

THE pernicious folly of making physic precede food at an infant's birth is, I hope, sufficiently exposed in the former section; and notice is there taken of the admirable manner, in which the thin diluted, and gently opening properties of the mother's milk, are adapted to every medicinal as well as alimentary purpose. Nature does not afford, nor can art contrive, any effectual substitute for that delicious fluid. By degrees the milk acquires consistence, and affords greater nourishment to the child, as he becomes more capable of digesting it. At length, his bodily strength increasing, and his teeth bursting through the gums, he can take more solid and substantial food, which requires still greater powers of digestion. These changes are so obvious, that they cannot be mistaken. Ignorance is pleaded in vain, and the least deviation from so plain a road to health, is punished with lasting injury. The infant after having derived its whole sustenance and growth, while in the womb, from the mother's juices, cannot without the greatest danger have its supplies totally altered at its birth. It must still be fed from the same congenial source, or the shock of a sudden and unnatural change will prove very trying to its tender constitution.

In my advice to mothers at the time of lying-in, I endeavoured to convince them of the imminent danger to their own health, which would arise from their neglect of the most sacred of all duties, that of suckling their children. It is an obligation so strongly enforced by nature, that no woman can evade the performance of it with impunity. But cheerful obedience to this sovereign law is attended with the sweetest pleasure of which the human heart is susceptible. The thrilling sensations, as before observed, that accompany the act of giving suck, can be conceived only by those who have felt them, while the mental raptures of a fond mother at such moments are far beyond the powers of description or fancy. She thus also ensures the fulfilment of the promises made by the best writers on this subject—speedy recovery from child-bed, the firm establishment of good health, the exquisite sense of wedded joys, the capacity of bearing more children, the steady attachment of her husband, the esteem and respect of the public, the warm returns of affection and gratitude from the objects of her tender care, and, after all, the satisfaction to see her daughters follow her example, and recommend it to others.

Though I expressed myself pretty fully on this head in the place above referred to, yet when I consider it, new ideas arise in my mind, and I am more and more impressed with a sense of its importance. People have been often amused with illusions of universal remedies. Long experience has almost destroyed my faith in the efficacy of even the best specifics. But were I called upon to point out any one remedy for the greatest part, not only of the diseases, but of the vices also of society, I would declare it to be the strict attention of mothers to the nursing and rearing of their children. "Would you have mankind return all to their natural duties," says the eloquent ROSSEAU, in one of his fine sallies of sentimental enthusiasm, "begin with mothers of families: you will be astonished at the change this will produce. Almost every kind of depravation flows successively from this source: the moral order of things is broken, and nature quite subverted in our hearts: home is less cheerful and engaging: the affecting sight of a rising family no more attaches the husband, nor attracts the eyes of the stranger: the mother is less truly respectable, whose children are not about her: families are no longer places of residence: habit no longer enforces the ties of blood: there are no fathers, nor mothers, children, brethren, nor sisters: they hardly know, how should they love, each other? each cares for no one but himself; and when home affords only a melancholy solitude, it is natural to seek diversion elsewhere.

"But," continues he, "*should mothers again condescend to NURSE THEIR CHILDREN*, manners would form themselves: the sentiments of nature would revive in our hearts: the state would be re-peopled: this principal point, this alone, would reunite every thing. A taste for the charms of a domestic life, is the best antidote against corruption of manners. The noise and bustle of children, which is generally thought troublesome, becomes hence agreeable: they render parents more necessary, more dear to each other, and strengthen the ties of conjugal affection. When a family is all lively and animated, domestic concerns afford the most delightful occupation to a woman and the most agreeable amusement to a man. Hence, from the correction of this one abuse, will soon result a general reformation: nature will quickly re-assume all her rights: let wives but once again become mothers; and the men will presently again become fathers and husbands."

To this sketch, drawn by the pencil of so great a master, I shall only add, that the happy consequences of such a reform would be no less striking in a medical than in a moral point of view. A stop would be put to the cruel ravages of death in early life. The long catalogue of infantile afflictions would almost become a blank, or contain nothing to excite alarm. Every child invigorated by his mother's milk, would, like the young HERCULES, have force sufficient to strangle in his cradle any serpents that might assail him.—Occasional illness would be to him only part of a necessary course of discipline, to enure him by times to bear pain with manly fortitude.—In short, health, strength, and beauty, would take place of puniness, deformity, and disease; society would be renovated; and man, instead of dwindling away, as he now does, by a gradual degeneracy, would soon rise to the original perfection of his nature.

If you entertain any doubt of the truth of what is here advanced look at other parts of the animated creation, and your doubts will im-

mediately vanish. Wild animals never degenerate: they bring forth and rear their young with undiminished strength. And why? Because the females, obedient in every thing to the impulses of nature, nurse their offspring, and watch over them with the most tender solicitude, till they can provide for themselves. Not only the inhabitants of the howling wilderness, the she-wolf and the fell tygress, but even the monsters of the great deep, draw out their breast and give suck to their young. Will woman then suffer herself to be stigmatized as the only unfeeling monster that can desert the issue of her own womb, and abandon it to the care of another? Will she alone entail the curse of her unnatural conduct on her hapless posterity?

But let me vindicate the female character from so foul a reproach. It is not so much the fault of the women, as of what is improperly called civilized society. In its ruder state, this never happened. It never happens among savage nations. I have already mentioned some remarkable instances of their parental tenderness. The influence of so strong a principle can be weakened only by the prevalence of vice, and of artificial refinement. Wherever an innocent simplicity of manners prevail, the children are not brought up by proxy: the women are not satisfied to be mothers by halves, as an old writer expresses it,—to bring forth, and then cast off their offspring. They think with him, that nothing can be more contrary to nature, than such an imperfect sort of mother, who, after having nourished in her womb, and with her blood, something which she did not see, refuses now her breast-milk to what she sees living, become a human creature, and imploring the assistance of its parent!

In the polished, or rather the depraved circles of social life, those sentiments are either unfelt or disregarded. Women enervated by luxury, allured by a false taste for mistaken pleasure, and encouraged by shameless example, are eager to get rid of their children as soon as born, in order to spend the time thus gained from the discharge of their duty in dissipation or indolence. Let not husbands be deceived: let them not expect attachment from wives, who, in neglecting to suckle their children, rend asunder the strongest ties in nature. Neither conjugal love, fidelity, modesty, chastity, nor any other virtue, can take deep root in the breast of a female that is callous to the feelings of a mother. I am aware of the little tricks that are so often played off by new-married women to keep up the show of a wish to nurse their children, while every engine is secretly employed to make the deluded husband conjure her to relinquish her design, for fear of the injury it might do her constitution. If she has not injured her health by vice, nursing will not lessen, but increase her strength; and if any constitutional defect renders her wholly unfit for suckling her child, she ought to abstain from procreation. The woman who cannot discharge the duties of a mother, ought again and again to be told, that she has no right to become a wife.

In cases of accidental injury or disease, where it may be impossible for the mother, or highly improper on her part, to give the child the breast, she is to be pitied in being thus deprived of the greatest pleasure of life, the pleasure of feeding and rearing her own offspring. But the number of those women who really cannot suckle is very small, compared with those who *will not*. The latter excite our indignation—not our pity: they stifle every emotion of tenderness; they are deaf to

the voice of nature: they sacrifice the most important duty to vicious pursuits; and madly barter joys that will please on every reflection, for such as never can bear to be recalled.

Little do those dissipated mothers think of what their poor infants are likely to suffer, when committed to the care of hirelings. Ought they not to consider, that the woman who parts with her own babe to suckle one of theirs, unless she is impelled by the keenest distress, gives a proof in the first instance of her not being a good mother? How then is it to be expected that she should become a good nurse? Even should she acquire, in time and from habit, a tender affection for her foster-child, ought not a mother of any sensibility to take alarm at the idea of having that child's love transferred from herself to a stranger? Indeed, the claims of the nurse who does her duty faithfully, are greatly superior to those of the parent who neglects her's. It was a saying of *SCIPIO AFRICANUS*, that he took her to be more his mother who had nursed him for two years, though she had not brought him forth, than her who, after she had brought him into the world, deserted and abandoned him. But I am still better pleased with the anecdote related by *VAN SWIETEN*, of a Queen of France, who gave her son suck, and would not desist from so doing even when she was taken ill of an intermitting fever. It happened during one of the fits, that another matron gave her breast to the thirsty and crying child; at which the queen was so much displeased, that she thrust her finger into the child's mouth, in order to excite a vomiting, being unwilling that another should perform any part of a mother's office.

I shall not enlarge any farther on this subject, I hope I have said enough to excite good mothers to the most assiduous observance of their duty, and to warn others of the evils inseparable from the neglect of it. Such as may resolve to obey the dictates of nature and reason, will find the following directions of some use in the prosecution of so laudable a purpose.

The mother, after delivery, should be indulged with a few hours sleep, to recover from the fatigue which she has lately undergone, and to allow due time for the secretion of the milk, before the infant is put to the breast. The child can suffer no inconvenience from this delay. Being replete with blood and juices, he has not the least occasion for any fresh supply of nutriment, till the mother is prepared by necessary repose to give him the grateful and spontaneous beverage. I before pointed out the means to be employed when the nipples are not sufficiently prominent to afford a proper hold. But whatever the form of the nipples may be, they should be washed with a little warm milk and water, in order to remove the bitter viscid substance, which is furnished round them to defend the tender parts from excoriation. I would also advise the mother, during the whole time of her nursing, to wash the nipples, immediately after giving suck, in warm water. Whenever this can be conveniently procured; and, in case the supplies of the nutritive fluid are very copious, or seem to exceed the infant's wants, she may always press out a little of the milk before the child is put again to the breast, as the first drops issuing from the fountain at every treat are the most liable to sourness and putrescency.

I need not urge a fond mother freely to give her child what nature freely produces. The only check in this respect is not to suffer the in-

fant to sleep at the breast, or to suck till vomiting ensues. But any attempts to entice the baby to the use of spoon-meat are still more improper. This is a common practice, not only with hired nurses, but even with affectionate mothers, from a foolish though prevalent idea of lessening the demands on the breast, or of strengthening the child with additional nourishment. If the nurse be not irregular in her own manner of living, she need not fear having a plentiful supply for the infant; and she may rest assured that her milk is far better suited to his young stomach, and will afford a greater quantity of nutritious chyle, than any preparation which art can devise.

Another error no less prevalent, and more injurious than the former, is the idea that a woman, when nursing, cannot eat and drink too *heartily*, as it is termed, to support her own strength and that of the infant. On the contrary, the tainted stream of intemperance must enfeeble and disorder the child, while the nurse really lessens her own power of giving suck, and invites the attacks of a fever by her thoughtless indulgence. The cooling regimen before recommended must be strictly complied with for the first week after delivery; and though a more liberal diet may then be allowed, yet this allowance must not extend to gross meats or heating liquids. A pint of porter or ale twice a-day for at least a fortnight more, will be quite sufficient, and animal food should be very sparingly used for a much longer period. Indeed it would be happy for the children, as well as for their nurses, if the latter would confine themselves without any painful restraint, to the salutary varieties of a milk and vegetable diet. It is a great mistake to suppose, that a nurse is better fitted for her office by living on animal substances: the reverse is the truth. The milk of women who live wholly on vegetables, is more abundant in quantity, will keep longer, and is far sweeter and more wholesome than what is prepared from animal food, which besides its inflammatory tendency, must subject the children to gripes and worms.

These remarks are merely designed to correct some vulgar errors respecting the quantity and quality of the aliment most proper for nurses, but not to impose upon any women the necessity of a total change from her former and usual manner of living. I would have her continue the temperate use of what she has found by experience to be most conducive to her health: and that will also agree best with her child. Her natural appetite may be safely indulged; but gluttony must be repressed, and a depraved taste for spirituous liquors, or high-seasoned food, must never be gratified.

It has been just hinted that the breast-milk of a woman in good health is abundantly sufficient for an infant's support. Nothing else should enter his lips for at least three or four months after the birth. A little thin pap or panada may then be occasionally introduced, with a view of familiarising it to the child's taste, and thereby lessening the difficulty and danger of a complete and sudden alteration at the time of weaning. But no spices, no wine, no sugar, should at any time be mixed with his food or drink. These and the like contrivances of silly women to make an infant's spoon meat what they call palatable and nourishing, are sure to vitiate his natural taste, to inflame his blood, and to fill the stomach with slime and acidities. Sugar, in particular, has another very bad effect: its frequent use not only gives children a dis-relish for a wholesome simplicity, but entices them to swallow more than they otherwise would,

or than they want, and thus makes gluttons of them even before they can be strictly said to eat.

Infants are commonly deprived of the breast too soon. What people call solid food is supposed to contribute more to their growth and health. But in the first place, milk, though a fluid, is immediately converted into a solid substance in the stomach, where it is soon after digested, and then affords the best nutriment possible. It also appears contrary to nature to put solid substances into the mouth of a child, before it is furnished with teeth to chew them. I should therefore look upon the previous cutting of the teeth as the surest indication of the proper time for weaning children. I do not mean to lay this down as an invariable rule. The state of the nurse's health, as well as of the child's should be duly considered. It seems only that the cutting of the teeth gives a sort of hint of the use to which they may be applied. It is farther remarkable that, during the continuance of this usually sharp and painful operation, children, as it were instinctively, carry every thing that is put into their hands up to their mouths. Give them on such occasions crusts of bread, pieces of biscuit, dried fruits, or fresh liquorice root, which they may suck, and chew. Corals, glass, and the like hard bodies, are very improper, as they will either bruise the gums, and cause an inflammation, or make them hard and callous by continual rubbing, so as to render the cutting of the teeth still more difficult, and the pain more acute and lasting.

A few weeks before the intended time of weaning, that is to say, in the interval between the first symptoms of cutting the teeth and the appearance of at least four of them, spoon-meat should be given more frequently, and in greater quantity, reducing in the like degree the proportion of breast-milk, till the gradual increase of the one and diminution of the other render the change almost imperceptible. The best spoon-meat that I know consists of bread and milk, prepared in the manner pointed out in my Domestic Medicine; that is, first boiling the bread in water, afterwards pouring the water off, and then mixing with the bread a proper quantity of new milk unboiled. I there observed, that milk used this way was more wholesome and nourishing than when boiled, and was less liable to occasion costiveness.

It is not necessary, however, to confine children, after they are weaned, to one particular sort of food. The bill of fare may be gradually enlarged with the child's growth, provided always that it consist of an innocent variety. He may have bread and milk at one time, bread pudding at another, and bread sliced in broth, or in the gravy of roast meat, diluted with water, now and then, till at length his teeth being properly grown, and fit to chew meat itself, he may be allowed a little of it at dinner, with a due proportion of bread and of wholesome vegetables. But I must forbid in the most positive manner any artificial sweetening of his food, all spices or seasoning, except salt, all sorts of pastry, butter in every form, unripe fruits, and fermented liquors.

As I have great reliance on the discretion of good mothers, when well informed of their duty, I should be sorry to tire them by too many details, or to fetter them by unnecessary restraints; I shall therefore only add one caution more on this part of the subject, and that is, not to adopt the pernicious custom of giving food or drink to children during the night. Even in the course of the day, they should

not be crammed every hour, and trained up in habits of early gluttony. Temperance is that sure preservative of health, which they cannot be taught to practice too soon. Let them eat freely at proper intervals; and the longer they are kept from the things already forbidden, the more rapidly will they thrive, and the greater number of diseases will they escape.

As I have admitted that cases may occur, in which it would be impossible or improper for a mother to suckle her own child, I shall suggest a few hints on the choice of a nurse, and the remaining duties of the parent. From what I have said of the admirable manner in which the milk of a woman newly delivered is adapted to the various wants of a child newly born, it will be easily inferred, that, when the mother cannot discharge that important duty, a nurse who has just lain-in ought to be preferred. Otherwise the milk will not have the purgative quality proper to bring away any remains of the *meconium*, nor will it be exactly suited to the infant's weak powers of digestion. Inconveniencies always arise the moment we oppose the intentions of nature. This is what obliges us to have recourse to the precarious aid of art. When there is a difference of more than a week in the time of delivery between the mother and the nurse, some opening medicine may be necessary to cleanse the first passages: A table-spoonful of whey or water, with the addition of a little honey or raw sugar, will commonly answer the purpose. But the infant's stomach cannot be so easily reconciled to foreign sustenance, or made strong enough to digest the thick milk prepared for an older child.

On the other hand, many difficulties must attend the very expedient which I propose. It will not be easy, except in cities like London where there are several lying-in hospitals, to get nurses newly delivered for new-born infants. Then as the nurse cannot be removed to the child, the latter must be taken to the nurse, and must remain with her till she can go to the parent's house. If an exact coincidence as to the time of delivery be made the leading consideration, an improper person may be fixed upon from that circumstance alone, though unqualified in all other respects. Thus, as I before hinted, whatever course we take, when we deviate from nature, we shall find numberless perplexities and obstacles in our way.

Almost every body is a judge of the other requisites in a nurse, such as health, plenty of breast-milk, the thriving state of her own child, cleanliness and good temper. The last quality, though of very great importance, is seldom inquired into. Parents are commonly satisfied with the healthy appearance of the nurse and her child, or with a mid-wife's favourable account of her milk; and seem to forget that a good disposition is as essential as a good constitution. I do not say that an infant will suck in the vices of his nurse; but he will certainly suffer from them. They are doubly injurious in spoiling her milk, and lessening her tender care of the child that is at her mercy. The twin founders of the Roman empire were said to have been suckled by a she-wolf; I should think it much more unlikely that an infant could be properly nursed by a passionate or ill tempered woman.

The mother is not to suppose herself relieved from all trouble by the choice of even a good nurse. The latter may give the child the breast; but she should be directed and zealously assisted by the for-

mer in the discharge of every other duty. This will render her labour easy, and her situation comfortable. She should also have every indulgence consistent with good sense and with the rules before laid down. She should not be debarred from the occasional company of her husband: a rigorous chastity, or a total abstinence from wedded joys, is often as hurtful to the nurse and child as immoderate gratification. It is by humouring her that you will engage her to humour you in the strict observance of all your reasonable injunctions.

The child's father also should pay very assiduous attention to the proper treatment of his offspring. His advice, his encouragement, his superintending care, will have the happiest effect. Is not our admiration of *CATO*'s character increased, when we read in *PLUTARCH*, that the man, who governed in Rome with so much glory, would quit every business in order to be present when the nurse washed and rubbed his child? Such instances are seldom to be met with in our times; we think ourselves far above all the trifling concerns of the nursery. Yet, according to the remark I made on the same subject in another work, it is not so with the kennel or the stables: people of the first rank are not ashamed to visit these places, and to see their orders for the management of their dogs and their horses obeyed, though any of those sportsmen would blush where he surprised in performing the same office for that being who derived its existence from himself, who is the heir of his fortunes, and the future hope of his country.

If *CATO*'s wisdom and parental affection could be heightened by contrast, I might easily point to a noble duke who is more attentive to the breed of dogs than to that of the human species, and who has laid out more money upon the magnificence of a kennel, than he ever expended for the relief of poverty. I am told that his grace is very particular in the choice of skilful nurses to wait upon the females of his canine family, when they are sick, or *in the straw*. I do not blame his tenderness for brute animals; but I am sorry it should be confined to them when a more natural sphere lies open for the exercise of his humanity. This hint will be taken by those for whom it is intended: *qui facit ille capit*.

SECTION VI.

Of Exercise and Rest during Infancy.

I MADE use of the plainest reasoning I could in the first Chapter of my "Domestic Medicine," to show how much the health, the growth, and the strength of children, depended on exercise; and to warn parents of the melancholy effects of inaction, and of sedentary employments in early life. It does not appear to me that any new arguments on that subject are necessary; but it may be of service to mothers and nurses to be informed how the principles there laid down should be reduced to practice during infancy. They are otherwise apt to fall in'to great errors, not considering that as much mischief may often arise from untimely and violent exercise, as from the neglect of it when most essential.

It has been justly observed, that children require no exercise for

the first and second months after their birth, but a gentle motion somewhat like that to which they had been accustomed in the mother's womb. A frequent change of posture, however, is advisable, lest by always laying them on the same side, or carrying them on the same arm, their soft limbs may be incuded into an improper shape. But violent agitations of any sort may do them much greater injury, by deranging the fine structure of the brain, and giving rise to the incurable evils of intellectual or nervous weakness.

Other parts of the body, as well as the brain, are exposed to great danger by tossing infants on high, or rapidly *dancing them*, as it is called, before their little limbs have gained some degree of firmness. A great deal of the spine is gristly, and the breast entirely so. Consider then what may be the effect of the grasp or strong pressure of your hands against those places in order to prevent the child from falling. As he advances in age, his bones acquire solidity, and his whole body becomes able to endure a little shock. Brisk, lively, and frequent exercise, will then be of the greatest service to him; and you run no risk of laying the foundations of any disease, or of destroying any part of that admirable symmetry in the human frame on which health and beauty alike depend.

In the course of a few months, a well-nursed child, unfettered by any check on the free motion of his limbs, will be able to exercise himself, and to gather strength from every new effort. When you take him into the fields, which you should do every day in fine weather, let him roll upon the dry grass; and, when in the nursery, upon the carpet. He will soon learn the use of his legs, without the least possibility of making them crooked by the pressure of so light a body. When he begins to walk, you must help him a little in his first experiments: lead him about with the support of your hands, and then by the finger only, till you perceive he can do without your assistance. Go-carts and leading strings not only retard the increase of a child's activity, and produce an awkwardness of gait very hard to be corrected afterwards, but often affect the chest, lungs, and bowels, in such a manner as to pave the way for habitual indigestion or costiveness, and for asthmatic or consumptive complaints.

Nothing can be more ridiculous than the numberless contrivances of mothers to teach their children to walk, as if it was a thing to be learned by their instruction; and to keep them propped up by wooden machines, or suspended by back strings, as if their lives and limbs were to be endangered by the least tumble. They are too near the ground, and too light to hurt themselves by falling. Besides, the oftener they fall, the sooner they will learn, when down to get up again; and the only way to make them sure-footed, is to accustom them betimes to trust more to the proper management of their own legs, than to any artificial support.

As to the best time for exercise during infancy, it admits of a very simple regulation. That sort of passive exercise, which consists of agreeable motion in a nurse's arms, must never be omitted after the use of the bath in the morning, and cannot be too often repeated in the course of the day. But when the child is able to take exercise himself, it will be easy to manage matters so as to let him have as much as he likes before meals, and never to rouse him into action upon a full stomach. If left to himself, or to nature, he will then be more inclined to stillness and repose.

The subject of rest requires some farther consideration. A healthy,

thriving child sleeps more than two-thirds of his time for a few weeks after his birth. So strong a propensity must be indulged by day as well as by night; but, with judicious management, he will be gradually brought to want and to enjoy repose by night only. This is evidently the order of nature; and such a habit, begun in childhood, and continued through life, will contribute more to its enjoyment and duration, than any one maxim or rule of health ever yet laid down by human wisdom.

Nurses, indeed, are too apt, for their own ease, or to gain time for other concerns, to cherish the sleepy disposition of infants, and to increase it by various things of a stupefactive quality. All these are extremely pernicious. I would not suffer opiates, under the name of cordials or carminatives, or in any shape or form whatever, to be given to a child in health. The only composing means which art may at any time be allowed to employ, are gentle motion and soft lullabies. I very much approve of the little cots now in fashion, which being suspended by cords, are easily moved from side to side, and promote the desired end, without the danger which violent *rocking* was often attended with. Those swinging cots are in exact conformity to the suggestions of the best medical writers, ancient and modern. GALEN mentions the propriety of placing children to sleep in *tectulis pendentibus*, or *hanging little beds*; and the reason for such a contrivance is thus explained, with great clearness and simplicity, by *Van Swieten* :

“As the *fetus*,” says this accurate observer of nature, “hanging from the naval-string in the womb, is easily shaken this way and that, while the mother moves her body; hence it has been reasonably presumed, that new-born infants delight in such a vibrating motion. They have therefore been laid in cradles, that they might enjoy this gentle exercise, and be more and more strengthened. Daily experience teaches us, that the worst-tempered children are soothed by this motion, and at last sink into a sweet sleep. But the shaking of the cradle should be gentle and uniform: on which account, *those cradles that hang by cords are the best of all*, as they may by a slight force be moved equably, and without any noise. At the same time, the motion communicated to these cradles is imperceptibly diminished, and at last ceases without any shock.”

In England, as well as in most other parts of Europe, cradles fixed upon wooden *rockers*, have been in use from time immemorial. No evil could arise from their continuance, while in the hands of careful and affectionate mothers; but, when left to the management of impatient nurses, or of giddy boys and girls, the delicate texture of an infant's brain would often be exposed to great danger. The agitation of a cradle by such persons has been compared to the jolting of a stage-coach basket: and I believe that a poor child would suffer as much from the one as from the other, where he not a little more confined in the former. Is it possible to conceive a more shocking object than an ill-tempered nurse, who, instead of soothing the accidental uneasiness or indisposition to sleep of her baby, when laid down to rest, is often waked up to the highest pitch of rage; and, in the excess of her folly and brutality, endeavours by loud, harsh threats, and the impetuous rattle of the cradle, to drown the infant's cries, and to force him into slumber!—She may sometimes gain her point, but never till the poor victim's strength is exhausted.

To guard against this evil, the transition from rocking-cradles to fixed

bed-steads was not necessary. The gentle motion before described, at once so natural and so pleasing to infants, may be given them with ease and safety in little baskets suspended by cords, as used in the Highlands of Scotland under the name of *creels*, or in the more elegant contrivances of *swinging cots*, which are now coming into fashion. I am sorry to see any of the latter surrounded with close curtains, which have almost as bad an effect as confining the infant in a room of the same dimensions. One green curtain may be hung at some distance from his face, so as to intercept the light in the day-time but not to obstruct the free communication of air, or to reverberate the exhalations from his lungs and body. Green window-blinds in the sleeping-room will answer the same purpose. Care should also be taken not to expose infants either in bed or out of bed to an oblique light, or they will become squint-eyed. They should be kept facing it when up, and exactly the reverse, when laid down to rest. If the light come upon them from one side, their eyes will take that direction, and thus they will get the habit of looking crosswise.

It is of still greater moment to pay strict attention to their bedding. Nothing can have a more relaxing tendency, or be at the same time more unfavourable to cleanliness, than beds and pillows stuffed with feathers. These absorb and retain the perspirable matter, as well as every other impurity, so that the child who sleeps upon them must inhale the most noxious vapour, while its action on the surface of his body must destroy the energy of the skin, and render his whole frame both within and without the ready receiver of disease. Horse-hair cushions and mattresses are far preferable; but if soft bran were used instead of hair for the stuffing of children's beds and pillows, these would more readily let any moisture pass through them, would never be too much heated, and might be frequently changed or renewed without any great trouble or expense. My former hints concerning a child's dress are equally applicable to his bed-clothes, which should be loose, easy, and as light as may be consistent with due warmth. I say the less on the subject of cold, as most mothers are too apt to run into the opposite extreme.



CHAP. V.

OF DWARFISHNESS AND DEFORMITY.

THE chief causes of defects in the size and form of Children, have been occasionally touched upon in the preceding chapters, but the prevalence of such evils, and the lamentable consequences with which they are followed, require to be more fully and distinctly considered. I must not weaken the influence of important truths by suppressing any part of them, or by leaving them too widely scattered. I must shake off the restraints of false delicacy, and by candidly pointing out the grand source of so many private and public calamities, endeavour to prevail on parents to adopt the most effectual remedy. Let not the fairest part of the creation be offended with me for saying, that, in all cases of dwarfishness and deformity, ninety-nine out of a hundred are owing to the folly, misconduct or neglect of mothers. The following remarks are not written in the spirit of reproach, but with a view to the most desirable reform.

It would be difficult to mention any thing in which society is so deeply interested, as in the proper union of the sexes. This has often engaged the attention of legislators, and marriages have been prohibited in various diseases and personal disqualifications. We have even an instance upon record, where the community interposed, when degeneracy in the royal line was likely to be the consequence of their king's injudicious choice of a wife. History tells us, that the Lacedæmonians 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."

I am aware that any checks on the liberty of individuals in their matrimonial contracts, would be deemed inconsistent with the freedom of the British constitution; and indeed, it is strange that laws should be necessary to convince men, that health and form are, or ought to be, powerful considerations in the choice of a wife. Every part of animated nature proclaims aloud, that *like begets like*; and though a puny, dwarfish, or distorted woman, may become a mother, it will often be at the risk of her own life, and always with a certainty of transmitting some of her infirmities to her innocent and ill-rated offspring.

But the inheritance of parental weakness and deformity is one of those curses which argument or expostulation cannot avert. The voice of reason is disregarded, and objects of natural desire are over-looked, by avarice and pride. I shall therefore confine my observations to such evils as may be presumed to admit of a cure, because they arise rather from error and folly, than from depravity or wilful perverseness.

It seems to be the natural wish of every pregnant woman to bring forth stout, healthy, and beautiful infants. Yet, *Mr. Locke* did not hesitate to assert, that, if mothers had the formation of their own children in the womb, we should see nothing any where but deformity. The *fœtus* is happily placed in better hands, and under the guardian care of nature. But though it cannot be new-moulded, altered in its shape, or disfigured by the mere fancies and capricious desires of the mother, it may suffer no less injury from her ignorance, her folly, or misconduct. I hope I made it sufficiently evident in my cautions to women during pregnancy, that the *fœtus* may not only be checked in its growth, but marked also and distorted by tight or heavy pressure on the womb,—by stays, girdles, or the like improper ligatures. In vain does nature provide for the easy and gradual enlargement of the embryo, if her benignant purposes are counteracted by the bracing restraints of a silly mother's dress.

After the birth, as I before observed, still greater danger awaits the infant from attempts to mend his shape,—to keep his head and limbs in proper form,—and to secure him against accident. The worst accident that can befall him is far less alarming than the certain consequences of such presumptuous improvements and ill-directed care. He becomes puny, stunted, deformed, diseased; and, though perhaps cast "in nature's happiest mould," is sure to be spoiled by the disfiguring touch of man.

I have already explained the fatal effects of meddling with the soft bones of an infant's skull at the birth; of confining them by any check; or covering them too warmly. I showed how wonderfully the pliancy of those bones was contrived to yield to obstructions, for the purpose of promoting easy and safe delivery, and afterwards to resume of themselves their proper place and form, if they had been squeezed together in the

act of parturition. I also insisted on the importance of a thin and light cap, that the air may act upon them freely, to render them hard and compact, and of course fitter to defend the brain from cold or any external injury. But while midwives and nurses are suffered to pursue a contrary plan, we need not wonder at meeting with so many instances of early convulsions, of idiotism, and of heads misshapen, infirm, or susceptible of cold upon exposure to the least breath of air.

I was no less earnest in my cautions against the use of bandages, or of oppressive covering for any other part of the tender frame. I did not magnify the danger, but simply stated the result of frequent observation. I never knew a single instance of a child's attainment to full size and vigour, after having been cruelly confined during infancy in swathes or swaddling-clothes. How, indeed, is it possible, when the action of the heart, the lungs, the arteries, and of all the vital organs, is cramped and enfeebled:—when the free circulation of the blood and secretion of the humours are prevented; and when the impatience of restraint urges the infant to waste all his strength in continual but unavailing efforts to burst his fetters.

As I knew that external objects were more likely to make some impression on the minds of my female readers, than arguments drawn from the structure of the human frame, I endeavoured to fix their attention first on the young of brute animals, many of which, as kittens, puppies, &c. though very delicate when brought into the world, never want to be strengthened, kept in due form, or preserved from accidents, by means of swaddling bands. Children have as little occasion for any such defence against danger. In reply to the idle objections of mothers and nurses, founded on the difference in point of alertness between kittens and infants, it has been admitted, that the latter are certainly heavier than the former, but they are more feeble in the same proportion: they are incapable of moving with sufficient force to hurt themselves; and if their limbs get into a wrong situation, the uneasiness they feel soon induces them to change it. Is it not absurd to put them to real pain by galling ligatures for fear of imaginary bruises; and to distort their tender bodies effectually by squeezing them into a press, lest they should grow distorted from being left at liberty to stir?

While I was writing on this part of the subject last autumn, I could not help being struck with another illustration of it, which presented itself every day to my view. Above three hundred cattle were grazing in a field before my window, all of them nearly of the same size, well formed and vigorous, without the least mark of feebleness or distortion. They had not been kept panting, when young, in tight and cumbersome wrappers, nor had they been stunted in their growth by improper management. They might be truly called the offspring of nature, reared and brought up in conformity to her laws. How painful and humiliating did I feel the contrast, when I compared them with the foster-children of art, with bipeds of various shapes and sizes,—with the hunch-backed, crooked-legged, lame, ricketty, diminutive, and deformed human beings, whom I often saw walking through the same field!

Should it be alleged, that inferences drawn from a species so different from our own are not conclusive, let us next turn our eyes to what takes place in savage nations, who are all known to be tall, robust, and well proportioned. Indeed, any instance to the contrary is so very rare,

and extraordinary among them, that it was vulgarly believed they put all their puny and misshapen children to death. The fact is that they have not any such, because they never thwart the purposes of nature, or disobey her dictates in the treatment of their infant progeny.

The perfect form of the North American savages will be more clearly conceived from the following anecdote of the president of the Royal Academy, than from a whole volume of travels. This justly admired painter, who is a native of America, having displayed in his youth strong proofs of uncommon talents was sent to Italy, at that time the grand school for the imitative arts. Upon his first seeing the *Apollo Belvidere*, he is said to have exclaimed, "O! what a fine *Mohawk* Indian!" Almost every body has at least heard, that the *Apollo Belvidere* is one of the most beautiful and exquisite pieces of statuary in the world.

I must not here omit *BUFFON'S* account of the method of bringing up their young, pursued by other unpolished nations, as we proudly call them. "The ancient Peruvians," says he, "in loosely swathing their children, left their arms at full liberty. When they threw aside this dress, they placed them at freedom in a hollow, dug in the earth, and lined with clothes. Here their children, unable to get out and crawl into danger, had their arms quite loose, and could move their heads and bend their bodies, without the risk of falling or hurting themselves. As soon as they were able to stand, the nipple was shewn them at a distance, and thus they were enticed to learn to walk."

The same writer observes, "that the young negroes are often in a situation in which it is with more difficulty they come at the breast. They cling round the hip of the mother with their knees and feet, and by that means stick so close, that they stand in no need of being supported, while they reach the breast with their hands, and thus continue to suck, without letting go their hold, or being in any danger of falling, notwithstanding the various motions of the mother, who all the while is employed in her usual labour. These children begin to walk at the end of the second month or rather to shuffle along on their hands and knees; an exercise that gives them ever afterwards a facility of running almost as swift in that manner as on their feet."

To this very interesting description, I can add, upon the testimony of a friend of mine who had been several years on the coast of Africa, that the natives neither put any clothes on 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 complaint. Good health, as well as a good shape, is the consequence of their free, unconfined motion during infancy: while among us, on the contrary, restraint, or, what is the same thing, tight pressure, checks growth, distorts the frame, and renders it at once diminutive, unsightly and infirm. There is always a close and very natural connection between deformity, weakness and disease.

The more we enlarge our survey of the human species in various parts of the world, the less doubt shall we entertain of the principal cause of dwarfishness and deformity. We shall find that mankind are stunted and distorted in proportion to their degree of civilization; that people who go almost naked from their birth, and live in a state of nature, are well-shaped, strong, and healthy:—and that among others who boast of

higher refinements, the greater attention is paid to dress, the nearer are the approaches to the stature and to the weakness of pigmies.

STERNE, who knew so well how to enliven the most serious subjects, represents himself as struck with the number of dwarfs he saw at Paris.

I am very sorry to observe, that we need not go so far as Paris to be convinced of the lamentable effects of tight clothes, bad nursing, and confined impure air. Many of these matters are not much better ordered in the English metropolis: every narrow lane in London swarms with ricketty children; and though we cannot say of the people whom we meet with in the streets, that every third man is a pigmy, yet we may with strict truth assert, that many of the women are evidently stunted in their growth, and, both in size and robustness, are below the standard of mediocrity. With regard to females, indeed, born and bred in this city, as more attention is unfortunately paid to the tightness of their dress, and to the artificial moulding or pretended improvement of their shape when young, the far greater part of them must be of a diminutive stature, and numbers are distorted either in body or limbs.

CHAP. VI.

BANEFUL EFFECTS OF PARENTAL TENDERNESS, OR OF WHAT MAY BE CALLED AN EXTREMELY DELICATE AND ENERVATING EDUCATION.

HAVING repeatedly had occasion to point out the evils that must arise from the inattention of mothers to any part of their duty, and especially from abandoning their children to the management of hired nurses. I shall now proceed to explain the bad consequences of the opposite extreme. Too much care operates in the same manner as too little, and produces similar effects. A case or two, selected from many which have occurred to me in the course of practice, will sufficiently illustrate the truth of this assertion.

The grand rule of life, which reason and experience concur to recommend is always to pursue the *golden mean*; to steer a middle course between dangerous extremes; and to take care, in avoiding any one vice or folly, not to run into its opposite. Mothers are too apt to forget this admirable lesson, in nursing and rearing their children. They do not seem to know the proper medium between cruel neglect or indifference on the one hand, and the fatal excesses of anxiety and fondness on the other. In giving way to the strong impulses of natural affection, they commonly go too far, and do as much mischief to their offspring by misguided tenderness, as by total insensibility.

It is not my intention to combat those fine feelings of mothers, without which the human race would soon be extinct. I only wish to see them kept a little more under the controul of reason. I wish to see the most amiable of all passions, maternal love, displayed in promoting the health and fortifying the constitutions of children,—not in relaxing them by every species of softness and effeminacy. When this passion is carried beyond the proper bounds, it ceases to be love: it becomes a sort of blind infatuation, always injures, and often destroys the object of its regard. Mothers should never forget the fable of the monkey snatching up

one of its young in a moment of alarm, and, in order to save it from danger, squeezing it with so close an embrace as to occasion its death. What a just picture of darling children so frequently *killed by kindness*!

Nature provides for the helpless state of infancy in the strong attachment of parents. A child comes into the world, chiefly dependent on the mother's care for the preservation of its being. She is tremblingly alive to all its wants. Every tender office she performs increases her fond solicitude, till at length it gains the full possession of her affections, and her sole wish is to make it happy. What a lamentable thing it is that she should so frequently mistake the means!

Indeed there cannot be a greater mistake than to imagine that extreme tenderness or delicacy of treatment will promote the health, the growth, the present or the future happiness of a child. It must have quite a contrary effect. Instead of supplying the real calls of nature, it creates a thousand artificial wants: instead of guarding the infant from pain and disease, it renders him much more susceptible of both, and less capable of enduring either: instead of happiness, it ensures misery in every stage of his existence, as the infirmities of body and mind, which are contracted in the cradle, will follow him with incurable obstinacy to the grave.

The writer, whom I quoted on the subject of suckling, is no less forcible in his censure of maternal fondness. He says, the obvious paths of nature are alike forsaken by the woman who gives up the care of her infant to a hireling, or, in other words, who neglects the duties of a mother; and by her who carries these duties to excess;—who makes an idol of her child; increases his weakness, by preventing his sense of it: and, as if she could emancipate him from the laws of nature, hinders every approach of pain or distress: without thinking that, for the sake of preserving him at present from a few trifling inconveniences, she is accumulating on his head a distant load of anxieties and misfortunes;—without thinking that it is a barbarous precaution to enervate and indulge the child at the expense of the man.

He then begs of mothers to attend to nature, and follow the track she has delineated;—she continually exercises her children, and fortifies their constitution by experiments of every kind; inuring them betimes to grief and pain. In cutting their teeth, they experience the fever; griping colics throw them into convulsions; the hooping-cough suffocates, and worms torment them; surfeits corrupt their blood; and the various fermentations to which their humors are subject, to cover them with troublesome eruptions; almost the whole period of childhood is sickness and danger. But, in passing through this course of experiments, the child gathers strength and fortitude; and as soon as he is capable of living, the principles of life become less precarious.

“This,” he adds, “is the law of nature. Why should you act contrary to it? Do you not see that, by endeavouring to correct her work, you spoil it, and prevent the execution of her designs? Act you from without, as she does within. This, according to you, would increase the danger; on the contrary, it will create a diversion, and lessen it. Experience shews, that children delicately educated die in a greater proportion than others. Provided you do not make them exert themselves beyond their powers, less-risk is run in exercising, than indulging them in ease. Inure them therefore by degrees to those inconveniences which they

must one day suffer. Harden their bodies to the intemperature of the seasons, climates, and elements; to hunger, thirst, and fatigue."

As the philosopher was aware that the latter part of his advice would stir up all the fears and alarms of fond mothers, he takes some pains to convince them that it may be followed with perfect safety. He very justly observes, that, "before the body has acquired a settled habit, we may give it any we please, without danger; though when it is once arrived at full growth and consistence, every alteration is hazardous. A child will bear those vicissitudes, which to a man would be insupportable. The soft and pliant fibres of the former readily yield to impression: those of the latter are more rigid, and are reduced only by violence to recede from the forms they have assumed. We may therefore," he concludes, "bring up a child robust and hearty, without endangering either its life or health; and though even some risk were run in this respect, it would not afford sufficient cause of hesitation. Since they are risks inseparable from human life, can we do better, than to run them during that period of it wherein we take them at the least disadvantage?"—I leave this question to be duly considered by every mother who is not blind to the clearest evidence of truth, or wilfully deaf to the most commanding tones of eloquence and argument.

The familiarity of any object lessens our surprise at it, or there are few instances of human folly which would astonish us more, than that of a fond mother, who, in order to protect her child from a little pain or uneasiness while he is young, multiplies his sufferings when he comes to maturity. Strange infatuation! to sacrifice the man to the infant, and, through over-solicitude for a year or two after his entrance into life; to shorten its natural extent, and to fill up that contracted span of existence with weakness, irritability, and disease! Did any body ever think of rearing an oak plant in a hot-house, thence to be removed to the bleak mountain? And is the puny, enervated nursling better prepared to endure the transition from the lap of softness to all the accidents of a rugged and a stormy world?

As strong examples often make some impression where other modes of reasoning fail, I shall here beg leave to introduce the history of a young gentleman, whom I attended at a very early period of my practice, and who fell a victim to the excessive fondness of an indulgent mother. With every wish to promote her son's health and happiness, she was as far as respected intention, the *innocent* but absolute cause of totally destroying both. She brought on relaxation and debility, by her misguided endeavours to avert pain; and while she hoped to prolong the life of an only son, the means which she made use of for that purpose, not only abridged its duration, but precluded his power of enjoying it. Though he was buried at the age of twenty-one, he might be said to have died in his cradle; for life has been well defined, not to consist in merely breathing—but in making a proper use of our organs, or senses, our faculties, and of all those parts of the human frame which contribute to the consciousness, of our existence. That he never attained to this state of being, will fully appear from the following narrative.

Edward Watkinson was the only son of a country clergyman, of amiable manners and sound learning, but of a recluse turn of mind. The mother was a daughter of a London tradesman, and had been educated with extreme delicacy. She naturally pursued the same line of con-

duct towards her own child; and her fond husband was too much under the influence of the like fatal weakness. Many a child is spoiled by the indulgence of one parent: in the case now before us, both concurred to produce that enervating effect.

For some time after his birth, master *Neddy* was reckoned a promising boy. When I first saw him, he was about eighteen years of age: but, to judge by his look, one would have supposed him to be at least eighty. His face was long, pail, and deeply furrowed with wrinkles—his eyes were sunk in their sockets—his teeth quite decayed—his nose and chin almost touched each other—his breast narrow and prominent—his body twisted—his legs like spindles—his hands and fingers approaching nearly to the form of birds claws—in short, his whole figure exhibited the truly pitiable appearance of a very old man, sinking under the weight of years and infirmities into the grave.

It was a Midsummer I paid my first visit. I then found him wrapped up in clothing sufficient for the rigours of a Lapland winter, and so closely muffled that one could hardly see the tip of his nose. He wore several pair of stockings; his gloves were double, and reached his elbows; and, to compleat the absurdity of his dress, he was tightly laced in stays. Though armed in this manner at all points, he seldom peeped out of doors except in the dog days, and then ventured no farther than the church, which was only forty paces from his father's house. I believe this was the most distant excursion he ever made; and the extraordinary attempt was always accompanied with peculiar care, and many additional preservatives from cold.

The eye of his parents might be truly said to watch over him not only by day, but by night also, as he slept in the same bed with them, having never been permitted to lie alone, lest he should throw the clothes off, or feel the want of any immediate assistance. It did not once occur to his father or mother, that all the inconveniences which they so much dreaded, could not be half so injurious as the relaxing atmosphere of a warm bed, surrounded by close curtains, and impregnated with the noxious effluvia from their lungs and bodies.

His food and his drink were of the weakest quality, always administered warm, and by weight and measure. When I recommended a more nourishing diet, and a little generous wine, I was told that the strongest thing master *Neddy* had ever taken was *chicken water*, and that they durst not venture on wine or animal food for fear of a fever. Thus was the poor lad reduced almost to a skeleton, through the silly apprehension of a disease, of which he was not susceptible. Nature was in him too weak to spread a hectic flush even for a moment over his countenance, which had acquired the colour of a par-boiled chicken. All his vital powers were languid; and even his speech resembled the squeaking of a bird, more than the voice of a man.

When I spoke of exercise, I was told he took a walk every fine day in the hall, and that was deemed sufficient for one of his delicate constitution. I mentioned a horse—the mother was frightened at the very name of so dangerous an animal. On telling her, that I owed the firmness and vigour of my own constitution to riding every day, she began to think there might be something specific in it; and she therefore consented to the purchase of a little horse. But tame as the creature was, it did not quiet the mother's alarms. Master *Neddy*, though placed upon the

poney's back, was not entrusted with the reins. These were given in charge to a maid-servant, who led the horse round the orchard, while the cautious rider fastened both hands on the pommel of the saddle; and the father walking on one side, and the mother on the other, held him fast by the legs, lest he might be brought to the ground by any sudden start of his high mettled racer. This exhibition was too ridiculous not to excite the laughter of the neighbours: which soon put an end to master *Neddy's* equestrian exercise.

The timidity of a youth, thus brought up is more easily conceived than described. Fearful of every thing, he would run from the most inoffensive animal, as if he had been pursued by a lion or a tiger. His weakness in this respect being known to the village boys, it was a common practice with them, whenever they saw him peeping through his father's gate, to frighten him into the house by calling to the pigs to bite him. This sportive alarm had the same effect as the sudden rush of a mad bullock.

With such excessive weakness both of mind and body, master *Neddy* had some good points about him. His parents represented him as a perfect model of morality; and I had no right to doubt the truth of their representation, though I did not give him quite so much credit on that score, because he did not possess sufficient force of constitution to be capable of any kind of vice. But I viewed, with mixed emotions of admiration and pity, some proofs of learning and abilities which he left behind him. I was the more surprised, as the incessant care bestowed on his person seemed to leave very little time for any mental acquisitions.

Improper food, tight or oppressive clothing and want of fresh air and exercise, have in their turn proved destructive to thousands. This young man fell a victim to them all; and it would have been a miracle indeed, had he survived their combined influence. He died without a groan, or any mark of disease except premature old age, the machine being fairly worn out before he completed his twenty-first year. His death proved fatal to both his parents, whose lives were closely *bound up in that of the lad*.

The father had perceived his own error, but not before it was too late. On reading my inaugural dissertation, which was then published in Latin, under the title already mentioned, he sent for me, and begged I would endeavour to save his son. The youth, alas! was far beyond the reach of my most zealous efforts: I could only witness the certainty of his fate. Medicine was of as little use to him as consolation to his afflicted parents. The bitterness of their grief was increased by self-reproach; and friendship exerted her soothing voice in vain. The father on his death-bed conjured me to translate my dissertation into English, as he thought it might be of infinite service to mankind. My compliance with his request gave rise to the "*Domestic Medicine*," of which that essay on the means of preserving the lives of children, constitutes the first, and in my opinion, the best chapter.

The above relation may to some appear romantic; but did I suppose any one capable of questioning my veracity, I could name several persons of the first respectability, who know, that, so far from being heightened, it falls short of the truth. Indeed I might go farther, and assert, from my own too frequent observation, that a master *Neddy* is not so sin-

gular a phenomenon in many other families, and that the evils of parental folly are much oftener entailed upon favourite heirs, than the power of fully enjoying the estates which descend to them.

But it is in the female world, more especially, that maternal fondness spreads its fatal ravages. Girls remain longer than boys under the immediate and almost exclusive care of their mothers; and when the latter are more guided by love than reason, by the impulses of a tender heart instead of the dictates of an enlightened mind, the former are doomed to weakness and misery. I shall not offend my fair readers by a repetition of the remarks already made on the acquired defects and infirmities of too many of our young women; nor shall I attempt to describe the long train and almost endless variety of nervous diseases, from which so few of them are exempt: I shall now confine myself to a single instance of the effects of extreme delicacy in the education of a daughter as the counterpart of my story of a son cut off by the like means.

Isabella Wilson was in early life a very promising child, and the object of her mother's idolatry. This good woman had no idea that health and beauty were more likely to be destroyed than improved or preserved by excessive care. In the choice of diet, clothes, exercise, &c. the delicacy of her sweet girl was always the ruling idea. It is easy, indeed, to render the human frame more delicate; but to make it more robust, requires a very different mode of proceeding. As the child did not seem afflicted with any particular complaint, the doting mother exulted at the happy effects of her own management, and never thought that the taper form, the fine limbs, and the languishing softness, which she so much admired, were the sure symptoms of debility and of latent disease.

Isabella's mental improvement, in which she surpassed many other young girls of her age at the same school, was no less flattering to her mistaken parents. But she had scarcely attained her fourteenth year before the fond illusion vanished, and the regular functions of both mind and body were suspended by a fit of the most extraordinary nature. I cannot avoid making one remark here, which may be of great practical utility. It is, that fits, though they go by different names, and are ascribed to a great variety of causes, may all be ranked under the general appellation of nervous affections, and are almost always the consequence of bad nursing or injudicious treatment in childhood. Few children, properly nursed, have fits; and of those who are improperly managed, few escape them. POOR BELL WILSON was one of the unfortunate class.

On my being sent for to attend this young woman, who was then sixteen, I was informed that she had been subject to fits for about three years, and had taken a great deal of medicine by the advice of several of the faculty, but without having experienced any benefit. Though the person who gave me this account made use of the word *fits*, I soon found that, strictly speaking, it was only *one fit*, that assumed two different forms or states, which followed one another in constant succession during the whole of the above period.

In order to give a precise idea of this singular kind of fit, I shall call its first state *active*, and the second *passive*. During the former, the young woman made use of the most violent exertions, springing up, throwing her arms about, and striking them against every thing which came within her reach. At the same time, she uttered a sort of noise,

consisting of three notes, which was more like the cry of some wild beast than any thing human.

An universal spasm succeeded those strange agitations, and every limb became as stiff and inflexible as if it had been suddenly petrified. Her whole appearance was that of a statue made of Parian marble.—In this state of rigidity she continued sometimes for one hour, sometimes two and often three or four, but the moment it was over, she began with the cry and motion above described.

The active convulsion never lasted so long as the rigid state; but it was the only time at which any thing could be got down her throat. As she would not admit substances of the least solidity into her mouth, the little nutriment which she received was always given in a fluid form, and chiefly consisted of small-beer, or wine and water.—Her evacuations, either by stool or urine, were of course very trifling, and she was wholly insensible of both. Notwithstanding the thinness of her diet, she did not appear emaciated or ghastly; on the contrary, she was tolerably well in flesh, and her countenance, though quite void of colour, was rather pleasing. Her figure was exquisitely fine, the disease did not seem to have prevented her growth in height, though it had in strength, and in bulk or expansion; she was very slender, but as tall as most young women of the same age.—Such were the most striking peculiarities of her situation when I paid my first visit.

As all the voluntary motions were suspended, and the involuntary alone took place, I thought by exciting the former I might suppress the latter, which had so long agitated the system. But before I had recourse to stimulants, I was induced, by the tone of confidence with which I had often heard anodynes and antispasmodics spoken of by professional men of eminence, to try them first; but the experiment, though fairly made and duly persevered in, was not attended with the least success. And here I must observe, that, after forty years farther practice, I have never found the effect of antispasmodics in such cases to correspond with the high reputation which they long retained in the medical world. I know it has been the usual method, when the actions of the system appeared to be inverted, to employ this class of medicines, in order to restore regularity and to take off the supposed spasm. I am far from being inclined to question the veracity of the favourable reports made by others of the issue of their experiments, I candidly state the result of my own, which has wholly destroyed my reliance on that mode of proceeding.

After the failure of the above attempts, in which I was more guided by the example of others than by the dictates of my own mind, I resolved to try the effect of irritation on the most sensible parts, which were often rubbed with æther, and other volatile spirits. I prescribed at the same time the internal use of tonics, particularly chalybeated wine, and the compound tincture of bark.* Appearances soon became favourable; but as the change for the better was slow, the parents were persuaded by somebody to try the cold bath; and this rash step proved almost fatal to my hopes and to their fondest wishes.

* I have here omitted the detail of doses and effects, usually given in medical cases, as I am not writing instructions for the treatment of diseases, but cautions to mothers concerning the nursing of their children.

The reader should be informed, that the astonishing singularity of the girl's disorder had filled the minds of the country people all around with the wildest and most superstitious conjectures. The general opinion was, that the complaint must be owing to evil spirits, and that the girl was certainly possessed. Some were for putting her into water, where they were sure she would swim. Others said that, if she was laid upon the fire, she would undoubtedly fly up the chimney. One bold captain of horse, a man of more resolution than intellect, declared his readiness to expel the foul fiend by shooting the girl, if the parents would give him leave. Her mother, who was not deficient in natural good sense, though in the education of her daughter she had suffered her fondness to get the better of her understanding, paid no regard to such absurd and ridiculous proposals; but she yielded to the importunities of a friend, who had described to her with great earnestness and plausibility the wonderful effects of the cold bath.

A single immersion convinced the parents of their dangerous error. All the symptoms were aggravated in the most alarming manner. The duration of the rigid state of the body was extended from a few hours to eleven days. She would then have been buried, had I not positively forbidden her mother, whatever might happen, not to have her interred, till I should give my assent. At the time of this last attack, I was upon a journey to a distant part of the country. On my return home I was told that my patient was dead; but that her burial had been delayed till I should see her. When I called, I found her to all appearance what the people had described her, a lifeless corpse. On examining the body, however, I thought I perceived some degree of warmth about the region of the heart. This confirmed me in my previous design to make every attempt to restore animation. It was a considerable time before any symptoms of life appeared: at length, the girl set up her old cry, and began to throw her arms about as usual.

After having so far succeeded, the parents implicitly followed my farther directions, and did not throw any new obstacle in the way of a cure. I again had recourse to the tonics before mentioned, with such nourishment as the girl could be brought to swallow. The violence of the convulsive motions gradually abated, and the duration of the rigid state of the fit grew shorter and shorter; till, in about six months, the whole ceased, and the regular and natural actions of the system returned.

The state of this girl's mind, as well as of her body, on her recovery, was as extraordinary as her disease. It is common to all persons who fall into fits, to have no remembrance of what happens during the paroxysm. This young woman not only was insensible of every occurrence and of the progress of time during her long fit, but her malady had completely blotted out all recollection of every event before that period, and even the traces of all knowledge which she had acquired from the moment of her birth till her illness. I have indeed known a single fit of twenty-four hours' duration to destroy the powers of the mind, and produce absolute idiotism; but that was not the case here. The mental faculties, after a total suspension for four years, were not destroyed, but reduced to an infant state; and though void of all knowledge, were as capable of acquiring it as ever.

It was just the same with regard to speech. And to the proper man-

agement of the legs and arms, of which she knew as little at the time of her recovery as at the instant of her birth. Nothing could be more curious than to hear her lisping for some months the *namby pamby* of a child, and to trace her progress in the imitation of sounds and the use of language. As soon as she could converse, she was told how long she had been ill, she cried, but could not believe it.—When some books which she had written at school, were shown to her she thought it impossible they could be her's and was positive that the whole must be a mockery. In the course of time, she yielded to the concurrent testimony of others ; but she remained unconscious of any former state of existence.

Her new attempts to walk were as awkward as her attempts to speak ; and she required nearly as much time to recover the perfect use of her legs as of her tongue. Even after she had acquired a considerable degree of strength, she wanted expertness in her motions, and was obliged to be led about by the arms like a baby.—Whenever I called to see her, I made a point of taking her into the garden to walk with me ; but it was with great difficulty that I could prevent her from falling. We often lament the weakness of infancy ; yet were we to come full grown into the world, we should not only be as long in learning to walk as infants are, but our first essays would be infinitely more dangerous.

It is unnecessary to trace any farther the steps by which this young woman advanced to the full re-establishment of her health, and to the perfect use of all her mental and corporeal faculties.—These great ends were gained by a mode of treatment the very reverse of the enervating plan, which had been the cause of her long sufferings, but which, happily for her, was not afterwards resumed. I shall leave tender parents to make their own reflections on this case, and shall now only urge it as a further caution against the too hasty interment of persons who may seem to expire in a fit. Unequivocal proofs of death should always be waited for, and every advisable means of resuscitation persevered in, when we consider how long appearances may be deceitful, and how unexpectedly the latent sparks of life may be rekindled.

Besides the uncommon instance of this young woman's re-animation, as it may be called, I have heard of a young lady in Holland, who was restored to her desponding friends, after she had been for nine days apparently in a state of death. The day before her proposed interment, her doctor called to take his final leave of her ; but fancying that he perceived some vital symptom, he renewed his before hopeless efforts, and had the happiness to succeed. This girl's case differed from that of my patient in one very remarkable particular : I am told that, in her seemingly inanimate state, she was all the while perfectly conscious of being alive, though she could not stir, nor speak, and that her only terror was lest she should be buried alive.

CHAP. VII.

OF EMPLOYMENTS UNFAVOURABLE TO THE
GROWTH AND HEALTH OF CHILDREN.

THOUGH my remarks on air and exercise render it less necessary to be very minute in my detail of occupations which preclude the full enjoyment of those essential requisites, yet some little illustration in a few instances may have its use. The children of the rich and of the poor are alike sacrificed to the mistaken views of their parents, the former by confinement at home or at school, for the sake of some trifling attainments, and the latter, by premature endeavours to get a livelihood. There is, however, a very material difference between both, as the error in one case, arising from fashion or caprice, is infinitely less pardonable than the other, which is too often occasioned by want.

It is strange the mothers in the higher ranks of life, who must have felt or frequently observed the debilitating effects of fashionable modes of education, should persist in making their own daughters sit for hours together at a tambour-frame, or at the needle in learning fancy works, which can never be of the least service, but must do their health and their form irreparable injury. The very postures, in which they are thus employed, not only tend to distort their pliant limbs and bodies, but to impede the action of the principal organs of life, which require above all things an expanded chest for the easy performance of their respective functions. I cannot too often repeat that personal deformities, pale complexions, head-aches, pains of the stomach, loss of appetite, indigestion, consumptions, and numberless other enemies of youth and beauty, are the sure consequence of long continuance in a sitting or inclining attitude. What so many young ladies suffer at a critical time of life, and the still greater danger which often awaits them when they become wives and mothers, are chiefly owing to the same cause,—early confinement in sedentary pursuits; and the want of frequent exercise in the open air.

To fetter the active motions of children, as soon as they get the use of their limbs, is a barbarous opposition to nature: and to do so, under a pretence of improvement, is an insult upon common sense. It may, indeed, be the way to train up enervated puppets, but never to form accomplished men or woman. I always behold, with much heart-felt concern, poor little creatures of ten or twelve years of age, and sometimes younger, who are exhibited by their silly parents as prodigies of learning, or distinguished for their extraordinary proficiency in languages, in elocution, in music, in drawing, or even in some frivolous acquirement. The strength of the mind as well as of the body is exhausted, and the natural growth of both is checked by such untimely exertions. I am not for discouraging the early introduction of youth into the sweet society of the Muses and the Graces; but I would have them pay their court also to the Goddess of Health, and spend a considerable part of

their time, during the above period at least, in her enlivening sports and gambols.

It would be foreign to my immediate purpose to say any thing farther of the literary pursuits of boys, than that more frequent intervals between the hours of study than are now usual, should be allowed for recreation and active exercises. But a much greater reform is wanted in female education, the whole of which appears to be upon a wrong basis. I leave to others the moral part of this business, and shall only take a medical view of the subject. It grieves me to see health impaired by a close application to objects of very little consequence while the most important qualifications are disregarded. Every girl should be brought up with a view of being a wife and mother; or, whatever her other accomplishments may be, she will prove totally unfit for the discharge of those duties, on which the affections of her husband, the well-being of her progeny, and her own happiness, must depend. If she herself is languid and indolent, how can she hope to bring forth active and vigorous children; and if she knows nothing of the proper management of them, must she not have recourse to hirelings, and trust entirely to their care, to their skill, and to their fidelity, in the dearest concerns of life?

It is common to see women, who are supposed to have had a very genteel education, so ignorant, when they come to have children, of every thing with which a mother ought to be acquainted, that the infant itself is as wise in these matters as its parent. Had the time spent by such females in the acquisition of what can never be of any service to them, been employed under the eye of a sagacious matron in learning domestic virtues and the art of rearing children, they would have secured the attachment of their husbands, made their sons and daughters useful members of society, and been themselves an example and an ornament to the sex.

If a young man be intended for the army or navy, he is sent to the academy to be instructed in those branches of science which are deemed necessary for his making a figure in the proposed department. But a young woman, who has got a more difficult part to act, has no such opportunity afforded her. She is supposed to require no previous course of training,—to need no assistance but that of nature, to fit her for the discharge of her duties when she comes to be a mother. Did she live in a state of nature, that idea would not be far wrong, but, in society, every thing is artificial, and must be learned as an art.

The art in question, however, can neither be learned from books, nor from conversation. These may have their use, but they will not make an accomplished nurse. Indeed, nothing can form this first of characters but practice; and if such practice is not acquired under some experienced matron, it will cost many lives to learn it any where else. A mother may blunder on, as most of them do, till she has killed a number of children, before she is capable of rearing one. At last, perhaps, she succeeds.—It is in this way we find many wealthy citizens, who have had several children, yet die without any, or leave only one to enjoy their ample fortune.

All practical things are the most difficult to learn, because they can only be learned from observation and experiment. Thus I have known a girl, whose mother had eighteen children, take one of them and bring it up by the hand, merely from the force of example and imitation. Had

this girl studied the art under the ablest medical instructor, or read the best books that ever were written on the subject, she could not have done what she effected with the utmost ease, because she had so often seen it succeed under her mother's management.

The inference is very plain : that acquirements of little value, or merely ornamental, ought not to be assiduously cultivated at the expense of health, or to the neglect of things of the first importance ; and that a great part of the time inconsiderately spent by young ladies in fancy works, and in learning to draw, to paint, or to play upon some musical instrument ; of which they will never feel the want, or which at best will afford them only a momentary gratification, had much better be employed in practical lessons on the duties of wives and mothers, which they will be soon called upon to discharge, and their ignorance of which will cost them many an aching heart.

As to the other evil before hinted at, which is owing to poverty, and which consists in putting young children to sedentary or unwholesome employments, in order to get their bread, it is a matter of the most painful consideration, when viewed either by the eye of humanity or of policy. The source of the sweetest pleasures is thus embittered to the parent ; and society loses the valuable services of the man, through the feeble, untimely, and exhausting efforts of the child. In vain do we look for the full grown fruits of autumn, after a too early expansion of the buds of spring ; and we never see a colt, if put too soon to hard labour, turn out a strong and active horse.

When I touched upon this subject in the first chapter of my "Domestic Medicine," I thought I could not urge a stronger proof of my assertion, that the constitutions of children were ruined by such premature endeavours to earn a livelihood, than the immense number of rickety, scrophulous, and diminutive creatures, that swarm in all our manufacturing towns. There the infants suffer severely in the very first stage of life, for want of proper exercise and proper nursing, while the distressed mothers are busy at other work. The next step, almost as soon as they feel the use of their legs and arms, is to employ them in some of the subordinate or preparatory parts of the manufactures, which are the more injurious to growth and health for requiring constant confinement rather than active exertion. Very few of those poor objects attain to maturity, and fewer still to manly vigour. Most of them die very young, and the rest are weak and sickly all their lives, so that incapacity of labour at an advanced age is the sure consequence of the sorry earnings of childhood.

But there is another set of devoted beings more pitiable still than those which I have now described—I mean the children that are bound apprentices to chimney-sweepers. If any creature can exist in a state of greater wretchedness, or is a juster object of commiseration than a boy who is forced to clean chimneys in this country, I am very much mistaken. Half naked in the most bitter cold, he creeps along the streets by break of day—the ice cutting through his feet—his legs bent—and his body twisted. In this state, he is compelled to work his way up those dirty noisome passages, many of which are almost too narrow for a cat to climb. In order to subdue the terror which he must feel in his first attempts, his savage master often lights up some wet straw in the fireplace, which leaves the poor creature no alternative but that of certain

suffocation, or of instantly getting to the top. I have witnessed still greater cruelty : I have more than once seen a boy, when the chimney was all in a blaze, forced down the vent, like a bundle of wet rags, to extinguish the flame.

On the very day (the twenty-second of last October) when I was come to this part of my subject, an indictment for cruelty to a young chimney-sweeper happened to be tried at the Westminster sessions. The wretched sufferer had been decoyed into the house of a woman who carried on this horrid business, but who promised to employ him only as an errand-boy. He had not been long there, however, before he was put to learn the trade, as it is called. Some domestic lessons were deemed necessary to prepare him for public exhibition. The child not being able to climb with the readiness expected, used to be stripped naked by the foreman, and whipped round the room with birch rods. His body, legs, and arms were severely bruised by the beatings he had received. This was not all. Though his knees and elbows had been rendered sore by repeated trials, yet when the poor creature could not mount quick enough, his cruel instructor used to goad him (while in the chimney) in the legs and thighs, by a needle put into the end of a stick.

It also came out in the course of the evidence, that unfortunate children of this sort are taught to climb by being taken to the porch of St. George's church, where, at the risk of their lives, they are obliged to mount the perpendicular wall. I am always happy to see justice tempered with mercy, especially when the punishment is at the discretion of the judge or magistrate ; but after a culprit had been fully convicted of those atrocious acts, I could not help thinking that lenity towards him was carried too far in sentencing him only to six months' imprisonment. I am still more grieved to think, that any business which requires such dreadful modes of training, should be tolerated.

Perhaps I shall be told, that boys so trained are necessary. I deny the assertion. Chimneys are kept clean, without such cruel and dangerous means, not only in many countries on the continent, but even in some parts of our own island, where the houses are much higher than in London. In North Britain, for instance, a bunch of furze or of broom answers the purpose, and does the business cheaper and better. One man stands at the top and another at the bottom of the chimney, when a rope is let down by means of a ball ; and the bunch of furze or broom, being properly fastened on, is pulled up and down till the chimney is quite cleaned. The little trouble and expense attending the operation are the strongest incitements to repeat it so often as to preclude the possibility of chimneys ever taking fire. Is this the case in London, though hundreds of lives are every year sacrificed to the most barbarous method of preventing danger? How vain shall we find the boasts that are made of mighty improvements, in the metropolis of the British empire, if we fairly consider that it is at least a century behind the meanest village in the kingdom, in almost every thing that regards the preservation of human life!

I have often heard the plea of necessity urged to justify doing wrong, but never more absurdly than in the employment of boys to clean chimneys. Experience clearly proves that it can be much better done without them; and shall we, in perverse opposition to reason and humanity, continue a practice which is equally forbidden by both? The abolition of the slave-trade has of late years become a very popular topic among us ; and the

cause of the poor Africans has been pleaded with lips of fire in our senate. But while our pride is flattered by the idea of relieving slaves abroad, we make a set of our fellow-subjects at home infinitely greater slaves, and far more miserable ! This is something like the fashionable chimera of universal philanthropy, which pretends to be alive to the sufferings of the distant Hottentots, but in reality steels the heart against spectacles of much keener wretchedness in our own streets.

My late worthy friend, *Jonas Hanway*, who literally *went about, doing good*, used all his influence to ameliorate the condition of those unhappy creatures : which, in a certain degree, he effected. But there are some customs, that can be thoroughly mended, only by being completely abolished. While boys are forced up chimneys, they must be miserable, whatever laws are made for their relief. A law prohibiting the practice altogether, would be at once laying the axe to the root of the tree ; and the evil admits of no other remedy.

Had *Mr. Hanway* taken up the matter upon this ground, he had spirit and perseverance sufficient to have carried it through, and to have obtained an act of parliament for the effectual relief of the most wretched beings on the face of the earth. He confined his benevolent exertions to a partial alleviation of their miseries, because it had never occurred to him, that the *climbing boys*, as he calls them, where wholly unnecessary. What a pity he did not carry his views a little farther, as, in that case, he certainly would have not remained satisfied with any thing short of their total emancipation from such cruel and useless bondage !

The situation of those children of misery is now become more hopeless in consequence of the death of *Lady Montague*, who used to make such of them as could go to her house, happy for at least one day in the long and lingering year. I often wished to see her well known talents exerted in their favour : they could not have had an abler or a better advocate. The amiableness of her character would have given additional force to the impressive productions of her pen ; and the legislature might have been induced to interpose its authority in suppressing an employment at once so destructive and so degrading to the human species.

But surely there is humanity enough in both houses of parliament to take up this subject, without any other appeal to their feelings than a bare representation of facts.

Many touches more would be necessary to finish the melancholy picture of the wretchedness of young chimney-sweepers. It is enough for me to sketch the principal outlines, in hopes that some person more at leisure may be induced to lay on the internal colouring. In addition, however, to the miseries already described, I must not omit the malignity of the disorders, with which those poor creatures, if they live long enough, are almost sure to be afflicted. They are not only deformed and stunted in their growth, but, in consequence of having their pores clogged, and the surface of their bodies continually covered with a coat of dirt composed of soot, sweat, &c. they are subject to various maladies unknown to the rest of mankind.

I need only give an instance of one of those diseases, which is called by the sufferers the *soot-wart*, but which the late *Mr. Pott* has very properly named the *Chimney-sweepers' cancer*. He describes it as a ragged, ill-looking sore, with hard and rising edges,—rapid in its progress, painful in all its attacks, and most certainly destructive in its event. Extir-

pation by the knife, on its first appearance, and the immediate removal of the part affected, he looks upon as the only chance of putting a stop to, or preventing the fatal issue of the disease. His reflection on the subject does equal honour to his heart and to his understanding. "The fate of these people," says he, "seems singularly hard. In their early infancy, they are most frequently treated with great brutality, and almost starved with cold and hunger. They are thrust up narrow, and sometimes hot chimneys; where they are bruised, burned, and almost suffocated; and when they get to puberty, they become peculiarly liable to a most noisome, painful, and fatal disease."

CHAP. VIII.

OF ACCIDENTS.

CHILDREN are not only lamed and maimed, but they often lose their lives by accidents, owing to the carelessness or inconsiderate neglect of nurses and mothers. A child should never be left alone in a place of danger, or in any situation where he may, through his own want of experience, be exposed to the destructive elements of fire and water. We daily hear of children that have been burned to death, in consequence of their clothes having caught fire; and even grown people often lose their lives by similar accidents.

Afflicting events of this kind often take place even under the mother's eye; and, what is surprising, their frequency does not prepare women for the most effectual method of extinguishing the fire. Distracted by the frightful scene, and the cries of the sufferer, they rush to tear off the burning clothes. But, before this can be effected, the mischief is done. The attempt, therefore should never be made. The clothing instead of being torn off, ought to be pressed close to the body, and whatever is at hand wrapped over it, so as to exclude the air, upon which the blaze will go out. It is the action of the air that keeps it alive, and increases its vehemence. A carpet, a table-cloth, a blanket, any close wrapper, will instantly extinguish it. Ladies, whose dress is so very liable to catch fire, should in such a case have recourse to these means, and be their own preservers, instead of running out of the room, fanning the flame, and uselessly screaming for help, which comes too late to save them from torture and from death.

Our newspapers frequently contain accounts of persons, who, by running about, not only accelerate their own destruction, but frighten others into an absolute incapacity of affording them any assistance. A case nearly of this sort very lately fell under my observation. A beautiful woman, with her clothes in a blaze, had been suffered to run out into the street before any body ventured to approach her. A hackney-coachman, seeing her in this situation, jumped off his box, and wrapping his coat round her, extinguished the flames. Though her life was saved, no remedy could be found for the cruel ravages of the fire on her person. She lost the use of some of her limbs, and was most shockingly disfigured. Few people are ignorant of what ought to be done to extinguish

flame: but presence of mind or courage is wanting in the moment of sudden danger, and the consequences are of course deplorable. I admire the practical philosophy of the good women in North Britain, who are employed in spinning flax, or *tow* as they call it. Whenever the flax round the distaff catches fire by accident, they immediately wrap their apron about it and it is out in an instant. But where the fire affects an animated being, especially a darling child, I am afraid few mothers would have the resolution to act in the same manner. Nor is this the case with mothers only. I have known a father stand by, and see his darling daughter burned to death, without any immediate and rational effort for her relief: the powers both of his mind and body were suspended by the shock; and he remained like a statue at the very crisis of the alarming catastrophe. Nay, I have known children carried into the street, that the air might extinguish the flame.

It must be evident enough, from what I have said of excessive care in the treatment of children, that I would not have mothers or nurses oversolicitous about trifles. But where exposure to danger may be attended with irreparable mischief, it cannot be too cautiously guarded against. I would therefore have the upper garments of children, when they can run about, made of woollen materials, which do not so readily catch fire as manufactures of flax and cotton. I would also have children taught very early to dread the fire; and I think that the best way of impressing their minds with the danger of coming too near it, is to suffer them to burn their fingers slightly, yet so as to give them some pain. This would have more effect than a thousand admonitions.

When children are cold, they are very apt to get close to the fire: by which means they not only run the risk of being burned, but of inducing whitloes or other inflammatory disorders of the extremities. In these cases, however, I would not have the preventive care of the nurses or parents carried too far. The actual experience of the tingling effect will operate more powerfully than any which can be said to young people to make them avoid it: when they have once felt the smart, a few words to remind them of the cause will be quite sufficient: and they will easily acquire the habit of rubbing their hands and running about, rather than going to the fire to warm themselves, after having been out in the cold.

I have always been glad to find those semi-circular irons, called *guards*, fixed up round fire-places in nurseries, and in all the apartments to which children had access. It gives me still greater pleasure to see wire-fenders, two or three feet in height, now frequently made use of even in parlours and drawing rooms. They are excellent preservatives from the danger to which grown persons, particularly ladies, as well as giddy boys and girls, may be exposed, when standing or sitting by the fire.

Children are very fond of roasting things, such as chesnuts, potatoes, &c. in the fire. I knew a lady, who had nearly lost her life by an accident arising from a circumstance of this sort. A little boy was poking in the fire for a potatoe, which he had put in to roast; his clothes caught the flame, and, though his mother was standing by, he was dreadfully burned. She, being a nurse at the time, held an infant in her arms, which rendered her less capable of assisting the other child. The effect of the shock on herself was seriously alarming; it dried up her breast-milk,

and produced a fever, the violence of which left little hopes of her recovery for three weeks; she was then seized with a convulsion fit, which came on critically, like that which often precedes the eruption of the small pox in infants, and is far from being an unfavourable symptom. Her fit proved equally salutary; it abated the force of the fever, and she grew better every day after. This lady was attended by my excellent friend the late Dr. John Gregory and myself, who had both despaired of her recovery.

The accidents from scalding are still more numerous. Children are in continual danger where victuals are cooking: and among the lower and middle ranks, the kitchen is the nursery. One of the finest boys I ever saw, lost his life in this manner. He was dancing round the kitchen, when a pot full of food for some domestic animals, which had been just taken off the fire, stood in his way: he fell backwards, and was so scalded, that in spite of all my best endeavours, he died.

Nothing hot should ever be left within a child's reach; otherwise he will very probably pull it over him: in which case, before the clothes can be got off, he may be scalded to death. Children are also apt to carry every thing to the mouth; and a very small quantity of any liquid boiling hot, will occasion death, if taken into the stomach. A melancholy proof of this occurred not long since. A child put the spout of a tea-kettle to its mouth, and drank a little of the boiling water, which proved almost instantly fatal. Numberless instances have come to my knowledge, of children having pulled off the table dishes full of hot victuals, with which they were scalded in a terrible manner. Indeed, victuals, or any thick substances, in a burning hot state, are much worse than fluids as they adhere more closely to the skin.

Perhaps there is not a more painful death, than that which is the consequence of scalding or burning. When instantaneous, it is nothing; but when lingering, it is dreadful beyond imagination. We can only form some imperfect idea of it from the intense pain occasioned by scalds or burns, though not of deadly effect. I once had a patient, about one half of whose skin was scalded, by falling into a boiler. Though this man recovered, yet so great was his agony, that, every time he was dressed, he used to beg and pray to be put to death.

Accidents by *cold* water, though not so frequent in early life as these occasioned by fire, ought nevertheless to be guarded against with due precaution. Children, who have no idea that these elements are hostile to life, are often dead before they know their danger. Wells and pieces of water near houses are frequently left open, or without any fence round them, as if they were designed for traps to allure the unwary to destruction. Is it not well known that young people are fond of looking into the water, especially when they can see their own image or likeness? And, is it an uncommon thing for them, when viewing themselves in the watery mirror, to tumble in, and to be drowned? Even to this day I shudder at the recollection of a draw-well in my father's garden, without the least railing to keep children at a proper distance. A thousand times in playful mood, have I sported on the margin of the abyss, and cannot now conceive how I escaped a fatal slip. It is a weak security against the danger of open wells, or ponds, or pits, or the like cavities, to tell a child to take care. The effect of such a silly piece of advice is well ex-

posed in *Æsop's* fable of the old hen and the young cock: of which the moral is—

“ Restrain your child—you'll soon believe

“ The text which says we sprung from Eve ”

But it is not only in yards, and gardens that the least slip may sometimes be fatal to children; they are often exposed to almost as much danger within doors, by falls in various situations. I shall first mention the dark and winding stair cases, which remain in all old houses, especially in that part of London which is called the *city*. Children must be enticed with a degree of precaution far beyond their years, to avoid tumbling upon those stairs; and if they do make a false step, they often roll from the top to the bottom. As, from the usual lightness of a child, a leg or an arm is seldom broken by such an accident, little notice is taken of it at the time; but although it may not seem to do much hurt for the present, it often lays the foundation of future maladies. The fine organization or structure of the brain may receive a dangerous shock; and there is reason to believe that the *hydrocephalus internus*, is sometimes the consequence of bruises, or blows, or other injuries done to the head. I lost a most promising boy, through an affection of his brain, which I thought was owing to a fall from a kitchen-dresser.

All children have an inclination to climb, and to get upon stools, chairs, tables, &c. A fall from one of these is more dangerous than mothers and nurses are apt to imagine. A child's head is large, and, being specifically heavier than the body, is the part most liable to strike the ground, and thus to cause a concussion of the brain, which may be attended with fatal consequences. All the furniture of a nursery should be low, so as to preclude at once the desire of climbing and the danger of falling. The tables should also be made without corners, as these sharp projections often do mischief. I have already declared myself a warm advocate for indulging the restless activity of children, on which their growth and health very much depend; but, till they acquire reason and experience to guide them, it is the business of their parents to take care, that they move about, and always remain in a sphere of perfect safety.

For the same reason, nurses should never leave any deadly weapon within the reach of children. Knives and sharp instruments, with which they may cut or wound themselves, are very improper play-things. Yet I remember to have read in some newspaper a curious story, of several lives having been saved by a knife in the hand of an infant. It happened near one of those extensive woods on the continent, whence hungry wolves often sally forth in quest of prey. The wife of a peasant, who lived in a cottage at no great distance, was gone out upon some business; leaving an infant in the cradle, under the care of three or four more of her young family, one of whom gave a knife to the baby to amuse it.—During the mother's absence, a wolf, impelled by hunger, rushed into the cottage, and made its first snap at the infant's arm, which, being extended with the knife in a playful manner, it entered the throat of the ravenous animal, and proved its death. As the women in our happy island have no occasion to arm their children against such enemies, I do not suppose that they will be tempted, by the desire of hearing their infants cried up as heroes, to intrust them with weapons, which are far more likely to hurt than to defend them.

But to return to more serious and necessary precautions: I must take

notice of some fatal accidents which frequently occur, though they may be easily guarded against. We daily hear of children falling from windows and being killed : this must be owing to the want of proper preservatives ; a few bars fixed across the windows of the nursery, or of any high apartments where children are suffered to play about, would prevent such disasters. Yet easy as the remedy is, we find it too often neglected. How frequently have I seen, with much alarm, children hanging out of windows in a state of imminent danger, and no regard paid to them by any person within ! this is peculiarly the case with the children of the poor in London, who commonly live in the upper stories, and seldom or never have their windows secured by bars. To keep such windows constantly shut would exclude the fresh air, so necessary to health, and even to existence : while, on the other hand, having them open, without the guard or defence here recommended, is exposing the giddy and thoughtless to certain mischief. On the least noise in the street, a child is apt to run to the window, and, leaning forward in eager gaze, is often dashed against the pavement.

In my former remarks on *hanging cots*, my chief aim was to shew how much safer and more conducive to sleep their gentle motion was than the violent and dangerous rocking of a cradle. I have now an observation of greater extent to make on beds in general, which is, that they often prove fatal to children, instead of being places of easy and secure repose. It is too customary for mothers and nurses to take infants into bed with them for the whole night. This is always relaxing, and sometimes attended with the melancholy effect of suffocation. Either in France or in Holland, I am not now positive which, there is a prohibitory law against putting any child to sleep in the same bed with its mother or nurse. Though we have no such law in England, maternal care ought to supply the want of it, especially as it is not an extraordinary, or a very uncommon thing to hear of a child's being smothered by the accidental rolling or pressure of a grown person during sleep.

The use of *turn-up* bedsteads is not less noxious or dangerous.—They exclude the air from the bed-clothes all day, and render them frouzy and unwholesome. Children may also be inadvertently killed in them. The servant, or perhaps the mother, turns up the bed in a hurry, without examining whether the child is in it or not : the infant incapable of making any noise in this situation, is smothered before the mistake is found out ; and tears flow in vain to remedy what a little caution might have prevented, or what could never have happened in a proper bed.

Children suffocated in this manner, as well as those accidentally overlaid, might be sometimes restored to life. Yet I do not recollect any instances, except the one mentioned in my "Domestic Medicine," of its having been done ; though it must be as practicable as in cases of drowning, of fits, and various other casualties, attended with a suspension of seeming extinction of all the vital powers. It is not my business, however, to suggest the use of very precarious restoratives, when the means of prevention are so easy and certain.

I should never have done, were I to engage in a particular description of all the dangers to which children are exposed in our streets, partly through the want of a good medical police, and partly through the negligence of their parents. The importance and the necessity of the former, I may take some other opportunity to enlarge upon ; my present wish is,

to excite the attention of mothers to the perils which await their children at almost every corner, when they are suffered to run about by themselves, or intrusted to young people who have neither sufficient strength nor experience to protect them. It always gives me great uneasiness to see infants daudled by girls who are hardly able to hold them up, or led about by others whose giddiness is more likely to plunge them into danger than to keep them out of it. At least half the accidents that befall children, both within doors and without, are owing to the folly, the cruelty, I had almost said the murderous criminality of leaving one child to the care of another, who, though a little older, is not less in want of a mother's or a nurse's vigilance.

Let me ask any parent of common sense and tender feelings, whether it can be fairly considered as much short of murder, to let a little girl of seven or eight years of age take an infant out in her arms, or lead about younger children than herself, in a city, where carts and carriages of every description are rattling along—where horses are galloping—bullocks furiously driven—and crowds of people constantly rushing with thoughtless impetuosity? Is it a wonder, then, to hear every day of children run over, their legs or arms broken, their brains dashed out, or their bodies crushed to atoms, in the midst of those dangers to which they are so inconsiderately exposed? Though the immediate authors of such disasters deserve in most cases to be hanged, yet I do not know how any jury could conscientiously acquit the negligent parent of some participation in the crime.

Let me therefore conjure mothers, in particular, never to permit their young children to go alone into the streets, and never to rely upon one child's protection of another. It is also a mother's duty to make her children, as soon as they are capable of it, aware of danger, and to instruct them how to avoid the numberless enemies that beset them on all sides, and too often prove fatal to infant life. A good police would certainly go a great way towards the prevention of many of those disasters which so frequently occur in our streets, but no laws can ever be made that will supercede the mother's care and attention in watching over the health and safety of her children.

CHAP. IX.

OF FOUNDLING HOSPITALS, AND OTHER CHARITABLE INSTITUTIONS FOR
THE REARING OF POOR OR DESERTED CHILDREN.

THE proper qualifications and indispensable duties of mothers having so far engaged our attention, I am not without hopes that the remarks which have been made on those important subjects, will be of some service in the middling and higher ranks of life. But it gives me pain to think, that there are great numbers of poor women, who do not want so much to be taught, as to be *enabled* to discharge their duty. They would willingly devote all their time and care to the nursing of their children; but the want of common necessaries forces them to be otherwise employed. They see their infants languish; but the dread of fa-

mine is an object of still keener concern. They are not dead to the impulses of natural affection; but its warm emotions in their hearts are soon chilled by distress. It is poverty, whose icy hand congeals the streams of maternal comfort, and whose withering breath blasts some of the fairest buds of human life.

Vanity is more gratified than reason, by the acknowledgment that there is not any country in the known world which is so much distinguished as England for its charitable institutions. How mortifying is it to add, that there is not any country in which charity is so much abused and perverted! When I look at such a building as the Foundling Hospital, much more like a palace than a nursery for poor children; when I consider the vast sums laid out in raising that structure, and the still greater sums which have since been expended and continue to be expended upon the most pompous and useless parts of the establishment;—I cannot help crying out with ROCHEFOUCAULT, *that virtue or charity would never go so far, if pride did not keep her company.*

It is much to be lamented, that the plans for the relief both of the old and the young, in every pitiable situation, which at different times have been encouraged by the people of England, should all be connected with superb buildings, profitable jobs, and a train of offices and employments which prey upon the funds, and render their use to the public very small, in comparison to what it might otherwise have been. This gross misapplication—this waste of charitable contributions, is not the only thing to be found fault with in the management of the Foundling Hospital. Never did any institution hold out fairer claims to the support of the benevolent and humane, and never was any more liberally patronised; yet, from ignorance and inexperience, instead of preserving the lives of children, it has too frequently accelerated their death.

The first suggestion of a Foundling Hospital was certainly very plausible; its professed object was to rescue from misery and destruction the innocent victims that would otherwise be doomed to both by the desertion of their parents. Thus many valuable lives would be saved to society, and such a resource would be opened to unfortunate mothers, as would remove, or considerably weaken, any temptation to the commission of the most unnatural acts. The prude, the bigot, and the canting hypocrite, might, indeed, condemn such a supposed encouragement to the illicit union of the sexes; but humanity can never look upon the preservation of a human being as a crime.

An undertaking, therefore, of so specious a tendency, could not fail to meet with the most generous support. Independently of all private contributions, sixty thousand pounds a year out of the public money were for several years appropriated by parliament to so laudable a purpose. A palace, as I before observed, instead of a nursery, soon reared its head. The doors were thrown open for the admission of deserted children from all parts, not to be nursed and educated there, but to be sent down to the distant counties and in their conveyance numbers of the poor infants perished. I am not here making a vague or an imaginary calculation; I am stating what fell under my own notice, when I was physician to a very considerable branch of the Foundling Hospital. I have elsewhere described the mortality which was occasioned by the improper use of medicines among those who had survived the fatigues of the journey. I have also explained the very easy means I made use of

to put a stop to such afflicting ravages, while the children and their nurses were under my inspection and control. But all my remonstrances against having them dragged away from those nurses too soon, crowded into hospitals, confined in schools, or put out to unhealthy employments, were unavailing. I was told that the established rules and customs of the hospital could not be deviated from, though their evident effect was to destroy health, and to enfeeble the minds as well as the bodies of the unfortunate victims.

I have often viewed with indignation the fallacious reports of the numbers of children said to be brought up and provided for at such places. I am very confident, that were an accurate list made out of those who perished through unseasonable removals, improper treatment, bad nursing, diseases occasioned by too early confinement in schools, as well as by infection in hospitals, and, lastly, through what I call murderous occupations, it would appear that not one in ten of the infants received there, ever lived to become a useful member of society.

But, besides the evils here hinted at, there is a fundamental error in the plan itself, not only of the Foundling Hospital, but of all parochial and other charitable institutions for the maintenance and education of poor children. Every scheme which tends to separate the parent from the child, whatever imposing appearance it may wear, is a bad one, and will eventually be found to do mischief. It is flying in the face of nature, a thing that never can be done with impunity: it is rending asunder the first and the strongest bonds of society—parental and filial affection: it is perversely attempting to blunt and destroy the finest feeling of the heart, motherly love, without which the human species could not long exist. All nature points out the mother for the nurse of every thing that is brought forth alive; nor can her place be supplied by any institution. Those who make the experiment will soon be convinced of their temerity and folly.

A few years ago, I met with a letter addressed to Lord *Fitzwilliam*, then viceroy of Ireland, on the subject of the protestant charity schools in that country. As the author's sentiments agree with mine in many points, and particularly with respect to the pernicious effects of separating children from their parents for the sake of education, I shall here give them in his own words. Some people may think the language too strong; but the nature of the subject required the most pointed energy.

“ My Lord, I do request that you will take the trouble of reading the account of this inveterately illiberal institution in any common almanac; and every line will, I think, carry its own reprobation to an ingenuous mind. The children, as it is regulated in their unnatural system, are all placed in schools remote from their former abodes; or, in other words, they are torn from all the sweet associations that attend the interesting idea of home. This is, indeed, a charity which thrives on the extinction of all the other charities of life; *and the feelings of nature must be eradicated, before they can become nurslings of the state.* They are banished from their vicinage to a remote quarter of the kingdom, where all the traces and ties of kindred are lost and cut off; all habitudes of the heart smothered in the cradle; and, when sent into the world, they know not the spot which gave them birth, the mother that bore them, nor the blood that flows in their veins. I think of the speech of *LOGAN*

the Indian chief, when all his kindred were murdered—*There remains not a drop of my blood in the veins of any living creature.*”

The writer here takes occasion to direct his remarks to the heart, as well as to the head;—to exert all his powers of pathetic, as well as argumentative eloquence. “It is,” says he, “a cold, cheerless, and forlorn feeling of this nature, which must freeze the young blood, and, placing the mind in a state of sullen insulation, makes its reaction upon society rather dangerous than beneficial. The ties of kindred operate as a sort of external conscience upon the conduct of men, deterring them from the commission of great crimes, for fear of the disgrace which would be reflected on their relations. There is a family pride, a domestic honour, among the very poorest and lowest of the community, that guards and sanctions, and is a sort of God for the little household. Even the highest have such workings of nature. Lady MACBETH exclaims, *had he not resembled my father when he slept, I had done it.* The imagined countenance of her father was the only conscience left, and came between her and murder. But charter-school policy makes a sort of massacre of all those domestic moralities which operate upon character and conduct, without being able to put a higher and nobler principle of action in their place; and thus, I fear, the same policy has bred up many victims for the laws, while they only thought of making proselytes to religion.”

Though the subject is here considered only in a moral light, yet I could not resist the temptation to make a short extract from such a masterly letter; and I do not think that any of my readers will be displeased at the perusal of it. But I have still less occasion to make any apology, for stating the author’s opinion of the most effectual means of remedying the evil, as the leading feature of his plan of reform exactly corresponds with what I recommended above thirty years ago. I was then lamenting that poverty often obliged mothers to neglect their offspring, in order to procure the necessaries of life. I observed, that, in such cases, it became the interest as well as the duty of the public to assist them; but I contended that 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 could be erected with that view. In a subsequent edition of those remarks, I added, that, if it were made the interest of the poor to keep their children alive, we should lose but very few of them; and that a small premium given annually to each poor family, for every child they had alive at the year’s end, would save more infant lives than if the whole revenue of the crown were expended on hospitals for that purpose.

It gave me great pleasure to find, that the writer just now quoted had reasoned in the same manner on the hundreds of thousands which had been expended, merely, he says, to *create foundlings*; the tenth part of which, if properly employed, would have been of infinitely more service to society. The proper mode of employing charitable contributions, he thinks, should consist chiefly in giving premiums to such parents as have shewn most zeal and capacity in educating their children. Thus, notwithstanding the different points of view in which we examine the abuse of so important a part of public charities, the very means which I advised for saving the lives, and promoting the bodily health of in-

fants, appear to him the most conducive also to the intellectual and moral improvement.

The prejudices in favour of old institutions must be strong, indeed, when they can resist the clearest evidence of facts, and the plain deductions of fair argument. Yet, in the question before us, how the public, or the state, may most effectually contribute to the nursing and rearing of poor infants, one would suppose that no appeal to past experience, nor any great depth of reasoning, were necessary to demonstrate the impropriety of separating children from their parents. Nature forms the chain that binds them; and, if possible, it should never be broken. I have shewn how the lives of the mother and the child are entwined, not only during pregnancy, but after delivery. To part them is to endanger the health and existence of both. They are equally necessary to each other's well-being; and the longer they are kept together, the more sensible they become of the duties they owe to one another, which, when faithfully discharged, tend greatly to increase the sum of human happiness.

But how are we to expect that any regard will be paid to this doctrine by narrow-minded unfeeling overseers of the poor, who make a greater merit of saving a shilling to their parish, than of saving fifty lives to the community? We now and then hear of such persons being dragged into our courts of justice, to answer for their cruelty to pregnant women; but no account is kept, and of course no cognizance can be taken, of the immense number of infants that are torn in our parochial receptacles, from the arms of their distressed mothers, and are consigned to an untimely death, or to certain debility and protracted wretchedness. Even the show of humanity in some of those places, serves only to excite our stronger indignation. It is a cobweb, through which the penetrating eye can easily see written up in letters of blood *children murdered here under the sanction of charity.*

Are we not always shocked at reading or hearing any accounts of the barbarous policy that prevails in China, where avaricious as well as distressed parents are encouraged by the permission of the law, and by the force of example, to destroy their female children in order to avoid the expense of rearing them? And is there a father or a mother in Great-Britain, who would not join in a general outcry against an act of parliament for the immediate drowning of all infants taken to parish work-houses? Yet, humanity itself must acknowledge that instant death is infinitely preferable to a lingering existence in a state of pain, of misery, of continual suffering and disease. I do not, therefore, hesitate to assert, that such policy as that of the Chinese, or such an act of parliament as I have now mentioned, would, in reality, be an act of mercy, contrasted with the present most barbarous, most inhuman, and most detestable method of taking care, as it is falsely called, of poor infants thrown upon the parish.

Nothing was left undone by the late *Jonas Hanway* to probe this sore to the bottom. He spared neither time, pains, nor expense, to procure the fullest information on the subject, before he published his "Plea for mercy to the children of the poor." He there states, as the result of his inquiries and calculations, that not more than one in seventy of the children consigned to the parish, ever attained to mature age; and that even that one, seldom became an useful member of the community. Among

many instances of the most horrid nature, he takes notice of a memorandum he met with in the books of a certain parish, where the names of particular nurses were inserted, with the remark of their being "*excellent killing nurses.*"—This testimonial of their expertness in murder, was deemed by the overseers, who had tried them, the strongest recommendation to constant employment.

Let it not be supposed, that I mean to involve all overseers of the poor in one general charge of infanticide. I know several of them to be very amiable and tender-hearted men, who would do every thing in their power to promote the ends of true charity and the real interests of humanity, were they not tied down by the established rules of their office. That part of the institution which relates to the nursing and rearing of children, being radically wrong, the most zealous exertions of any individual, during his short continuance in office, will operate but as a temporary palliative of an evil in its own nature incurable. It is not a partial reform, but a total change of system, that can in such cases be productive of any good effect.

The supporters of Foundling Hospitals may imagine, that a justification of their plan is implied even in my censures of parochial establishments for poor children. They may say, that the laudable end of their charity is not to separate infants from their mothers, but to provide for those from whom cruel and unnatural mothers have separated themselves. I before paid the just tribute of applause to the spirit of such an institution, and to its professed objects; but I lamented the abuses which had arisen out of it, or rather, which were inseparably connected with the execution of the scheme. Its obvious tendency and its actual effect have been to *create foundlings*,—to encourage the desertion of young children, whom many of their parents would never have consigned to a receptacle of that sort, but from cruel necessity, and from a vain hope that due care would be taken of the poor creatures. I have shewn the extent of that care, the dreadful sweep of mortality which accompanied it, and its consequent insufficiency to promote the desired end.

I would not however have Foundling Hospitals entirely abolished. I would endeavour, in the first place, to render them less necessary, by a method which I shall fully explain in the next chapter, and of which the great object will be to take away from poor mothers all temptation to abandon their children. But as some women may be prompted, by other motives than that of want, to destroy their young, let there be a receptacle ever open for the rescue of such victims, and for the prevention of such unnatural crimes. If my plan for the relief of poverty, above hinted at, be carried into full effect, the number of foundlings of the latter description will always be small, and will not require any very expensive establishment. There will be no occasion for showy buildings—no room for lucrative jobs, offices, or appointments. Two or three trustees, without salary or emolument, and actuated solely by humane and charitable motives, will be sufficient to receive the money, and to lay it out according to well-regulated and maturely considered instructions. The present abuses are very great and flagrant; but the reform is very easy, if it be zealously undertaken and persevered in by men of talents and virtue. I take it for granted that such persons will also possess dignity of mind enough to despise the wretched suggestions of igno-

rance, of prejudice, of envy, malignity, sordid interest, and disappointed vanity.

The foregoing remarks are purposely confined to some of our most popular establishments for the nursing and rearing of children. It would lead me too far to enter into a detail of all the schemes which have assumed the like name of charitable institutions in the neighbourhood of London alone. The former have at least the merit of having been well intended ; but most of the latter are founded in fraud, and have no other aim but to enrich some artful projector, at the expense of public credulity. This is an inexhaustible fund for any man who can invent a quack medicine, a new mode of faith, or the plan of some specious charity. We have seen footmen in the first department, coal-heavers in the second, and swindlers in the third, driving their chariots with rival splendor and success. But the victims of the last description are most to be pitied, because they are poor, innocent, and helpless children ; while the dupes of the two first, being people of mature years and experience, cannot lay claim to any compassion for suffering not only their purses, but their very souls and bodies, to be sported with by ignorant and audacious impostors.

CHAP. X.

SKETCH OF A PLAN FOR THE PRESERVATION AND IMPROVEMENT OF THE HUMAN SPECIES.

WERE this subject to be discussed with a degree of extent suited to its importance, it would require a large volume. But I mean to touch only on a few of the principal points, merely with the hope of exciting more general attention to a matter, which, though of the highest concern, has hitherto been very slightly considered! I shall not dwell upon truths which are obvious to almost every person of common understanding, that the resources and stability of a state depends upon the number, vigour, and industry of its subjects ; and, on the contrary that where little value is set on the increase of population, on the growth, health, or life of man, the political fabric, however showy, stands on a rotten foundation, and must sooner or later sink into an abyss dug out of its own inhumanity. It is enough to mention these truths, in order to secure the ready assent of all thinking people ; but the practical inferences to be drawn from them may admit of a great diversity of opinions. The plan which I am about to propose, whether approved of, or not, may be productive of one good effect at least, that of exercising the ingenuity of others, and perhaps of conducting public and private charity to more useful purposes than those to which they are now applied.

I hope I need not go over the ground again, or repeat my former arguments, to prove that there is not any law of nature so clear, so forcible, or so sacred as that which ordains every mother to be the nurse of her own young. The well-being of both, as I before observed, depends on the faithful discharge of this duty. Every attempt to divert the breast-milk from its proper channels, endangers the mother's life ; and it is beyond the power of wealth to procure, or of art to devise, any

nutriment so congenial to the constitution of the infant, as the very juices of which it is composed, and which have so long sustained it in the womb. It is equally impossible to supply the tender care and unwearied attention of a parent; and the rich, who trust to hirelings, find by woeful experience, that half their children perish in early life. Is it a wonder, then, that a far greater mortality should await the poor infants thrown upon the parish, or consigned to an hospital, where no individual is interested in their preservation? I have faithfully stated, as a matter which came within the sphere of my own knowledge, that nine out of ten of the deserted foundlings died before they attained to maturity; and it appears from *Mr. Hanway's* unquestionable account, that sixty-nine out of seventy of the poor parish children perish in the same untimely manner. Can it therefore be called charity to persevere in measures which are so destructive to the population of the country?

I before suggested what appeared to me the best substitute for a Foundling Hospital, confined in its objects to the preservation of such children as might otherwise perish by neglect, and of such as may be deprived of their mothers at an early age by the "hand of fate." Poor orphans and deserted infants being in the same predicament, though from different causes, must be reared by strangers. The only expedient in these unavoidable deviations from nature, is to place the children under the care of nurses of unexceptionable character, in a healthy part of the country, and not to take them away till of age to be put apprentices. This very circumstance will prompt every nurse to use her best endeavours to rear a child who is to stay with her, if he thrives and does well till he is fourteen years of age. It is the only chance of making a stranger acquire in time a maternal affection for her nursling. It is also the only chance of a poor child's acquiring a good constitution, and that kind of early education which is best suited to rural employments.

But, for the relief of poor women, who in pregnancy may be exposed to numberless afflictions, and who, after delivery, may often be forced to part with their children, I would not recommend either hospitals or parish work-houses. These receptacles are little better than half-way houses, or conductors to the grave. In their room, I would have a fund established to afford indigent mothers every necessary comfort and assistance at their own habitations, during pregnancy as well as in child-bed, and afterwards to enable them to nurse and bring up their infants themselves. By these means more lives would be preserved than by all the charitable institutions now existing in this country, without costing one half of the money, or alienating the hearts of children from their parents.

It is impossible, without heart-felt sorrow, to think of the immense numbers of fine children that are lost for want of a little timely aid to mothers. How many of these poor women pine with their offspring in obscurity, and in unavailing struggles for their support! The dread of ill treatment of diseases, of death, and (what is still more terrible to a delicate mind) the dread of shame, keeps them from work-houses and hospitals. Their groans are unheard—their wants unpitied—and they pass like silent shadows to the grave!

How many others, no less tenderly attached to their young, are driven by extreme distress to leave them to the very uncertain care of others, and to hire out their breasts, and their own distracted attention, to a stran-

ger! When a mother abandons her child, to suckle that of another woman, one of the infants is almost sure to die; and it frequently happens that both share the same fate.

There is a third class of truly pitiable objects, though too often regarded with cruel indifference and contempt; I mean the poor women whom we daily see begging with two, three or more children, and entirely dependant on so precarious a resource for a morsel of bread. While these can lie under hedges, and get scraps of food they may live; but should a severe winter overtake them, when they must cling to the rock for shelter, they will all be lost. It is not unlikely that many of those poor infants may be the issue of men who have fought for their country, and that they were turned out of house and harbour lest they should become troublesome to the parish.

Can public or private charity be better employed than in preserving so many lives to the state? And how are they to be preserved? Not by tearing the poor children from the arms of their mothers, and sending them to hospitals and work-houses, to be put under the care of "*excellent killing nurses*;"—but by enabling the mothers to nurse them agreeably to the designs of nature, and thus rendering fertility, not what it now is, a curse to the poor, but the source of the sweetest pleasures, and the greatest of all blessings. A very small part of the vast sums collected in this kingdom by taxes, under the title of poor rates, and by voluntary contributions, would be fully sufficient for the proposed fund; and I am persuaded that the wisdom and humanity of parliament and of government could not be better exerted, than in preparing and carrying into effect either this, or some other more advisable plan, for saving the lives of such an incalculable number of devoted victims.

Vanity, as I before observed, has a very great share in the erection and support of alms-houses; or the rich and the truly humane would readily discover in the hints now given, a much more useful as well as a more charitable method of employing their superfluous wealth. I hope, however, that the conscious pleasure of doing real good, will induce many ladies, blessed with affluence, to assist poor women to nurse and rear their children in their own little huts or habitations, though not inscribed on the outside with any vain compliment to the pride of a patroness or a founder. Is not the sight of a rising family, who are indebted to you for health, and even for existence, a thousand times more gratifying to the human heart, than the silly ostentation or parade of a public charity?

It would imply a very unbecoming doubt of the good sense and natural feelings of my readers, to dwell any longer on this head; but many of them may think the other part of my plan, expressed in the title of the present chapter, and having for its avowed object *the improvement of the human species*, a little romantic. Yet I flatter myself that I shall be able to prove, that there is nothing of fanciful or impracticable theory in the suggestion; and that the improvement, as well as the preservation of the human species, may be effectually promoted by the same means—well-timed assistance, and proper encouragement to mothers.

In the first chapter of this work I threw out some hints on the proper choice of wives and of husbands, with a view to the procreation of a healthy and vigorous issue; and I lamented that the impulses of natural inclination were too often checked in civilized society by the manner

passions of avarice and false pride. I also took notice of cases in which marriage had been forbidden by the legislators of different countries. But though it would be difficult to frame, and to enforce any complete system of laws for regulating the union of the sexes; and though such legal restraints on marriages would be incompatible with the liberty of individuals in a free government like ours, yet it is in the power of every state to encourage the rearing of fine children, by granting to every mother a premium annually, in proportion to the age and number of the healthy children she brought up. The prospect of a liberal and honourable reward at the end of every year, would encourage mothers to exert all their skill, and use every endeavour to rear a numerous and healthy offspring. It would excite a general emulation among mothers; and the object of the virtuous struggle would be, who should have the finest children. The name of *Cornelia*, that famous Roman mother, would no longer stand alone on the records of maternal affection: But English women, when requested to shew their jewels or their brightest ornaments, would throw open the nursery, and exhibit a lovely family to the spectator's admiring gaze.

Let it not be frivolously objected, that a fond mother cannot want, or cannot feel a stronger stimulus, than natural affection, to make her take care of her child. Poor women are forced by keen distress to neglect their infants in order to earn a bit of bread. They require therefore present supplies, and the assurance of a future reward; not merely to induce them, but in fact to enable them to bestow more time and attention upon this one important object. Again, then, I must assert, that a part of the public money, as well as of private charitable contributions, cannot be applied to a better purpose, than to the establishment of a fund for the support and encouragement of such mothers. The good effects of this plan would far exceed any present conjecture or calculation. The population of the country would increase with almost inconceivable rapidity. Instead of puniness, deformity, diseases, and early deaths, the rising generation would be distinguished from their health, beauty and vigour; and we should see a stout and hardy race spring up, to repay with usury, in valuable services to the state, the sums expended in nursing and rearing them. I do not know any one institution upon earth, in which humanity and enlightened policy would be found more happily united.

The effects of premiums have been proved in a variety of other instances, such as the culture of vegetables, the growth of flax, of hemp, of potatoes, the planting of trees, and the improvement of the breed of cattle. Is it not a matter of just surprise that no attention of this sort should ever have been paid to the personal or bodily improvement of the human species? We know that the most tender plant is not more susceptible of any shape or form than infant man. We know that his strength and figure are certainly as improvable as those of any other animal, were proper methods pursued for the accomplishment of such desirable purposes. Yet the breed of men is alone neglected, while every effort of ingenuity is called forth, and the resources of wealth are exhausted, in experiments to improve the breed of sheep, of horses, and of oxen!

I never met with more than one man who took up this subject on a serious ground. His plan was a good one had he possessed sufficient

means to carry it into execution. He proposed to purchase a small island, and to plant it with as many people of both sexes as it would very comfortably maintain. Of these, he meant to superintend the diet, occupations, marriages, and the management of their children, with a view to try how far the breed might be improved. It was a speculation worthy of an enlarged mind. Were every person of landed property in the kingdom, of this gentleman's way of thinking, and could our country squires in particular be induced to pay half as much attention to the breed of men, as to that of dogs, horses, and cattle, the progress of the human species to perfection would become more rapid, and more astonishing, than the degeneracy so often complained of in every successive age.

Nor would this progressive improvement of man be confined to the body only; it would extend itself also to the mind. Every thing great or good in future life, must be the effect of early impressions; and by whom are those impressions to be made but by mothers; who are most interested in the consequences? Their instructions and example will have a lasting influence, and of course, will go farther to form the morals, than all the eloquence of the pulpit, the efforts of schoolmasters, or the corrective power of the civil magistrate, who may, indeed, punish crimes, but cannot implant the seeds of virtue. If these are not sown in childhood, they will never take deep root; and where they are not found to grow, every vice will spring up with baneful luxuriance.

In this view of the subject I could easily find a thousand arguments to enforce the political importance of the plan which I have suggested; but I undertook only to shew that perfect health and growth, that personal beauty and vigour, were most likely to be the fruits of the well-directed and well-encouraged care of mothers in the nursing and rearing of their children. Other authors have enlarged on the culture of the heart and the understanding, the first and chief part of which they all acknowledge to be the incontestible province of mothers. The eloquent writer whom I have repeatedly quoted, and who has taken some pains to illustrate this point, argues with great justness, that if the early part of education, which concerns us most, had been designed for fathers, the Author of nature would doubtless have furnished them with milk for the nourishment of their children. It is in concurrence with his opinion, that I have addressed this little book of instructions to females; and as he has very beautifully compared infant man to a shrub exposed to numberless injuries in the high way of life, I shall join him in calling on the tender and provident mother, to preserve the rising shrub from the shocks of human prejudice. I shall say to her, almost in his words, *Cultivate, water the young plant before it die; so shall its fruit be hereafter delicious to your taste. Erect an early fence round the disposition of your child: others may delineate its extent; but it remains with you only to raise the barrier.*

APPENDIX.

WHEN I first turned my attention to the nursing and management of children, the late *Dr. Cadogan's* pamphlet on that subject fell into my hands. I perused it with great pleasure, but soon lost it : and though I have been in quest of it for above forty years, I never could set my eyes upon it till within these few days ; which makes me conclude that it is out of print. That so valuable a fragment may not be lost, I shall insert the principal part of it in this Appendix ; and I hope it will render the book more extensively useful, and at the same time, tend to corroborate my sentiments concerning mothers.

“ In my opinion,” says the ingenious writer whom I am now quoting, “ the business of nursing has been too long fatally left to the management of women, who cannot be supposed to have proper knowledge to fit them for such a task, notwithstanding they look upon it to be their own province. What I mean is, a philosophic knowledge of nature, to be acquired only by learned observation and experience, and which therefore the unlearned must be incapable of. They may presume upon the examples and transmitted customs of their great grandmothers, who were taught by the physicians, of their unenlightened days ; when physicians, as appears by late discoveries, were mistaken in many things, being led away by hypothetical reasonings to entertain very wild conceits, in which they were greatly bewildered themselves, and misled others to believe I know not what strange unaccountable powers in certain herbs, roots, and drugs ; and also in some superstitious practices and ceremonies ; for all which notions their being no foundation in nature, they ought to be looked upon as the effects of ignorance, or the artifices of designing quacks, who found their account by pretending to great knowledge in these occult qualities, and imposing upon the credulous. The art of physic has been much improved within this last century : by observing and following nature more closely, many useful discoveries have been made, which help us to account for things in a natural way, that before seemed mysterious and magical, and which have consequently made the practice of it more conformable to reason and good sense. This being the case, there is great room to fear, that those nurses, who yet retain many of these traditional prejudices, are capitally mistaken in the management of children in general, and, fancying that nature has left a great deal to their skill and contrivance, often do much harm where they intend to do good. Of this I shall endeavour to convince them, by shewing how I think children may be clothed, fed, and managed, with much less trouble to their nurses, and infinitely greater ease, comfort, and safety, to the little ones.”

“ When a man takes upon him to contradict received opinions and prejudices sanctified by time, it is expected he should bring valid

proof of what he advances. The truth of what I say, that the treatment of children in general is wrong, unreasonable and unnatural, will in a great measure appear, if we but consider what a puny valetudinary race most of our people of condition are, chiefly owing to bad nursing, and bad habits contracted early. But let any one who would be fully convinced of this matter, look over the Bills of Mortality. There he may observe, that almost half the number of those who fill up that black list, die under five years of age: so that half the people that come into the world, go out of it again before they become of the least use to it, or themselves. To me this seems to deserve serious consideration; and yet I cannot find that any one man of sense and public spirit has ever attended to it all: notwithstanding the maxim in every one's mouth, that a multitude of inhabitants is the greatest strength and best support of a commonwealth. The misconduct, to which I must impute a great part of the calamity, is too common and obvious to engage the idle and speculative, who are to be caught only by very refined researches; and the busy part of mankind, where their immediate interest is not concerned, will always overlook what they see daily: it may be thought a natural evil, and so is submitted to without examination. But this is by no means the case; and where it is entirely owing to mismanagement, and possibly may admit of a remedy, it is ridiculous to charge it upon nature, and suppose that infants are more subject to disease and death, than grown persons; on the contrary, they bear pain and disease much better, fevers especially (as is plain in the case of the small-pox, generally most favourable to children), and for the same reason that a twig is less hurt by a storm than an oak. In all the other productions of nature, we see the greatest vigour and luxuriance of health, the nearer they are to the egg or the bud; they are indeed most sensible of injury, and it is injury only that destroys them. When was there a lamb, a bird, or a tree that died because it was young? These are under the immediate nursing of unerring nature, and they thrive accordingly. Ought it not therefore to be the care of every nurse and every parent, not only to protect their nurslings from injury, but to be well assured that their own officious services be not the greatest the helpless creatures can suffer.

“ In the lower class of mankind, especially in the country, disease and mortality are not so frequent, either among the adults or their children. Health and posterity are the portion of the poor, I mean the laborious. The want of superfluity confines them more within the limits of nature: hence they enjoy blessings they feel not, and are ignorant of their cause. The mother, who has only a few rags to cover her child loosely, and little more than her own breast to feed it, sees it healthy and strong, and very soon able to shift for itself; while the puny insect, the heir and hope of a rich family, lies languishing under a load of finery that overpowers his limbs, abhorring and rejecting the dainties he is crammed with, till he dies a victim to the mistaken care and tenderness of his fond mother. In the course of my practice, I have had frequent occasion to be fully satisfied of this; and have often heard a mother anxiously say, *the child has not been well ever since it has done puking and crying*. These complaints, though not attended to, point very plainly to their cause. Is it not very evident when a child rids its stomach several times in a day, that it has been overloaded? When it cries, from the incumbrance and confinement of its clothes, that it is hurt by

them? While the natural strength lasts, (as every child is born with more health and strength than is generally imagined,) it cries at or rejects the superfluous load, and *thrives apace*; that is, grows very fat, bloated, and distended beyond measure, like a house-lamb. But in time, the same oppressive cause continuing, the natural powers are overcome, being no longer able to throw off the unequal weight; the child, now not able to cry any more, languishes and is quiet. The misfortune is, these complaints are not understood; it is swaddled and crammed on, till, after gripes, purging, &c. it sinks under both burdens into a convulsion-fit, and escapes any farther torture. This would be the case with the lamb, were it not killed when full fat.

“That the present mode of nursing is wrong, one would think needed no other proof than the frequent miscarriages attending it, the death of many, and ill-health of those that survive***. What I am going to complain of is, that children in general are over-clothed and over-fed; and fed and clothed improperly. To these causes I impute almost all their diseases. But to be a little more explicit. The first great mistake is, that they think a new-born infant cannot be kept too warm: from this prejudice they load and bind it with flannels, wrappers, swathes, stays, &c. which altogether are almost equal to its own weight; by which means a healthy child in a month’s time is made so tender and chilly, it cannot bear the external air; and if, by any accident of a door or a window left carelessly open too long, a refreshing breeze be admitted into the suffocating atmosphere of the lying-in bed-chamber, the child and mother sometimes catch irrecoverable colds: but, what is worse than this, at the end a month, if things go on apparently well, this hot-bed plant is sent out into the country to be reared in a leaky house, that lets in wind and rain at every quarter. Is it any wonder the child never thrives afterwards? The truth is, a new-born infant cannot well be too cool and loose in its dress: it wants less clothing than a grown person in proportion, because it is naturally warmer, as appears by the thermometer, and would therefore bare the cold of a winter’s night much better than any adult person whatever. There are many instances, both ancient and modern, of infants exposed and deserted, that have lived several days; as it was the practice in ancient times, in many parts of the world, to expose all whom the parents did not care to be encumbered with; that were deformed or born under evil stars; not to mention the many foundlings picked up in London streets. These instances may serve to shew, that nature has made children able to bear even great hardships, before they are made weak and sickly by their mistaken nurses. But, besides the mischief arising from the weight and heat of these swaddling-clothes, they are put on so tight, and the child is so cramped by them, that its bowels have not room, nor the limbs any liberty, to act and exert themselves in the free easy manner they ought. This is a very hurtful circumstance; for limbs that are not used will never be strong, and such tender bodies cannot bear much pressure: the circulation restrained by the compression of any one part, must produce unnatural swellings in some other, especially as the fibres of infants are so easily distended. To which, doubtless, are owing the many distortions and deformities we meet with every where; chiefly among women, who suffer more in this particular than the men.

“If nurses were capable of making just observations, they might see

and take notice of that particular happiness, which a child shews by all its powers of expression, when it is nearly undressed. How pleased, how delighted it is with this new liberty, when indulged for a few minutes with the free use of its legs and arms! But this is not to last long: it is waddled up as before, notwithstanding its cries and complaints.

“ I would recommend the following dress: a little flannel waistcoat, without sleeves, made to fit the body, and tie loosely behind; to which there should be a petticoat sewed, and over this a kind of gown of the same material, or any other that is light, thin, and flimsy. The petticoat should not be quite so long as the child, the gown a few inches longer; with one cap only on the head, which may be made double, if it be thought not warm enough. What I mean is, that the whole coiffure should be so contrived, that it might be put on at once, and neither bind nor press the head at all: the linen as usual. This I think would be abundantly sufficient for the day; laying aside all those swathes, bandages, stays, and contrivances, that are most ridiculously used to close and keep the head in its place, and support the body. As if nature, exact nature, had produced her chief work, a human creature, so carelessly unfinished as to want those idle aids to make it perfect. Shoes and stockings are very needless incumbrances, besides that they keep the legs wet and nasty if they are not changed every hour, and often cramp and hurt the feet: a child would stand firmer, and learn to walk much sooner, without them. I think they cannot be necessary till it runs out in the dirt. There should be a thin flannel shirt for the night which ought to be every way quite lose. Children in this simple, pleasant dress, which may be readily put on and off without teasing them, would find themselves perfectly easy and happy, enjoying the free use of their limbs and faculties, which they would very soon begin to employ when thus left at liberty. I would have them put into it as soon as they are born, and continued in it till they are three years old; when it may be changed for any other more genteel and fashionable: though I could wish it was not the custom to wear stays at all; not because I see no beauty in the sugar-loaf shape, but that I am apprehensive it is often procured at the expense of the health and strength of the body. There is an odd notion enough entertained about change, and the keeping of children clean. Some imagine that clean linen and fresh clothes draw, and rob them of their nourishing juices; I cannot see that they do any thing more than imbibe a little of that moisture which their bodies exhale. Were it, as is supposed, it would be of service to them; since they are always too abundantly supplied, and therefore I think they cannot be changed too often, and would have them clean every day; as it would free them from stinks and sournesses, which are not only offensive, but very prejudicial to the tender state of infancy.

“ The feeding of children properly, is of much greater importance to them than their clothing. We ought to take great care to be right in this material article, and that nothing be given them but what is wholesome and good for them, and in such quantity as the body calls for towards its support and growth; not a grain more.—Let us consider what nature directs in the case: if we follow nature, instead of loading or driving it, we cannot err. In the business of nursing, as well as physic art is ever destructive, if it does not exactly copy this original. When a child is first born, there seems to be no provision at all made for it;

for the mother's milk, as it is now managed, seldom comes till the third day; so that according to this appearance of nature, a child would be left a day and a half, or two days, without any food. Were this really the case, it would be a sufficient proof that it wanted none; as indeed it does not immediately; for it is born full of blood, full of excrement, its appetites not awake, nor its senses opened; and requires some intermediate time of abstinence and rest to compose and recover the struggle of the birth, and the change of circulation (the blood running into new channels) which always put it into a little fever. However extraordinary this might appear, I am sure it would be better that the child was not fed even all that time, than as it generally is fed, for it would sleep the greatest part of the time, and, when the milk was ready for it, would be very hungry, and suck with more eagerness; which is often necessary for it seldom comes freely at first. But let me endeavour to reconcile this difficulty, that a child should be born thus apparently unprovided for: I say apparently, for in reality it is not so. Nature neither intended that a child should be kept so long fasting, nor that we should feed it for her. Her design is broke in upon, and a difficulty raised that is wholly owing to mistaken management.—The child, as soon as it is born, is taken from the mother, and not suffered to suck till the milk comes of itself; but is either fed with strange and improper things, or put to suck some other woman, whose milk flowing in a full stream, overpowers the new born-infant, that has not yet learned to swallow, and sets it a coughing, or gives it a hickup: the mother is left to struggle with the load of her milk, unassisted by the sucking of the child. Thus two great evils are produced, the one a prejudice to the child's health, the other the danger of the mother's life; at least the retarding her recovery, by causing what is called a milk fever; which has been thought to be natural, but so far from it, that it is entirely owing to this misconduct. I am confident from experience, that there would be no fever at all, were things managed rightly; were the child kept without food of any kind till it was hungry, which it is impossible it should be just after the birth, and then applied to the mother's breast: it would suck with strength enough, after a few repeated trials, to make the milk flow gradually, in due proportion to the child's unexercised faculty of swallowing, and the call of its stomach. Thus the child would not only provide for itself the best of nourishment, but, by opening a free passage for it, would take off the mother's load, as it increased, before it could oppress or hurt her; and therefore effectually prevent the fever, which is caused only by the painful distension of the lacteal vessels of the breasts, when the milk is injudiciously suffered to accumulate. Here let me describe a case of pure nature, in order to illustrate this material point yet farther. When a healthy young woman lies in of her first child, before the operations of nature have been perverted by any absurd practices, her labour would be strong, and, as I have chosen to instance in the case of a first child, perhaps difficult; but in a few minutes after her delivery, she and her child, if it be not injured, would fall in a sweet sleep of six or seven hours: the mother, if no poisonous opiate has been unnecessarily given her, would awake refreshed, the child hungry. A little thin broth with bread, or some such light food, should be then given her; and soon after the child be put to suck. In one hour or two the milk would infallibly flow; and, if nothing else be given it, the child would grow strong, and

she recover perfectly in a few days. This is the constant course of nature, which is very little attended to, and never followed. The general practice is, as soon as a child is born, to cram a dab of butter and sugar down its throat, a little oil, panada, caudle, or some such unwholesome mess. So that they set out wrong, and the child stands a fair chance of being made sick from the first hour. It is the custom of some to give a little roast pig to an infant, which, it seems, is to cure it of all the mother's longings. Much nonsense has been propagated, and believed, about women's longings, without any foundation in truth and nature. I wish these matters were a little more inquired into for the honour of the sex to which many imperfections of this kind are imputed, which I am sure it does not lie under.

"Hence I may be asked, what is to be done with a child born sick, that, instead of sleeping, cries incessantly from the birth, and is hardly to be quieted by any means? Let good care be taken that it is not hurt by the dressing, or rather let it not be dressed at all, but wrapped up in a loose flannel. If, notwithstanding this precaution, it still continues crying: instead of feeding it, for it is certainly a preposterous thing to think of feeding a child because it is sick, though possibly this may stop its mouth for a little while, let it be applied to the mother's breast, perhaps it may bring the milk immediately, which would be the best medicine for it in such a case; or the nipple in its mouth may quiet it, though it does not bring it.—And it is certainly better it should be quieted without food than with it, which must necessarily make it worse. Sometimes indeed the child may be so very ill, that it will not even attempt to suck. In such a case, which I think can happen but rarely, let the physic I shall recommend a little farther on, where children are unavoidably to be dry-nursed, be given, a little every hour, till it takes effect, still attempting to bring it to suck the mother's milk, which is the best physic or food it can take.

"When a child sucks its own mother, which, with a very few exceptions, would be best for every child and every mother, nature has provided it with such wholesome and suitable nourishment, supposing her a temperate woman that makes some use of her limbs, it can hardly do amiss. The mother would likewise, in most hysterical nervous cases, establish her own health by it, though she were weak and sickly before, as well as that of her offspring. For these reasons I could wish, that every woman that is able, whose fountains are not greatly disturbed or tainted, would give suck to her child. I am very sure that forcing back the milk, which most young women must have in great abundance, may be of fatal consequence: sometimes it endangers life, and often lays the foundation of many incurable diseases. The reasons that are given for this practice are very frivolous, and drawn from false premises; that some women are too weak to bear such a drain, which would rob them of their own nourishment. This is a very mistaken notion; for the first general cause of most people's diseases is, not want of nourishment, as is here imagined, but too great fulness and redundancy of humours; good at first, but being more than the body can employ or consume, they stagnate, degenerate, and the whole mass becomes corrupt, and produces many diseases. This is confirmed by the general practice of physicians, who make holes in the skin, perpetual blisters, issues, &c. to let out the superfluity. I would therefore leave it to be considered, whether the

throwing back such a load of humour, as a woman's first milk be most likely to mend her constitution, or make her complaint irremediable. The mother's first milk is purgative, and cleanses the child of its long-hoarded excrement; no child, therefore, can be deprived of it without manifest injury. By degrees it changes its property, becomes less purgative and more nourishing; and is the best and only food the child likes, or ought to have for some time. If I could prevail, no child should ever be crammed with any unnatural mixture, till the provision of nature was ready for it; nor afterwards fed with any ungenial alien diet whatever, at least for the *first three months*: for it is not well able to digest and assimilate other aliments sooner. I have seen very healthy fine children, that never ate or drank any thing whatever but the mother's milk for the first ten or twelve months. Nature seems to direct this, by giving them no teeth till about that time. There is usually milk enough with the first child; sometimes more than it can take: it is poured forth from an exuberant, overflowing urn, by a bountiful hand that never provides sparingly. The call of nature should be waited for to feed it with any thing more substantial, and the appetite ever precede the food; not only with regard to the daily meals, but those changes of diet, which opening, increasing life requires. But this is never done in either case, which is one of the greatest mistakes of all nurses. Thus far nature, if she be not interrupted, will do the whole business perfectly well; and there seems to be nothing left for a nurse to do, but to keep the child clean and sweet, and to tumble and toss it about a good deal, play with it, and keep it in good humour.

“When the child requires more solid sustenance, we are to inquire what, and how much is most proper to give it. We may be well assured there is a great mistake either in the quantity or quality of children's food, or both, as it is usually given them; because they are made sick by it; for to this mistake I cannot help imputing nine in ten of all their diseases. As to the quantity, there is a most ridiculous error in the common practice; for it is generally supposed, that, whenever a child cries, it wants victuals; and it is accordingly fed ten, twelve, or more times, in a day and night. This is so obvious a misapprehension, that I am surprised it should ever prevail. If a child's wants and motions be diligently and judiciously attended to, it will be found that it never cries but from pain: now the first sensations of hunger are not attended with pain: accordingly a child (I mean this of a very young one) that is hungry, will make a hundred other signs of its want, before it will cry for food. If it be healthy and quite easy in its dress, it will hardly ever cry at all. Indeed these signs and motions I speak of are but rarely to be observed; because it seldom happens that children are ever suffered to be hungry. In a few days, very few, whom I have had the pleasure to see reasonably nursed, that were not fed above two or three times in four and twenty hours, and yet were perfectly healthy, active, and happy, I have seen these signals, which were as intelligible as if they had spoken.

“There are many faults in the quality of their food: it is not simple enough. Their paps, panadas, gruels, &c. are generally enriched with sugar, spice, and sometimes a drop of wine, neither of which they ought ever to taste. Our bodies never want them: they are what luxury only has introduced, to the destruction of the health of mankind. It is not

enough that their food be simple, it should be also light. Several people I find, are mistaken in their notions of what is light; and fancy that most kinds of pastry, puddings, custards, &c. are light, that is, light of digestion. But there is nothing heavier in this sense than unfermented flour and eggs boiled hard, which are the chief ingredients of those preparations. What I mean by light, to give the best idea I can of it, is any substance that is easily separated, and soluble in warm water. Good bread is the lightest thing I know; the power of due fermentation, in which consists the whole art of making it, break and attenuates the tenacious particles of the flour so as to give it these qualities I mention, and make it the fittest food for young children. Cow's milk is also simple and light, and very good for them: but it is injudiciously prepared; it should not be boiled; for boiling alters the taste and property of it, destroys its sweetness and makes it thicker, heavier and less fit to mix and assimilate with the blood. But the chief objection is, that their food is wholly vegetable, the bad consequence of which is, that it will turn sour in their stomachs. The first and general cause of all the diseases of infants is manifestly this acescent quality of all their food. If any of these vegetable preparations I have named, be kept in a degree of heat equal to that of a child's stomach, it will become sour as vinegar in a few hours time. These things are therefore very improper to feed a child wholly with. Some part of its diet should be contrived to have a contrary tendency; such as we find only in flesh, which is the direct opposite to acid and tends to putrefaction. In a due mixture of these two extremes, correcting each other, consists that salubrity of aliment our nature seems to require. As we are partly carnivorous animals, a child ought not to be fed wholly upon vegetables. The mother's milk, when it is perfectly good, seems to be this true mixture of the animal and vegetable properties that agrees best with the constitution of a child, readily passes into good blood, requiring but a gentle exertion of the powers of circulation to break and subdue its particles, and make them smooth and round, and easily divisible. I would advise therefore, that one half of an infant's diet, be thin light broths, with a little bread or rice boiled in them; which last is not so acescent as any other kind of meal or flour. These broths should be made with the flesh of full-grown animals, because their juices are more elaborate; especially if they have never been confined to be fatted. The juices of a young ox, taken from the plough, make the finest flavoured and most wholesome soup. I believe it is for the same reason, the flesh of all wild animals has a higher taste than that of tame, saginated ones, and is therefore most agreeable to the palate of the luxurious; but this is to be understood of those creatures that feed on corn or herbage. The other part of children's diet may be a little toasted bread and water boiled almost dry, and then mixed with fresh milk not boiled.* This, without sugar, spice, or any other pretended amendment whatever, would be perfectly light and wholesome, of sufficient nourishment, something like milk from the cow, with the additional strength and spirit of bread in it.

* The London bakers are suspected of putting alum in their bread, which would be very pernicious to infants. Therefore rusks, or the biscuits called tops-and-bottoms, or rice, may be used instead of it. These will not turn sour so soon as common bread; which quality is undoubtedly an objection to using much of it, especially when children are weakly. The safest and best method in my opinion is, not to feed them at all; at least till they are six or eight months old. The finest children I ever saw lived wholly upon sucking till after that age.

Twice a-day, and not oftener, a sucking child should be fed at first ; once with the broth, and once with the milk thus prepared. As to the quantity at each time, its appetite must be the measure of that. Its hunger should be satisfied, but no more ; for children will always eat with some eagerness full as much as they ought : therefore it must be very wrong to go beyond that, and stuff them till they spew, as the common method is. They should not be laid on their backs to be fed, but held in a sitting posture, that swallowing may be easier to them, and that they may the more readily discover when they have had enough. When they come to be about *ten or twelve months old*, and their appetite and digestion grows strong, they may be fed three times a-day ; which I think they ought never to exceed their whole lives after. By night I would not have them fed or suckled at all, that they might at least be hungry in a morning. It is this night-feeding that makes them so over-fat and bloated. If they be not used to it at first, and, perhaps, awaked on purpose, they will never seek it ; and if they are not disturbed from the birth, in a week's time they will get into a habit of sleeping all or most part of the night very quietly, awaking possibly once or twice for a few minutes, when they are wet, and ought to be changed. Their meals, and, in my opinion, their sucking too, ought to be at stated times, and the same every day ; that the stomach may have intervals to digest, and the appetite return. The child would soon be quite easy and satisfied in the habit ; much more so than when taught to expect food at all times, and at every little fit of crying or uneasiness. Let this method be observed about a *twelve month*, when, and not before, they may be weaned ; not all at once, but by insensible degrees, that they may neither feel, nor fret at, the want of the breast. This might be very easily managed, if they were suffered to suck only at certain times. Were this plan of nursing literally pursued, the children kept clean and sweet, tumbled and tossed about a good deal, and carried out every day in all weathers, I am confident, that, in six or eight months time, most children would become healthy and strong, would be able to sit upon the ground without support, to divert themselves an hour at a time, to the great relief of their nurses ; would readily find the use of their legs, and very soon shift for themselves.

“ If it be asked, whether I mean this of children in general, and that weakly ones, born of unhealthy parents, should be treated in the same manner, I answer, that it is not so common for children to inherit the diseases of their parents, as is generally imagined : there is much vulgar error in this opinion ; for people that are very unhealthy seldom have children, especially if the bad health be on the female side ; and it is generally late in life when chronic diseases take place in most men, when the business of love is pretty well over : certainly children can have no title to those infirmities which their parents have acquired by indolence and intemperance long after their birth. It is not common for people to complain of ails they think hereditary, till they are grown up : that is, till they have contributed to them by their own irregularities and excesses, and then are glad to throw their own faults back upon their parents, and lament a bad constitution when they have spoiled a very good one. It is very seldom that children are troubled with family distempers. Indeed, when we find them affected with scrophulous or venereal complaints, we may reasonably conclude the taint to have been transmitted to them ; but these cases are very rare, in compa-

rison of the many others that are falsely, and without the least foundation, imputed to parents: when the real cause is either in the complainants themselves, or bad nursing, that has fixed them early in bad habits. In one sense, many diseases may be said to be hereditary, perhaps all those of malformation, by which I mean not only deformity and distortion, but all those cases where the fibres and vessels of one part are weaker in proportion than the rest; so that upon any strain of the body, whether of debauch or too violent exercise, the weak part fails first, and disorders the whole. Thus complaints may be produced similar to those of the parent, owing in some measure to the similitude of parts, which possibly is inherited like the features of the face; but yet these diseases might never have appeared, but for the immediate acting cause, the violence done the body. Most distempers have two causes: the one, a particular state of the solids and fluids of the body, which dispose it to receive certain infections and impulses; the other, the infection or impulse itself. Now what I contend for is, that though this predisponent state or habit of body be heritable, yet the diseases incident to these wretched heirs may be avoided by preventing the active cause: which may be done in many cases by a due attention to the non-naturals, as they are called; in plainer words, by a temperate, active life; in children, by good nursing. Therefore, I conclude, that, instead of indulging and enfeebling yet more by the common methods, children so unhappily born what I am recommending, together with the wholesome milk of a healthy nurse, is the best, the only means to remedy the evil, and by which alone they may by degrees be made healthy and strong. And thus, in a generation or two of reasonable temperate persons, every taint and infirmity whatever, the king's evil and madness not excepted, would be totally worn out.

“The plain natural plan I have laid down is never followed, because most mothers, of any condition, either cannot, or will not undertake the troublesome task of suckling their own children; which is troublesome only for want of proper method: were it rightly managed, there would be too much pleasure in it, to every woman that can prevail upon herself to give up a little of the beauty of her breast to feed her offspring; though this is a mistaken notion, for the breasts are not spoiled by given suck, but by growing fat. There would be no fear of offending the husband's ears with the noise of the squalling brat. The child, was it nursed in this way, would be always quiet, in good humour, ever playing, laughing, or sleeping. In my opinion, a man of sense cannot have a prettier rattle (for rattles he must have of one kind or other) than such a young child. I am quite at a loss to account for the general practice of sending infants out of doors, to be suckled or dry-nursed by another woman, who has not so much understanding, nor can have so much affection for it, as the parents; and how it comes to pass, that people of good sense and easy circumstances will not give themselves the pains to watch over the health and welfare of their children, but are so careless as to give them up to the common methods, without considering how near it is to an equal chance that they are destroyed by them. The ancient custom of exposing them to wild beasts, or drowning them, would certainly be a much quicker and more humane way of dispatching them. There are some, however, who wish to have children and to preserve them, but are mistaken in their cares about them. To

such only I would address myself, and earnestly recommend it to every father to have his child nursed unde his own eye; to make use of his own reason and sense, in superintending and directing the management of it; nor suffer it to be made one of the mysteries of the *Bona Dea*, from which the men are to be excluded. I would advise every mother that can, for her own sake as well as her child's to suckle it: if she be a healthy woman, it will confirm her health; if weakly, in most cases it will restore her. It need be no confinement to her, or abridgment of her time: four times in four-and twenty-hours will be often enough to give it suck; letting it have as much as it will suck out of both breasts at each time. It may be fed and dressed by some handy reasonable servant, that will submit to be directed; whom, likewise, it may sleep with. No other woman's milk can be so good for her child; and dry-nursing I look upon to be the most unnatural and dangerous method of all; and, according to my observation, not one in three survives it. To breed a child in this artificial manner, requires more knowledge of nature and the animal economy, than the best nurse was ever mistress of, as well as more care and attention than is generally bestowed on children: the skill of a good physician would be necessary to manage it rightly." * * * *

The doctor is here led to state his opinion as to the precautions necessary to be taken in the choice of hired nurses, and his reasons why the children entrusted to their care should be treated somewhat differently from those who are nursed in a more natural way, and suck their own mothers. He does not deem it enough that hired nurses should be clean and healthy: he looks upon their age as a material consideration. "those," he says, "between twenty and thirty are certainly of the best age; because they will have more milk than the very young, and more and better than the old. But what," he thinks, "of the utmost consequence is, that regard should be had to the time of their lying-in, and those procured, if possible, who have not been brought to bed above two or three months." He justly observes, that "nature intending a child should suck about a twelve-month, the milk seldom continues good much longer;" and he adds, with a still greater degree of evidence, "that if a new-born infant be deprived of its own mother's milk, it ought undoubtedly to have what is most like it: the newer it is, the more suitable in all respects to its tender nature." * * * * *

After censuring a very common practice with poor women, who, if they can get nurse-children, will suckle two or three of them successively with the same milk, he proceeds thus: "A nurse ought to have great regard to her diet: it is not enough that she be sober and temperate; her food should consist of a proper mixture of flesh and vegetables: she should eat one hearty meal of unsalted flesh-meat every day, with a good deal of garden-stuff, and a little bread. Thin broth or milk would be best for her breakfast and supper. Her drink should be small-beer, or milk and water; but on no account should she ever touch a drop of wine or strong drink, much less any kind of spirituous liquors: giving ale or brandy to a nurse is, in effect, giving it to the child; and it is easy to conclude what would be the consequence." * * * * *

This equally candid and judicious writer does not enter upon his promised description of the treatment proper for children put out to nurse, without again reminding his readers, that the plan, which he would lay down, could he prevail, would be that of nature, excluding art

and foreign aid entirely. "But," he adds, "when this is broke in upon, a little adventitious skill becomes indispensably necessary; that, if we are not perfectly right in following closely the design of nature, we may co-operate a little, and not be totally wrong in counteracting it, as is often the case. What I mean is, that every child, not allowed the mother's first milk, whether it be dry-nursed or suckled by another woman, should be purged in a day or two after the birth, and this purging continued for some time; not by regular doses of physic that may operate all at once, but some lenient laxatives should be contrived, and given two or three times a-day, so as to keep the child's body open for the first nine days, or a night; lessening the quantity insensibly, till it be left off. It should be so managed, that the operation of the artificial physic may resemble that of the natural. This is so material, that, for want of it, most children in the first month break out in pimples all over: the nurses call it red-gum, and look upon it to be a natural thing, and that the children will be unhealthy who have it not. So indeed they will be in all likelihood; and it is better that these foulnesses, which become acrid and hot by remaining too long in the body, should be discharged through the skin, than not at all: or that they should be lodged in the blood, or fall upon the vitals, to lay the foundation of numberless future evils; but it is chiefly owing to the neglect of this method at first. A child that sucks its own mother, unless it be greatly over fed, or kept too hot, will never be troubled with this humour at all."

The following is the form of the gentle purgative which the Doctor recommends to such infants as have been deprived of the salutary operation of their mother's milk:

"Take manna, pulp of cassia, of each half an ounce: dissolve them in about three ounces of thin broth. Let the child take two spoonfuls three times a-day, varying the quantity according to the effect; which, at first, ought to be three or four stools in four-and-twenty hours."

Among other rules for the conduct of hired nurses, this experienced physician particularly enjoins such women "to keep the children awake by day, as long as they are disposed to be so, and to amuse and keep them in good humour all they can; not to lull and rock them to sleep, or to continue their sleep too long; which is only done to save their own time and trouble, to the great detriment of the children's health, spirits, and understanding." * * * * * Here he refers to his former observations on the changes to be gradually made in the diet of children, when they come to require more solid sustenance than breast-milk; and he takes occasion to introduce the following remarks:

"A child may be allowed any kind of mellow fruit, either raw, stewed, or baked, roots of all sorts, and all the produce of the kitchen-garden. I am sure all these things are wholesome and good for them, and every one else, notwithstanding the idle notion of their being windy, which they are *only* to very debauched stomachs; and so is milk: but no man's blood wants the cleausing, refreshing power of milk, more than his, whose stomach, used to inflammatory things of high relish, will not bear the first chill of it. To children, all this kind of food, taken in moderation, is perfectly grateful and salutary. Some may think that they carry into the stomach the eggs of future worms: but of this I am not very apprehensive; for I believe there are few things we eat or drink that do not convey them. But then they can never be hatched in a healthy inside, where all the juices are sweet and good, and every

gland performs its office: the gall, in particular, would destroy them; bullock's gall has been found to be a good and safe vermifuge. It is my opinion, we swallow the eggs of many little animals, that are never brought to life within us, except where they find a fit nest or lodgment in the acid phlegm or vitiated humours of the stomach and bowels. Were these totally discharged every day, and the food of yesterday employed in nourishment, and the superfluity thrown off to the last grain, no worms could ever breed or harbour in our vitals. As soon as the children have any teeth, at six or eight months, they may by degrees be used to a little flesh-meat; which they are always very fond of, much more so at first, than of any confectionary or pastry wares, with which they should never debauch their taste."

I have elsewhere enlarged on the fatal effects of these palatable poisons; and I am not without hopes that tender and rational mothers will pay some little attention to my warnings. A reform in this article alone—the total disuse of pastry in the diet of young children—will go a great way towards preventing many of the worst complaints to which they are subject.

From the above remarks on the proper food of infants, the Doctor makes a very natural transition to the consideration of their diseases. He begins with exposing the absurdity of popular errors and popular prejudices with respect to teething. "Breeding teeth," he says, "has been thought to be, and is fatal to many children; but I am confident this is not from nature, for it is no disease, or we could not be well in health till one or two-and-twenty, or later. Teeth are breeding the greatest part of that time; and it is my opinion, the last teeth give more pain than the first, as the bones and gums they are to pierce are grown more firm and hard. But, whatever fever, fits or other dangerous symptoms seem to attend this operation of nature, healthy children have sometimes bred their teeth without any such bad attendants; which ought to incline us to suspect the evil not to be natural, but rather the effect of too great a fulness, or the corrupt humours of the body put in agitation by the stimulating pain the tooth causes in breaking its way out. This, I believe, never happens without some pain, and possibly a little fever; but if the blood and juices be perfectly sweet and good, and there be not too great a redundancy of them, both will be but slight, and pass off imperceptibly, without any bad consequence whatever. The chief intention of the method I am recommending is, to preserve the humours of the body in this state; and therefore, if it succeeds, children so managed will breed their teeth with less pain and danger than are commonly observed to attend this work of nature."

In support of this opinion, I can state from my own experience that I have never known cutting the teeth, as it is called, attended with any pain, of an alarming nature, except in cases of previous disease, mismanagement or bad nursing. Fevers, convulsion-fits, and other dangerous symptoms, are always, upon such occasions, the consequences of an extreme fulness of the habit, a vitiated state of the blood and juices, some constitutional weakness, or a great irritability of the nervous system. The use also of corals, and the like hard substances, by rendering the gums callous, must oppose additional resistance to the bursting tooth, and greatly increase the acuteness of the pain. But the doctor's text requires no comment. I shall therefore resume my quotation from his valuable pamphlet.

“As I have said,” continues he, “that the first and general cause of most of the diseases infants are liable to, is the acid corruption of their food, it may not be amiss just to mention an easy and certain remedy, or rather preventive, if given timely, at the first appearance of predominating acid; which is very obvious, from the crude white or green stools, gripes and purgings occasioned by it. The common method when these symptoms appear, is to give the pearl-julep, crabs eyes and the testaceous powders; which, though they do absorb the acidities, have this inconvenience in their effect, that they are apt to lodge in the body, and bring on a costiveness very detrimental to infants, and therefore require a little manna, or some gentle purge, to be given frequently to carry them off. Instead of these, I would recommend a certain fine insipid powder, called, *magnesia alba*, which, at the same time it corrects and sweetens all sournesses rather more effectually than the testaceous powders, is likewise a lenient purgative, and keeps the body gently open. This is the only alkaline purge I know of, and which our dispensatories have long wanted. I have taken it myself and given it to others, for the heart-burn, and find it to be the best and most effectual remedy for that complaint. It may be given to children from one to two drams a-day, a little at a time in all their food, till the acidities be quite overcome, and the concomitant symptoms disappear entirely. I have often given it with good and great effect, even when the children have been far gone in diseases first brought on by prevailing acid.

“It is always easier to prevent diseases than to cure them; and as neither children, nor indeed grown persons, are ever seized with chronic diseases suddenly, the progress of decaying health being perceptibly gradual, it is no difficult matter for a physician of common skill to observe the first step towards illness, and to foretell the consequence, in all those whose habit of life is well known to him. But to parents and nurses in general, these observations may not occur. I will therefore point out a few certain signs and symptoms, by which they may be assured, that a child’s health is decaying, even before it appears to be sick. If these are neglected, the evil increases, grows from bad to worse, and more violent and apparent complaints will follow, and perhaps end in incurable diseases, which, a timely remedy, or a slight change in the diet and manner of life, had infallibly prevented. The first tendency to disease may be observed in a child’s breath. It is not enough the breath be not offensive: it should be sweet and fragrant like a nosegay of fresh flowers, or a pail of new milk from a young cow that feeds upon the sweetest grass of the spring; and this as well at first waking in the morning, as all day long. It is also so with children that are in perfect delicate health. As soon, therefore as a child’s breath is found to be either hot, or strong or sour, we may be assured that digestion and surfeit have fouled and disturbed the blood, and now is the time to apply a proper remedy, and prevent a train of impending evils. Let the child be restrained in its food, eat less, live upon milk or thin broth for a day or two; be carried, or walk if it is able, a little more than usual, in the open air. Let a little of this powder, or any other proper physic, be given; not that I would advise physic to be made familiar; but one dose administered now, would prevent the necessity of a great many that might afterwards be prescribed with much less good effect.

“If this first symptom of approaching illness be overlooked, the child

who, if it was healthy, would lie quiet as a log all night, will have disturbed sleep, restless, terrifying dreams; will be talking, starting, kicking, and tumbling about; or smiling and laughing, as is common with very young children when they are griped; and the nurses say they see and converse with angels. After this will follow loss of appetite and complexion, check of growth, decay of strength, cough, consumption, or else colics, gripes, worms, fits, &c. diseases that require all the skill of a good physician; and happy for them, if the utmost he can employ will restore them to any degree of lasting health.

“There is one thing more which I forgot to mention in its proper place and therefore, I must take notice of it here; that is, the degree of exercise proper for children. This is of more consequence than all the rest; for, without it, all our care in feeding and clothing will not succeed to our wishes: but when by due degrees a child is brought to bear a good deal of exercise without fatigue, it is inconceivable how much impropriety and absurdity in both these articles it will endure unhurt. A child, therefore, should be pushed forwards, and taught to walk as soon as possible. A healthy child a year old will be able to walk alone. This we may call the æra of their deliverance: for this great difficulty surmounted, they generally do well, by getting out of the nurse’s hands to shift for themselves. And here I must endeavour to correct a great mistake, which is that most people think it wrong to put weakly children upon their legs, especially if they are the least bent or crooked; but whoever will venture the experiment will surely find, that crooked legs will grow in time strong and straight by frequent walking, while disuse will make them worse and worse every day. As they grow daily more and more able, let their walks be gradually increased, till they can walk two miles on a stretch without weariness; which they will be very well able to do before they are three years old, if they are accustomed to it every day. To lead them such a walk, should be imposed as an indispensable task upon their maids, for to them it will be the highest pleasure; so far from a burthen to them, that if they perform the daily duty, they will, from the impulse of their own active vigour, be found running, leaping, and playing, all day long. Thus, a dull heavy child may be made playful and sprightly, a weakly one healthy and strong, and confirmed in good habits and perpetual health.

“There are some other little niceties that, were they observed in the nursing of children, would be of some use to them; such as making them lie straight in the bed. I do not mean extended like a corpse, but that their limbs may be free and easy. I have sometimes seen children a year or two old lie doubled up in bed as in the womb, especially in cold weather; and from the constraint of their posture, fall into profuse sweats. This will be prevented if they are laid straight; and sleep relaxing all the muscles of the body, the knees will naturally be bent a little. They should be taught to use both hands alike; for employing one more than the other will not only make the hand and arm so used, but also that side of the body bigger than the other. This is sometimes the cause of crookedness. It would likewise not be amiss to forward their speaking plain distinct words to them, instead of the *namby pamby* style, and giving them back their own broken inarticulate attempts; by which means, I believe, some children scarcely speak intelligibly at seven years of age. I think they cannot be made reasonable creatures too soon.

As this essay was written in the form of a letter, the Doctor concludes it with an apology to the gentleman to whom it was addressed, for the loose manner in which the thoughts were laid before him. The writer very candidly confesses that he had "neither time nor patience to think of form and order, or supporting them by affected demonstrations taken from mechanical principles and powers. "All I have endeavoured," says he, "is to be intelligible and useful: and therefore I have avoided, as much as possible, all terms of art; together with learned quotations, as often produced out of vanity, and to shew deep reading, as for the sake of proof. * * * * * I shall only add by way of persuasive to those who may be inclined to make trial of the method I recommend, that I am a farther, and have already practised it with the most desirable success."

In a postscript to the tenth edition of this pamphlet, dated July 17th, 1769, the author expresses himself in the following manner:

"It is now above twenty years since I wrote the foregoing essay; and though I have made a few alterations, it was only to explain those passages that contained any apparent difficulty or obscurity: I have never yet found cause to alter essentially any one opinion delivered in it. I have, through the whole, industriously laboured at the greatest plainness and simplicity; and yet my meaning has been much mistaken. Some have very strangely expected to find in it the general cure of children's diseases, though it be professedly written only to prevent them, by establishing good health; a very different thing (whatever people may think) from the cure of diseases. Sick or weak children, whether such by nature, or made such by bad nursing, cannot perhaps be brought immediately into the habits here recommended, but must first be cured of their maladies by a skilful physician; who, if he be also an honest man, will introduce these, or similar habits of management, to continue them in health and strength. But in treating their diseases, as well as in nursing them, I am very sure many capital errors are committed. I object greatly in particular to the frequent use of antimonial and mercurial medicines; which, though they give sometimes a little temporary relief, by discharging crude and phlegmatic humours, killing worms, &c. I am very confident a repeated use of them breaks the blood, relaxes the fibres, and is every way destructive to the constitution of children. Present relief seems to be all that is desired, and therefore all that is intended by medication: the slow, but permanent effects of good habits few have patience to expect. Others have neglected essentials, to lay stress only upon trifles. A lady of great sway among her acquaintance told me long ago, with an air of reproach, that she had nursed her child according to my book, and it died. I asked, if she had suckled it herself? No.—Had it sucked any other woman?—It was dry-nursed.—Then, madam, you cannot impute your misfortune to my advice, for you have taken a method quite contrary to it in the most capital point. Oh! but, according to my direction, it had never worn stockings." Madam, children may die whether they do or do not wear stockings." A stronger illustration could not be given of the folly of attending only to trifles, and acting diametrically opposite to the dictates of reason and experience in matters of the greatest moment.

Old Wally practice for the Swelled
leg that we found the best we had
tried with same -

Boil water remarkably soft
wash it up & thicken it with
wheat bran cover the Swelled
leg with Poplar leaves & put
the practice over all -
put it on at night to remain
24 hours -

An infallible remedy for
Scalds or Burns
That of sweet wood
made fine last made
3 parts of Hoggs spread on
into an ointment spread on
a Cotton cloth & renewed
occasionally until a cure
is effected - which has never
failed from 14 years experience
so says a Physician of Philad

An heroic indication
for bleeding at the nose
considered fully boiled strong
Vallum injected up the
nose will generally suc-
ceed -

To preserve color and
the ~~out~~ green out of
no. 11. Take a pound
of Logwood and boil in
five gallons of water until
virtue is extracted then
add 1 tea spoonfull of
of gall int. of potash
of 1 lb. of Sugar
put together,

[The page contains several lines of handwritten text in a cursive script, which is largely illegible due to fading and significant ink blots. The text appears to be organized into paragraphs or sections, with some lines starting with capital letters. There are approximately 15-20 lines of text visible across the page.]

Freezing mixture part Theri
 of a mixture 5 5
 of Potash — 5 } from 50
 to 10
 Ice ————— 16 }

add Sulphate of
 Soda ————— 8 } 50 to 4
 16 }
 Water ————— 16 }

Sulphate of Soda 3 } 50 to 3
 diluted Nitric
 acid ————— 2 }

add Sulphate of Soda 8 } 50 to 0
 muriatic acid ————— 5 }

the salts must contain their full
 quantity of water of Crystallization
 the vessel in which the freezing mix-
 ture is to be made must be very
 thin & just large enough to hold
 it & the materials should be
 mixed together as expeditiously
 as possible stirring the mixture at
 the same time with a rod of
 glass or wood

30 gm tart emetic dissolved in
2oz alcohol & put into a vial
containing 8oz water take
the spoon full will genera-
lly act as an emetic -

say 40 gm tartar to 8oz alcohol
give the spoon full at a time mixed
in water untill it operates 3 tea
spoons full will generally be sufficient

Mixing recd } for
1/2 oz oil anise }
1/2 - aloe }
2 - Rheubarb }
1/2 - Gentian root }
1 qt French Brandy }
a tea spoon full for a dose
if heart burn at night Take 1 to 3 gm
Carbonated Soda in Sage Tea
will produce perspiration
instead of pulling the crise in
the mixture add from 1 to 2
drops in each dose

W 2
270
B 1134
1815
C 1

