**The American domestick medicine, or, Medical admonisher : containing some account of anatomy, the senses, diseases, casualties ; a dispensatory, and glossary ; in which the observations, and remedies, are adapted to the diseases, &c.; of the United States ; designed for the use of families.**


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THE

# AMERICAN

# DOMESTICK MEDICINE;

OR,

# MEDICAL ADMONISHER:

CONTAINING

## SOME ACCOUNT

OF

ANATOMY,
THE SENSES,
DISEASES,

CASUALTIES; A
DISPENSATORY, AND
GLOSSARY.

IN WHICH

*The Observations, and Remedies, are adapted to the Diseases, &c.*

OF THE

## UNITED STATES.

DESIGNED FOR THE USE OF FAMILIES.

SECOND EDITION, WITH ADDITIONS AND IMPROVEMENTS.

BY HORATIO GATES JAMESON, M.D.
Honorary Member of the Medical Society of Maryland, and late a Surgeon in the General Hospital for the Army at Baltimore.

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*BALTIMORE:*
PUBLISHED BY THE AUTHOR.
JOHN D. TOY, PRINTER.
1818.

DISTRICT OF MARYLAND, ss.

BE IT REMEMBERED, That on this seventeenth day of February, in the forty-second year of the Independence of the United States of America, Horatio Gates Jameson, of the said District, hath deposited in this office the title of a book, the right whereof he claims as author; in the words following, to wit:

SEAL.

"The American Domestick Medicine; or, Medical Admonisher: containing some account of Anatomy, The Senses, Diseases, Casualties; a Dispensatory, and Glossary, in which the Observations, and Remedies, are adapted to the Diseases, &c. of the United States. Designed for the use of families. Second edition, with additions and improvements. By Horatio Gates Jameson, M. D. Honorary Member of the Medical Society of Maryland, and late a Surgeon in the General Hospital for the Army at Baltimore."

In conformity to the act of the Congress of the United States, entitled, "An act for the encouragement of learning, by securing the copies of maps, charts and books, to the authors and proprietors of such copies during the times therein mentioned." And also to the act, entitled, "An act supplementary to an act, entitled, 'An act for the encouragement of learning, by securing the copies of maps, charts, and books, to the authors and proprietors of such copies during the times therein mentioned,' and extending the benefits thereof to the arts of designing, engraving, and etching historical and other prints."

PHILIP MOORE,
*Clerk of the District of Maryland.*

# RECOMMENDATIONS.

IN compliance with custom, the publisher of this work requested a few of the most eminent professional men to give their opinion of it. The following highly respectable reviews of it have been obtained.

DR. JAMESON,

SIR—As popular treatises on diseases will be always much used, and are often indispensable, it is important to give to them the progressive improvements in medicine. In this view your book seems to merit, and no doubt will acquire, a liberal patronage. To the usual materials of such productions, you have added later facts and observations from the best authorities, including your own, and given to the whole, a method and style well adapted to their purpose. On the means of preserving health, you dwell to advantage, since that, more than the cure of diseases, is within the comprehension and control of your readers, and since our climate and mode of living, give to it particular importance.

Your sketches of the structure and laws of the human body, and application of them to the use of remedies, connect science with experience, and indicate the only safe principles on which diseases can be treated—thus combining throughout your work, utility and security, with commendable success.

July 1st, 1817. JOHN OWEN.

SIR,

I have examined with as much attention as my time would admit, your book, entitled, "The American Domestick Medicine, or Medical Admonisher." I am

much pleased with the design, and (with few exceptions) the ability of the work. It is executed with a pious zeal for the benefit of mankind, and is replete with useful instruction and entertainment to the gentleman and scholar. Your Dispensatory at the end of the book will be highly useful and convenient in families, and the Glossary will make the whole intelligible to every reader of common understanding.

I am, respectfully, your obed't, humble serv't,

JOHN COULTER.

*Dr. Horatio Gates Jameson.*

March 15, 1817.

---

*Baltimore, March 12th, 1817.*

DEAR SIR,

I have perused your Domestick Medicine with pleasure, and have no hesitation in saying, it is one of the best productions of the kind which I have seen. You deserve much credit for your industry and pains in compiling a work which is calculated to do much good. I hope you will be amply remunerated for your difficult and arduous undertaking.

I am, with respect, your obed't, humble serv't,

JOHN CROMWELL.

*Dr. Horatio G. Jameson.*

---

*Baltimore, Feb.* 16, 1818.

DEAR SIR,

Having perused the American Domestick Medici[illegible] published by you, am of opinion that it is a work of much merit, and equal, if not superiour, to any work of a similar description I have met with, and well deserving publick attention and patronage; and will, I think, be particularly valuable to those gentlemen who reside in the country, removed at a distance from a physician. The arrangement I think judicious, and the prescrip-

tions will be generally found useful and proper in the diseases for which they have been recommended.

I remain, very respectfully, yours, &c.

JAMES SMYTH.

*Dr. Horatio Gates Jameson.*

---

*Baltimore, Feb.* 16, 1818.

DEAR SIR,

We have perused your book, entitled, "The American Domestick Medicine," with much pleasure and satisfaction. The arrangement is highly judicious, and we sincerely hope, you will be amply remunerated for the trouble you have encountered, and for the time you have expended in the composition of the work.

We are, dear sir, yours, very respectfully,

BROWN & MACKENZIE.

*Dr. Jameson.*

---

*Pastoral-House, East street, June* 17, 1817.

DEAR SIR,

Agreeably to your request signified to me some time since, I have perused your volume recently published, under the title of "The American Domestick Medicine, or Medical Admonisher;" and, although I should deem it presumption in me to pass any opinion on its merits as a professional or scientifick work; I can have no hesitation in acknowledging with pleasure what I may be supposed more competent to discern; I mean its moral tendencies. To my best apprehension, your book is auxiliary to the soundest principles of religion and virtue. If the expression of this sentiment shall be of any service to you in the disposal of your publication, it will impart great pleasure, dear sir, to your friend and servant,

JAMES INGLIS.

*Dr. Horatio Gates Jameson.*

# INTRODUCTION.

THE author, in presenting this volume to the publick, begs leave to call the attention of its readers, to the circumstance of the very limited number of Original Works in the United States. The subject here treated of, is certainly highly important, and strongly claims the attention of every intelligent person.

The foregoing highly respectable recommendations were bestowed on the first edition; and as the work has undergone a careful revision, and appears now with some additions, and improvements, it is hoped it will not be deemed either arrogant or false to say, that this work is an improvement upon all that have preceded it.

Among the additions may be mentioned an alphabetical index, which will greatly assist the reader in finding what may be wanted suddenly. But, it is confidently believed, most persons will find some amusement and instruction in perusing these sheets, either by finding something new, or refreshing the memory in what may be already known. To an enlightened and liberal publick the author now appeals, with a confidence reasonably arising from ample opportunity of understanding the subject.

## EXPLANATION OF THE PLATE.

THE design is from a picture in the possession of my brother, Dr. Jameson, of York, Pennsylvania. It represents the celebrated Galen, viewing a human skeleton, of whom it is said that, "Though an Atheist, he was a strict observer of nature, till by chance finding a skeleton, he thought it of too curious a construction to be the work of chance." The vast and sudden expansion of his views of the Deity, in the following lines, while they agreeably surprise us, are a strong confirmation of the existence of a "light," in the human capacities, "which lighteth every man."

"Forbear, vain man, to launch with reason's eye,
Through the vast depth of dark immensity;
Nor think thy narrow, but, presumpt'ous mind,
The least idea of thy God can find.
Thought, crowding thought, distracts the lab'ring brain;
For how can finite infinite explain?
Then God adore, and conscious rest in this,
None, but Himself, can paint him as He is."

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THE

# AMERICAN

# DOMESTICK MEDICINE.

## OF THE ANATOMY OF THE HUMAN BODY.

### SECTION I.

THE Anatomy of the human body has been aptly compared, by the illustrious Bell, to a circle; so that, in our efforts at demonstration, it matters but little from what point we set out; tracing on the various parts of which it is composed, all equally dependant on a certain assemblage of parts and functions, we arrive at the point from which we embarked.

I have deemed it most natural, and equally convenient with any other course, to commence with the skin, it being that part in which all the others are enveloped, and which in some measure characterizes the man. The art of modern anatomists has discovered the skin to consist of four *lamanæ*, or folds; the *cuticle*, or scarfskin; mucous body, or *reticular tissue; cutis vera*, or true skin; and from this last there is separated a vascular membrane, which is the organized surface of the true skin.

The first, or scarfskin, is the outside, and is but a thin pellicle, except on particular parts exposed to friction. Persons who go barefooted, and those who labour much with the hands, have this part of the skin of great thickness on the soles of the feet, and palms of the hands. Nature has wisely provided, even for the infant, a greater body of this substance on those parts;

thereby evidently fitting him for the various laborious duties which fall to the lot of the mass of mankind. Over the body, in general, it serves the purpose of defending the true skin, and is that part which we remove by the application of blisters. However insensible in general, there is a point at which it will resist injuries; by wearing tight shoes, &c. excrescences, as corns, are formed, which become exquisitely sensible, and teach us, together with its regular organization, that it is a living part, and of vast importance to the human creature. The cause of this disease, appears to me, to be a union of the scarf with the true skin, brought about by a long continued pressure, by which the mucous body is removed or destroyed. Affections of the clavus, or corn kind, occur sometimes along the sides of the finger nails, for which it is only necessary carefully to pare down the hardened skin, leaving the nails untouched with the knife, otherwise, you produce deformity, and increase the disease. In youth, the scarfskin is thin and smooth, in old age it becomes thicker, rough, and disposed to furrow.

The second layer, or mucous body, is endowed with organization, being reticular or net-like, and is transparent, black, brown, yellow, &c. and gives to the body the colour of the European, Negro, Sambo, Mulatto, Mustee, &c. This substance is subject to disease, and to changes which may comport with the health of the person affected, but changing very materially the colour, hence the cause of white negroes. It is highly probable this part of the skin at times acquires considerable acrimony, which may arise either from disease in itself, or be the consequence of vicious secretions of the glands, or vessels of the skin. This organized membraneous mucous appears to be much affected in leprosy, *plica polonica*, and *tinea capitis*, or scaldhead.

Naturalists, and others, have been much engaged in dispute about the cause of this interesting colouring matter. Many ascribe it to the effects of climate, and other causes arising from filthy habits. It appears to be an unnecessary inquiry, as we find many virtues, and bright intellectual powers enclosed within the black, or co-

loured skin; and those who really believe in Revelation must admit, that we are all from one common parent, and it matters little whether we suppose it the effect of climate, or whether we attribute it to some special act of the Deity.

The third, *Cutis Vera*, or true skin, has considerable body and strength, and is endowed with a large share of sensibility, being furnished with a tissue of nerves innumerable: we cannot touch it with the finest point of a needle without causing pain. It in some measure serves to brace and give strength to the muscles. The fourth or inner layer, being a mere tissue of vessels connected with the more dense part of the skin, is merely mentioned as a matter of fact, without pretending to point out its particular use, or even its organization.

The skin then, taken with all its component parts, holds a high place among the important organs of the human system. The healthy skin covering a healthy body, presents to our view, in the pretty cheek, shades of red and white, more beautiful than the rose; the evanescent shades of which no pencil can trace—To the lip a ruby tinct, more beautiful than the coral—To the plump and well turned limbs and heaving bosom, a tension and smoothness, the master-piece of beauty—To the fingers of both sexes, perceptions and skill which afford pleasures, exquisite, rational, ornamental, and useful. Precious *Robe*, what brilliant intellect and virtue has been enveloped within thy folds? What mighty deeds have the human muscles performed, assisted by this wonderful covering. The skin being carried over every part as a defence, and being furnished with vessels, glands, &c. suitable for carrying on the important processes of sensible and insensible perspiration, must be acknowledged to hold a high place in the living assemblage. For on no function of the system are we more dependant for health, than that of insensible perspiration, a constant discharge through the skin, consisting of worn out parts divested of all living principle, and therefore highly noxious. Sensible perspiration or sweating, comes in as the kind guardian of the labourer's health, when exposed to the scorching sun; for by its rapid and constant

evaporation, the body is cooled several degrees, and i kept pliant and healthy.

Experienced physicians have long been aware of a strong connexion or sympathy, between the skin and the system generally. It is the most remarkably associated with the stomach and lungs; hence the absolute necessity of cleanliness. It is true many persons of robust constitutions, are raised in dirt, and wallow in it during a long life of activity. But this only argues, that nature can accommodate herself to powerful evils; to the valetudinarian, the idler, and to persons generally, who live in an unwholesome atmosphere, nothing can be more hurtful than filthiness, nothing is a more common passport to disease and to death.

## SECTION II.

I deem it equally natural and convenient, after having treated of the general envelope, to enter on the bones, and divide the skeleton into its three prominent parts; these are the Head, the Trunk, and the Extremities or Limbs. And first of the head: This is the *Emporium* of the living system; here, secure in a strong box of bone, lies the brain.

The bones may be divided into those of the head or skull-cap, and those of the face. Those of the skull-cap are eight in number. 1st. *Frontal*, forming the forehead. 2nd. Two *Parietal* bones, or great side walls of the head. 3d. The *Occiput*, forming all the back part of the head, and a considerable part of it attached to the neck. 4th. *Temporal* bones, forming the temple on either side. 5th. *Ethmoidal* bone. 6th. *Sphenoidal* bone; these two last are difficult to describe. The *Ethmoidal* bone is a small square bone, and divides the hollow of the nose from the cavity of the skull. It is perforated by the *Olfactory* nerves in so many places as to give it the appearance of a sieve, and hence its name.

All these bones are joined together with *Sutures*, so called from the bones being indented or dove-tailed into each other. The *Coronal Suture* extends across the head almost from ear to ear, and joins the *Parietal* bones to

the *Frontal.* The *Lambdoidal Suture* runs from behind one ear over the head to the other, and in its course somewhat resembles the letter V. The *Sagittal Suture* runs from the *Lambdoidal Suture* to the *Coronal*, joining the *Parietal* bones to each other. The *Temporal Sutures* join the temporal bones to the *Frontal*, *Parietal*, and *Occipital* bones.

There are several other *sutures* which pass through the base of the skull and face, which it is unnecessary to describe here. The bones of the head being thus divided into several pieces, may probably secure the head better from injuries, than one entire or solid box of bone. But it is in the birth of the child we see the admirable wisdom of this contrivance. By long continued pressure these bones overlap, and thus lengthen and diminish the volume of the head, so as to suffer it to pass through, where otherwise the solid head must be the destruction of both mother and child. Where the *Frontal* bone meets the *Parietal*, there is in the infant a considerable opening called the *Fontanelle*, which remains open from one to three years. In rickety or scrofulous children, it remains long open, and in those affected with the watery head, it sometimes dilates to a considerable extent.

The skull-cap is perforated with a number of holes, which serve as outlets to the spinal marrow into the neck, and for the nerves, and vessels connecting the head with the body.

The bones of the face are pretty numerous, but being all united to form the upper jaw and nose, no benefit can arise from an enumeration of them. The upper jaw is slightly moveable.

The under jaw is too familiar as respects its form and use, to require any particular description. Each jaw has sixteen teeth, the four first in each jaw are called *incisores;* the two next *canine;* the rest *molares;* the four last of which are named *dentes sapientiæ*, because they do not arrive till years of discretion. The first six teeth in either jaw, have, in general, but one root; the *molares* have from two to four roots, and are most spread in the upper jaw, which seems necessary to fix them securely in the spongy bone, of which the jaw bone is in good part composed.

The bones of the trunk are those of the *Spine*, *Pelvis*, Ribs, and *Sternum;* the collar bones and shoulder blades belong to the arm. The spine has generally seven bones of the neck, twelve of the back, five of the loins; *Sacrum* and *Coxcygis*, are a continuation of the spine, but belong particularly to the *Pelvis*.

The two first bones of the neck are called *Atlas* and *Dentata*, and are remarkable for giving the principal rotatory motion to the head. Those of the back are remarkable for their strength, and connexion with the heads of the ribs. Those of the loins display the wisdom of the contriver, being possessed of a strength and facility of motion truly astonishing, in every position of the body. The spine, throughout its whole length, with the exception of the *Coxcygis*, has a considerable channel, where the spinal marrow, or elongation of the brain, is securely lodged; between the *vertebræ*, or bones of the back, there is a substance in some measure of the nature of both cartilage and ligament. This substance is so highly elastick as to yield to all the complicated motions of the spine, accommodating itself, in a surprising manner, to the stooping, twisting, and rapid motions of the body. It is a well established fact, that it yields during the day to the pressure upon it, and recovers during the night, so that we are about an inch taller in the morning than at night. By long continued inclination forwards, backwards, or sideways, this substance accommodates itself to the bend, yielding on one side, and enlarging on the other, and if long continued produces deformity.

Some tolerable idea of the human spine may be formed by viewing that of quadruped animals. The ribs are usually twelve on either side; seven are called true ribs, because they reach the *Sternum*, or breast-bone; the remaining five are called false ribs; these are not connected with the *Sternum*, but are below it, and are fastened together by cartilages. The ribs are all, except the two or three lowermost, connected to the bones of the spine at two points; and they afford a pretty secure lodgment to the *viscera*, and assist largely in the process of respiration.

It has been a prevalent opinion that man has an odd rib. This supposition is founded on the belief of our partaking of Adam's altered form, in giving a rib for his mate; but this case is easily reconciled, by supposing man was originally formed with an odd one for that very purpose; we are not to suppose the work of creation, partaking of what we call chance, but that the Creator in his wisdom had, from all eternity, provided for every possible thing the suitable means.

The *Sternum*, or breast-bone, completes the bony fabrick of the *Thorax* or chest, and lies pretty much over the heart. In infancy it is composed of eight pieces, in more advanced life it has but three, and in old age it becomes one entire piece; even the cartilage with which it is connected, becomes bone in many cases; this cartilage, which runs down, shaped somewhat like a sword, derives its name from that circumstance, and is called *ensiform* cartilage. To the upper end of the *Sternum* is attached the *Clavicula*, or collar bone. Having now spoken of the *Vertebræ*, the Ribs, and *Sternum*, which form the Chest, we are regularly brought to the *Sacrum* and *Coxcyx*, they being the termination of the Spine, and forming a considerable part of the *Pelvis*. The *Sacrum* forms the back part of the *Pelvis*, and is a flat wedge-like bone; to its lower end is attached the *Coxcyx*, a small bone composed of several pieces, turning inwards so as to give some support to the parts within the *Pelvis*. In time of labour this bone forms the only moveable part of the *Pelvis*, for by straightening it enlarges the lower aperture in a small measure.

In examining the *Pelvis*, we are first led to contemplate it as a great living arch placed between the trunk and lower extremities; it being an irregular circle formed of large solid bones. It has too deep cavities, one on either side, they are called *Acetabula;* these afford a deep and firm socket for the head of the thigh bone. In the child it consists of many pieces; in the adult they are united. The entire *Pelvis* has free motions on the thigh bones, and also where it is connected to the loins; but its parts are firmly bound together. So strongly are the bones of this living arch bound together, that they can-

not yield, even in time of labour, without extreme violence being done.

The *Ilium*, a large flat bone, forming the haunch; the *Ischium*, or hip-bone, the lowest part, and that on which we sit; the *Pubis*, to which the genitals are attached, all unite in forming the *Acetabulum*, on either side and with the *Sacrum* and *Coxcygis* form the whole *Pelvis*. The last described bones being connected with the thigh bones, it will be most in order to enter on the bones of the lower limbs next.

The thigh bone called *Femur*, is strongly bound by a large round knob or head to the *Pelvis;* its body is composed of very solid bone, it has a neck about an inch and a half long, which connects the body of the bone with its head, and going off almost at right angles, leaves a prodigious stress on this part, when we carry heavy bodies. Its lower end is large and spongy, formed of two knobs or processes, called *Condyles;* these form the upper part of the knee joint, and by their large size give room for the insertion of many powerful muscles.

The leg has two bones called *Tibia* and *Fibula;* one of which, the *Tibia*, is connected with the thigh bone in forming the knee joint; it also forms the shin. Immediately over the knee joint is the *Patella*, or knee-pan, a small flat bone somewhat triangular, and plays over the knee joint as a pulley.

The *Fibula* is attached to the *Tibia* a little below the knee joint, and on the outside. The *Tibia* and *Fibula* unite in forming the ankle joint, the former being the inner, and the latter the outside ankle.

The foot is formed of seven bones, two of which it may be necessary to name. The *Astragalus* is connected with the leg bones in forming the ankle joint. The *Os Calcis* forms the heel, and gives a firm hold to the greatest tendon of the body, called *Tendino Achillis*. The remaining bones of the foot, which, with the last described, composes the *Tarsus*, and the five metatarsal bones, with those of the toes, it would be useless to describe; it may be observed, that the great toe has but two bones, and all the others have three each.

We are now to return to the upper limbs, and there complete our description of the skeleton. The *Clavicle*, on either side, is connected to the *Sternum* in a manner somewhat peculiar; it has no *Capsular Ligament*, as the other joints, and has a small moveable cartilage interposed between it and the *Sternum*, which, like a washer in machinery, facilitates motion, and lessens the friction. This bone is solid and pretty round, moving freely on the *Sternum*, at its inner end; it is connected with the *Scapula*, or shoulder-blade, by strong ligaments, which leave it very little motion.

The *Scapula*, or shoulder-blade, is a very complex bone, and divided by the anatomist into many parts; it is a thin flat bone of considerable size, attached to the ribs, &c. by powerful muscles, which allow it free motion. At its upper edge there is a considerable projection or process, called the *Acromion*, which is highly important, as it prevents the head of the *Humerus*, or shoulder-bone, from slipping upwards. Just below this is the *Glenoid* cavity, a very slight cavity or depression, into which the head of the shoulder-bone is received, or perhaps more correctly speaking, to which it is attached; for there is but a very shallow socket, which leaves this joint more subject to dislocation than any joint in the body.

The *Humerus*, or upper arm-bone, is a pretty round smooth bone, with a large round head, where it is connected with the shoulder-blade. At its lower end it has two prominences, called *Condyles*, which form the upper part of the elbow joint; these, or either of them, may be fractured and mistaken for dislocation of the joint, and therefore, it requires much caution in managing injuries of this joint.

The forearm is composed of two bones, the *Radius* and *Ulna*. The *Radius* is connected to the outer *Condyle* of the *Humerus*, by a round head, which gives to the arm its principal rotatory motion; it forms the principal connexion with the *Carpus*, or bones of the wrist.

The *Ulna* forms a large share of the elbow joint, being connected with the inner *Condyle* of the *Humerus;* and with a hook-like elongation, passes some distance round

the arm-bone, forming a hinge-like joint; this process is called the *Olecranon*, and is subject to be fractured.

The wrist is composed of eight bones, called *Carpal* bones, while the bones of the hand are called *Metacapal*, and are five in number. It is notorious that the fingers have each three bones, the thumb has but two.

Having now completed our description of the bones, so far as it can easily be understood without plates, or actual dissection, I shall pass on to the *Cartilages* and *Ligaments*.

## SECTION III.

### *Of the Cartilages.*

Cartilage, or gristle, composes the head or knob of jointed bones, being smooth and in a great degree insensible; it is well suited to the purposes of giving free and easy motion to the joints, without friction or irritation. The whole skeleton is *Cartilaginous* in the *Fœtus*, or forming child; and it is by slow degrees only, that the *Cartilage* is removed by the proper vessels, at the same time the bones are forming, by new depositions of bony matter: The external ear, and a considerable part of the nose, remain *Cartilaginous* during life. The inner end of each true rib, is connected to the *Sternum* by a *Cartilage* of considerable length, which leaves a portion of the breast without any better defence than this soft *Cartilaginous* substance; it, however, gives great freedom of motion to the ribs; the false ribs are connected to each other by *Cartilage* at their inner ends; the *Sternum* is terminated downwards with *Cartilage;* the eye lids are edged with *Cartilage*. In short, every union or connexion between bones throughout the body is formed of *Cartilage*. It is remarkable of the *Cartilage*, that while it lays down the form of the skeleton, in the *Fœtus*. or forming child, it has no agency in forming the *Callus*, which unites fractured bones. When the *ossifying* process, or forming of bone, is impeded by accidents, in a fractured bone, instead of a proper bony matter, *Cartilage* is formed, and leaves a kind of artificial joint.

*Cartilage*, in the finished skeleton, has no perceivable blood vessels. The *Trachea*, or windpipe, is formed of *Cartilaginous* rings.

Up to the twentieth year, the *Cartilage*, forming the two ends of most of the bones, will separate from the body of the bone by maceration in water, and is a curious coincidence of agreement, between the perfection of the body, and that which, I believe, all nations have agreed on as the period at which man becomes independent, or in common language, obtains his age; this being the twenty-first year, and the first year of the skeleton's completion.

## SECTION IV.

### *Of the Ligaments.*

The whole skeleton is covered with a membrane, which is called *Periosteum*, except on the head where it has got the name of *Pericranium;* it is a strong covering of skin-like substance, and runs from one bone to another, throughout the whole body, and by being attached to the circumference of the joints, forms a sack, called a *Capsule* which serves the purpose of strongly fastening the bones together, and of confining the *Synovia*, or liquor of the joints; here, it takes the name of *Ligament.* Besides these *Capsular Ligaments*, formed so immediately from the *Periosteum*, there is many other strong ones running in strap-like pieces, in various directions, so as to give to the joints great strength; they are composed of a matter extremely strong, inelastick, and possessing little sensibility.

## SECTION V.

### *Of the Muscles.*

We come now to treat of a very important part of the animal system, the Muscles or fleshy part of the body; in its general appearance it must be familiar to every person, from its resemblance to that of our domestick ani-

mals. Each little bundle or portion of flesh is called a muscle, and every muscle has its origin and insertion; they arise from, and are inserted into the bones through the medium of the *Periosteum*. Many of the most powerful muscles terminate in *Tendons*, or sinews, which like ropes, or cords, increase the length, and strength of the muscle. It was supposed till very lately, that these connecting sinews, or *Tendons*, were mere condensations of the muscular fibres; but it is now well understood that they are distinct in their nature, and possessed of no power but what is imposed on them by the muscles. Every muscle is made up of a vast bundle of fibres, or thread-like parts; the distribution of these fibres alters the moving power of the muscle, some being designed for strength, while others are particularly suited for quickness of motion, and act with a velocity altogether inconceivable. Those having straight long fibres, act more slowly, but possess greater strength than those which have their fibres running obliquely; the first are called rectilineal, and the latter penniform muscles.

Perhaps nothing in creation is more surprising than the muscular power; for a muscle which in the living man could raise an immense weight, immediately after death would be torn by the force of a few pounds. Authors still dispute whether there is any inherent power residing absolutely in the muscle, or whether they derive all their power from the nerves. It is of little consequence where the power resides; it is equally inscrutable as a resident of the nerves, as of the muscles; to know that it exists may exalt our views to Him who formed us, but all disputes referring living principles to mechanical agency, serve but to degrade the disputants. The red colour of the muscle in man, and many other animals, is not a necessary property; we see many animals having great activity and strength, whose muscles are nearly white.

The celebrated John Bell, supposes the muscular power to be ever the same, and that fatigue is the consequence of want of the nervous energy, which, rouses the dormant power of the muscles into action. Throughout the muscular system each one, (or every bundle of

fibres,) has a sheath or covering, which in many places has great strength: to the great muscles of the thigh, in particular, it gives much support; this is called the *cellular Membrane*, but gets the name of *Fascia* where it acts as a brace; where it passes over bone, or where *Tendons* rub together, it becomes thicker, and takes on the office of lubricating and smoothing those parts.

But while we admire the wondrous power of the muscles, let us not forget what a high place they hold, in giving suitable form and beauty to the human creature. Examine the well turned leg and arm, the lips and face, or the fingers, with power surpassing wonder; study the numberless motions of the body, the neatness and the convenience with which such a variety of muscles act without hindrance or incommoding each other, and who can but truly and emphatically say, *this* is the work of omniscience.

## SECTION VI.

### *Of the Muscles within the body.*

Tracing on the muscles, we come to those situated within the body; here we discover other wonderful powers, by which involuntary motions are effected, designed for the accomplishment of the circulation of the blood, &c. Among these, the Heart holds the first place. This muscular organ plays incessantly from the time of the formation of the *Punctum Saliens*, (the first moving power in the germ,) to the cessation of life. The general appearance of the heart must be well known; it lies somewhat obliquely in the chest, and is principally on the left side.

The *Diaphram*, or midrif, is that fleshy partition which we see in animals, dividing the chest from the *Abdomen*, or belly. It is the principal agent in the business of respiration. Although the ribs in general concur by means of the muscles of the chest in respiration, many cases have been found where the ribs had become one entire frame of bone, without the power of motion, and yet, respiration went on without any seri-

ous impediment. This muscle seems to partake, in a high degree, of the influence which the passions have over us: it has led a celebrated naturalist to believe this was the centre of the nervous power, but unfortunately for his notion, he mistook a tendon for a large nerve. The urinary bladder is a hollow muscle, whose office is well known. The stomach, the intestines, the arteries, and veins are all furnished with muscular coats, or in other words, they are made principally of muscular matter.

## SECTION VII.

### *Of the Arteries.*

Having given some account of the muscles, I shall now endeavour to give some idea of the *arteries* and veins; these, with their functions, will be most easily understood, by first giving a description of the heart.

The heart is a hollow muscle having four cavities; two of which are somewhat superficial, called *auricles,* which are sack-like appendages to this organ; between these *auricles* and the *ventricles,* there is a valve or flap which admits the blood to pass into the heart, but prevents its return. The *ventricles* are two cavities within the heart. From the right ventricle arises an artery called the *pulmonary artery,* which enters into the lungs, and branches out like the limbs of a tree, and thus supplies every part of the lungs with blood.

From the left *ventricle* of the heart, arises the great *artery* which sends off the blood to be carried through the whole body; it is called the *aorta;* it passes along up the spine, and gives off branches to be distributed upon the head and arms; then turning downwards, this great *arterial* trunk lies along the left side of the spine, till it reaches the *pelvis;* here it gives off many branches to nourish the fleshy mass about the *pelvis;* two main trunks go to the thighs and legs. Like the branches of a tree, the arteries divide, and at each division becomes smaller and smaller, till they are so small, as to be imperceptible to the eye. They pass through every mass

of flesh, through every *viscus*, enter every bone, and every solid part of the body. Having conveyed the blood, and given life, and warmth, to every part of the body, they terminate in the veins.

The veins, with a *reversed* course, arise from all the mouths or terminations of the *arteries*, and becoming larger and larger, like the collecting rivulet, grow into one immense vein, called the *vena cava*, which terminates in the right *auricle* of the heart. The veins are more numerous than the *arteries*, have less strength, and are furnished with valves or flaps; the blood moves upwards in most of the veins, and hence the necessity of these valves. Many of the veins are superficially situated, but the *arteries* are more securely and deeply seated among the muscles.

## SECTION VIII.

### *Of the Brain.*

In treating of the brain, I shall speak of the whole brainular system, comprehending the brain, usually so called, the *madulla spinalis*, and the nerves. If we have seen wonderful power in the muscles, calculated to exalt our ideas of the great architect, with how much greater reverence and admiration shall we examine that great assemblage of matter, which gives sensation, volition, and motion to the whole structure. To speak of the structure of the brain, with its appendages, according to its anatomical divisions, would be useless; for, such is the intricacy of this system, that even years of actual dissection would be necessary for obtaining a complete knowledge of all its parts; and when understood, no idea can be formed of its functions from its organization; all beyond description is mere conjecture. The brain, generally so called, is of immense size in the human subject, being larger than that of any other animal; it is a soft pulpy substance, filling the whole skull, is closely enveloped in its circumference, and many of its greater divisions, by a very strong membrane, called the *dura mater;* and in its smaller divisions, is lapped in a very

delicate fine membrane, called the *pia mater;* this last is the only partition between some of the greater divisions; these divisions are called *ventricles,* but there is no cavities in a healthy brain: in dropsy of the head, these *ventricles* are filled with water.

It is remarkable of the internal structure of the head, that there is a considerable number of large veins, called *sinuses;* these run along the *dura mater* between the different lobes of the brain, and contain a great quantity of blood; and further, that there is no fat within the head, nor *cellular membrane,* which is to be found every where else. It is supposed that fat is of too unstable a nature to be admitted into this grand mansion of life and sensation. The brain has usually been divided into a few prominent parts; the *cerebrum,* having two lobes, occupies the fore part of the head; the *cerebellum* and *madulla oblongata,* the hind part, being the smaller portion.

Bell considers the *madulla spinalis,* or spinal marrow, and even the nerves, as parts of the brain. In this opinion I concur. The great mass of the brain is composed of two parts, called its *cortical* and *madullary* substance; from the *madullary* part, the nerves go off; they are small white cords; each one is enveloped like the brain, in its membranes, and are accompanied with blood vessels in all their course.

The nerves originating from the head, have usually been reckoned ten pairs, but one pair of these arise from the *madulla spinalis,* mounts into the head, and passes out thence, as though it originated there. From the *madulla spinalis* go off, generally, thirty pairs, one pair between each joint of the spine; these give nerves to the arms and legs, and are connected in many places with those from the head, and assist in supplying the *viscera.*

There is a pretty general connexion among the nerves; they form nervous centres, which are little knobs called *ganglions,* and also net-like collections called *plexus.* All the nerves of particular senses, as the *olfactory* for smelling the *optick* for vision, the *auditory* for hearing, the *gustatory* for tasting, and the *cutaneous* for the touch, terminate in a soft pulpy matter. It is highly probable, the active matter throughout the whole nervous system,

is similar to that of the brain. On this foundation, we view the brain as occupying not only the head, but as being distributed over the whole living system, and giving life and activity to all. When particular nerves are destroyed, the parts which they supply lose all power, and soon die. It is a curious fact, that the nerves of part of the body, may lose the power of willing, or voluntary motion, and yet retain the power of carrying on the circulation, and maintaining life, as we see in palsy.

## SECTION IX.

### *Of the Circulation.*

The blood from the whole system being collected into the great *vena cava*, enters the right *auricle* of the heart; the peculiar and agreeable stimulus of the blood, causes the *auricle*, or sack-like appendage of the heart, to dilate and receive a gush of blood, till being filled, it suddenly resists or contracts, so as to force the contained blood forwards into the right *ventricle* of the heart; the *ventricle* in like manner dilates to receive a charge of blood, and then contracts, and propels the blood into the *pulmonary artery*, which proceeds from the right *ventricle*, and enters into the lungs. The *auricles* and *ventricles* are furnished with valves, or flaps, which prevent the blood from returning. The blood having passed through the lungs in the ramifications of the *pulmonary artery*, passes from the numberless *arterial* extremities into the *pulmonary* veins, which collecting into larger and larger veins, unite in one great vein; this vein enters the left *auricle* of the heart, and passes on the blood into the left *ventricle*, and from thence it is thrown into the great *aorta;* from thence it is carried throughout the whole body. We may observe here, that there is a double circulation of the blood; first through one side of the heart and the lungs, and then through the other side of the heart, and the general system. The blood, in traversing the lungs, undergoes some important change. It parts with *carbon*, in a form unfriendly to health; and receives from the air taken in-

to the lungs a portion of *oxygen*. This double process of rejecting the parts unfit for the wants of the system, and receiving *oxygen*, without which we cannot exist, is a phenomenon still somewhat clouded with uncertainty, and of the highest moment to the animal economy. The blood, by the action of the lungs, becomes of a brighter red; and here something is imparted to the brain and nerves, without which we cannot exist an instant. This appears to be a modification of *oxygen*.

It has been supposed that the reception of *oxygen* into the blood, through the lungs, was the cause of animal heat, but this is at best a very doubtful matter, if it be not really refuted. It seems more likely that animal heat is caused by the chymical operations within the body; fluids, in becoming solids, invariably elicit heat. It is probable, that the perpetual renewal of the solids from the fluids, set free a portion of *calorick*, or matter of heat; and thus, instead of a centre of heat in the lungs, the very operation by which the solids are every where formed, gives a degree or quantity of heat, suited to the particular well-being of each part. The blood having entered into the left ventricle of the heart, furnished with this *pabulum* or food for the brain, nerves, and the whole system of systems, passes on with an amazing velocity through the *arteries* of the whole body. The *arteries* terminate in the veins, and the veins collect the blood which is no longer fit for the purposes of life, and convey it back again to the heart.

In its course the blood not only gives nourishment in the common acceptation of the word, but, with the aid of the *arteries*, dissolves down and carries away worn out parts, and leaves new animalized matter, precisely suited to the parts over which it passes; with the glands it leaves juices, some of which are nutricious, some dissolvent, some lubricating, and others excrementitious; and to the bone it gives bone, to the flesh it gives flesh, and so of all the members of the body. But highest in the scale of life is that subtile something imparted to the brainular system; the brain and nerves, like all other parts, owe their life and power, and perpetual renewal, to the blood.

The blood in its course through the body, like the watch of an army, exchanging sentinel for sentinel, exchanges particle for particle; leaving the healthy and vigorous particle or soldier on his post, while the exhausted or languishing one is led away for another occasion, or dismissed the service.

From about the extremities of the arteries, but not by *anastomosis*, or immediate union of mouth to mouth, arises a set of fine thin vessels, called *lymphaticks;* these, like the veins, collect their fluid from small to larger branches, and terminate in the *lacteals*, in the large veins, and *thoracick duct*, which lies in the chest.

## SECTION X.

### *Of the Blood.*

The blood is composed of three parts, called the *crassamentum*, *serum*, and red *globules*. The *serum* is that watery part which generally rises to the top when blood is suffered to cool in a vessel; the *crassamentum* is blended with the red *globules;* the quantity or proportion of each of those component parts of the blood vary considerably: we see it sometimes composed in great part of *serum*. It also differs much in appearance in different parts of the healthy body, being florid in the *arteries*, purple in the veins, and almost black in the liver, and in the great vein connected with the right *auricle* of the heart.

Chymically considered, the blood is a compound of many ingredients; it has a portion of iron; but no advantage could be expected from inquiring into its constituent elements in this sketch; it is only by torturing it we can separate its parts, and it is highly probable that, by our clumsy experiments, we produce new combinations. If the fragrant flower can drink up simple water, (and this we know to be a fact,) and give out all its rich perfume, how little hope is there that we can trace the elements of even the most simple body in nature!

## SECTION XI.

### *Of the Glands.*

These exist in every part of the body, and are composed of an assemblage of vessels; an *artery*, a vein, and *lymphatick*, with their covering of *cellular membrane*, enters into the formation of every *gland*. They differ much in size, and in their functions; the *salivary glands*, situated about the neck and mouth, separate the *saliva* or spittle from the blood; the *mammæ*, or breasts of the female, separate the milk; the kidneys separate the urine, and so on. Every joint and every cavity is constantly moistened either with a fluid, or thin *halitus*. Thus the *glands*, constantly washed by the blood, abstract each one something peculiar from it, or impart to it some new properties, or lead from the mass excrementitious matters. That function by which parts are elected for the use of the system, is called secretion; that by which they are rejected as useless or unfriendly, is called excretion. Hence comes secretory, and excretory vessels, which are probably nothing but capilliary terminations of the *arteries* and *lymphaticks*.

## SECTION XII.

### *Of the Viscera.*

Having, in the preceding pages, given some account of all the parts which are blended more particularly throughout the whole system, I come now to treat of parts which, although equally necessary for the general welfare, nevertheless, occupy but a fixed place, and there seemingly await the agents by which they are brought into action. These are all the organs of the chest, *abdomen*, and *pelvis*, with their membranes and other appendages. In describing those parts, I have thought best to commence with what is usually called the *primæ viæ*, or first passages.

The masticated food mixed with a quantity of *saliva*, or spittle, proportioned to the chewing it has undergone,

passes over the windpipe, enters the throat through the *pharynx* into the gullet or *œsophagus*, thence into the stomach. Being lodged in the stomach, digestion commences; such is the organization of the stomach, that its secretory vessels pour out a juice, called the gastrick liquor; this fluid has the power of dissolving down the food into a thin or pulpy mass, which by some incomprehensible action in the stomach, is raised up and passed out at the *pylorus* or entrance into the gut, for the orifice is not on the lower part of the stomach, but situated near its upper side: the food now passes down the intestinal canal, which runs in a tortuous direction through the belly, and is five or six times the length of the whole body.

The intestines are divided by the anatomist into small and large; the smaller commence at the stomach, and are, first, the *duodenum*, *jejunum*, and *ilium;* then commences the larger, first, the *colon;* this gut is long and has the second attached to its side, called *cœcum*, which is a mere blind small tube-like appendage; and lastly, the *rectum;* the termination of the *rectum* called *anus*, is formed of a *sphincter* muscle, which, by surrounding the orifice, commands the passage. Those divisions of the intestines are in some measure arbitrary, but are necessary for the anatomist. The intestines are provided with glands, or absorbent vessels, which take up the nutritious thin part of the food, while the grosser parts are carried through the intestines, by means of a constant vermicular motion called the *peristaltick* motion. The aliment having passed into the intestines, mixes with the bile and *pancreatick* juice: the pancreas, or sweet bread, is a large gland under the upper part of the liver. From the intestines arise a set of vessels called the *lacteals*, whose office it is to take up the nutritious part of the aliment called *chyle;* these vessels, uniting into larger branches, collect the *chyle* into one duct or tube, and convey it up through the chest, and then pass it into the veins; these *lacteal* vessels run on the *mesentery*, or that strong skin-like substance which ties down the intestines in all their turnings, as we see in quadrupeds.

The *chyle* being mixed with the blood, is conveyed through the heart, thence through the lungs; here, it is exposed to the atmospherick air, and becomes somewhat animalized, passes through the heart again, and thence into the general circulation. The intestines are also furnished with vessels, which constantly pour into their cavity a mucous substance, for moistening and sheathing their nervous coat. Hence comes that constant collection of feces, which must be notorious to every one, for by giving purges daily, as well as in some wasting diseases, we see copious discharges from the bowels even where no food is taken. It is a curious fact that where the intestines were wounded and sewed up with thread, knotted on the outside, these knots, with the whole thread, has been carried into the intestinal canal, and carried off, while at the same time the parts were healed.

The *liver* is composed in great measure of a tissue of vessels: and through it, there is an extensive circulation of venous blood: it occupies a large portion of the abdomen, filling the right side, and lapping over the stomach; its office is to secrete the bile from the blood; the bile is an indispensable ingredient in digestion, and is conveyed from the liver into the *duodenum*, or first intestine. As an appendage or reservoir to the liver we find a gall-bladder, the duct or passage from which runs into that from the liver, and it is only through this duct the gall-bladder is filled, but for what precise purpose we know not.

On the opposite, or left side of the belly, and in contact with the stomach, lies the spleen; the office of which is not known, but most probably it is concerned in the business of digestion: this organ suffers particularly in long continued agues; and has given rise to the name of a very unpleasant disease, the spleen, or hypochondriasis. The kidneys lie in the back part of the abdomen, at the upper part of the loins, the one in some measure under the liver, and the other under the spleen; they separate the urine from the blood; from their cavities, into which the urine is secreted, arise two tubes called *ureters;* they enter the bladder at its neck, in

such a manner that nothing can pass out at these openings; from the bladder the urine is *occasionally* forced by the abdominal muscles, assisted by its own muscular fibres. The passage from the bladder outwards is called the *urethra.*

The whole abdomen is lined with a sensible membrane called the *peritoneum;* and over the fore part is spread a net-like web, generally loaded with fat, called the *omentum.* These, then, complete the parts within the abdomen and pelvis, excepting the organs of generation, which will be spoken of occasionally, or found in the glossary at the end of this book.

The chest or *thorax,* besides the heart, the great blood vessels, and *thoracick* duct, or great *chyle* vessel, contains the *pleura, mediastinum, pericardium,* and lungs. The whole chest is lined with a sensible membrane which is called pleura, the seat of common pleurisy. The breast in the human subject, has a double membranous partition, which runs lengthwise, and is called *mediastinum;* it divides the two great lobes, or portions of the lungs. The heart is inclosed in a strong purse-like sack, called *pericardium.*

The lungs are formed of two great lobes, and these again are divided into several smaller lobules; besides the blood vessels, we find in the lungs a set of vessels called *bronchiæ,* these, from very small beginnings, unite into larger trunks, till they end upwards in one great trunk, called the *trachea,* or windpipe, which ends in the back part of the mouth, in a small opening called *glottis,* and this again is covered by a small lid, or flap, called the *epiglottis;* over this opening all the liquids and food passes, and yet, such is its wonderful structure and power, that although open at every inspiration and expiration of the breath, it is but seldom any accident occurs.

## SECTION XIII.

### *Of the necessary distinction of Parts.*

It may not be amiss to give a short account of the names by which medical writers designate particular

parts, by a reference to certain outward regions. The hollow on the middle of the breast is called the *scrobiculus cordis;* the middle of the abdomen, or belly, above and below the navel, about three fingers breadth, is called the *umbilical* region; the middle part of this, *epigastrium;* under the cartilages of the lower ribs, *hypochondrium;* and from the umbilical region, down to the pubis, *hypogastrium.*

In the mouth the following parts are situated; the gums are too familiar to require description: *Fauces,* the top of the throat; *palat,* the roof of the mouth; *uvula,* a small fleshy process hanging from the hind part of the mouth, and usually called the *palate* of the mouth. This is subject to inflammation, in which case the muscles of the throat, called *pharyngeal,* are excited into action, and as it were, suck down this part, as they will all substances with which they come in contact. This, so far as I recollect, is a new idea, and I am well convinced it is correct. And hence it follows, that to talk of elevating this part while the swelling continues, is ill founded; the only means for removing this unpleasant involuntary attempt at swallowing the *uvula,* is frequent gargling with emollient articles, as milk and water, or thin mucilage, when it is accompanied with inflammation; and as soon as the inflammation abates, or if the disorder arises from relaxation, gargle with some spirit, or with a strong decoction of oak bark, with a little alum.

A strong faith in the whimsical remedy of raising the palate by taking up forcibly a lock of hair, reminds one of the ridiculous ideas which have so long maintained their credit, of bleeding in the hands and feet, in the *head, stomach,* and *uterine* veins, &c. when it is as well known as any other fact upon earth, that all the veins communicate immediately with the heart.

I have more than once seen the busy and *would-be-wise* women bandying about the *terrible* tale, that Miss —— had been bled, at her own desire, in the *uterine* vein for miscarriage. Oh! ignorance, where is thy bottom? Oh! envy, where is thy bounds? Immeasurable as original sin, from which they sprung, naught can mea-

sure or restrain these automaton monsters, save religion and truth; for *truth* is wisdom in her loveliest garb.

I have now described all the parts of the body which I consider most interesting to be known: all those remaining, or anatomical terms, will be found either in speaking of the organs of sense, on disease of the various parts of the body, or in the glossary which will be formed at the end of this work. I therefore conclude the subject of anatomy with a short

## RECAPITULATION.

It will occur to those possessing a knowledge of anatomy, that some of the organs have been omitted; among these is the eye, for instance; but a general outline having been given, the reader must in some measure be prepared to understand their structure and use, so far as may be necessary for those for whom this work is designed, when I come to treat of the senses, or of disease.

1st. I spoke of the skin as a general envelope or covering for the body, as being furnished with nerves for the sense of touch; and further, as sympathizing through the medium of the nerves and vascular system with the whole animal economy; and I may add, that from the skin arise the nails and hair.

2. Of the bones, as giving form and support to the body, and having their blood-vessels and nerves, like every other part: and I may add here, that they are in good measure composed of lime or earthy matter; and that the solid bones are hollow and filled with *marrow*, having little or no sensation; the use of which we do not understand.

3. Of the *cartilage*, as giving form, &c. to the joints, and connecting some of the bones, being what in common language is called gristle.

4. Of the *ligaments*, being formed out of the *periosteum*, and securing the joints firmly together; and of the *periosteum* covering the whole bony surface.

5. Of the muscles, as performing the motion of the body; being bundles of fleshy threads; giving shape to the body, and possessing a wonderful living power,

which decreases amazingly after death; for the muscle which would have raised a heavy load, would not bear the weight of a few pounds when dead.

6. Of the *tendons* or sinews, as connecting the ends of some of the muscles to the *periosteum* and bone.

7. Of muscular organs within the body; and first, the heart, to circulate the blood, undergoing incessantly, during life, dilation and contraction of its cavities; and thereby sending the blood through the lungs, and then through the whole body.

8. Of the *diaphram*, being a muscle principally instrumental in respiration, and as being under the influence of the passions.

9. Of the *arteries*, as arising from the heart, and carrying the blood throughout the whole system, and by means of the blood constantly renewing every part and taking away the old.

10. Of the veins, as collecting the blood from the extremities of the arteries, and returning it to the heart; and of the *lymphaticks*, as collecting a thin fluid throughout the body, and conveying it into the veins.

11. Of the brain, being the source of sensation, volition, and motion; as going in a large column down the spine, and further, as being probably distributed through the system generally.

12. Of the circulation, by which the blood is brought into contact with every particle of living matter, and imparting life, even to the brain and nerves, and further, as giving out animal heat.

13. Of the glands, as secreting from the blood the various juices of the body; being associated in the business of filling every internal surface with moisture, &c.

14. Of the *primæ viæ*, or first passages, being the stomach and intestines, whose office it is to digest the food.

15. Of the *lacteals*, as taking up the nutritious part of the food, called *chyle*, and conveying it into the circulating blood.

16. Of the liver, secreting the bile, and pouring it into the intestines below the stomach; and of the bile being an indispensable ingredient in digestion; and of

a *pancreatick* juice being also poured into the first intestine.

17. Of the spleen, the offices of which are unknown.

18. Of the kidneys, secreting the urine and carrying it into the bladder, through the *ureters*.

19. Of the *peritoneum*, as lining the whole abdomen and *pelvis*, and of the *omentum* covering the bowels.

20. Of the *pleura* lining the breast, and being the seat of pleurisy.

21. Of the *mediastinum*, as dividing the chest lengthwise, and also running between the lobes of the lungs.

22. Of the *pericardium*, like a purse enclosing the heart in a strong sack.

23. Of the lungs, being composed of two lobes; having *bronchial* vessels, which rise up and collect into one large trunk, called *trachea* or windpipe, &c.

Having gone thus far, it only remains to speak of a few parts unnoticed, this will be done when treating of their diseases, or of the organs of sense; or will be sufficiently explained in the glossary, at the end of this book.

# OF THE SENSES.

## SECTION I.

### *Of the Sense of Touch.*

THIS sense exists throughout the whole skin, but in greatest perfection in the fingers; the organs by which it operates are pulpy terminations of nerves, which rising up in little points, are called *papillæ*. It may be remarked of the sense of touch, that while the fingers possess the most exquisite perceptions, they can still bear a greater degree of temperature without pain, than many other parts, particularly the cheeks.

The sense of touch seems to exist in all parts furnished with a skin-like surface, and although the external skin is more especially endowed with this property, we are well assured that, the tongue, mouth, throat, stomach, intestines, &c. possess it in a high degree. Probably, a large share of the perfect state of this sense in the skin, is owing to its being more particularly exercised in that way.

To this sense we may refer the pleasurable sensations which arise from taking food into the stomach; and also those from taking air into the lungs. These, from long inattention, we are not very sensible of, but who has not felt pleasurable sensations in the stomach, from taking in food after fasting some time? or who has not felt pleasure, and a general invigoration, from inhaling the mild breezes of salubrious air into the lungs?

And may we not carry our views a little further, and inquire whether the brain too, is not endowed with this sense, in its common acceptation? When we inhale *nitrous oxyd gas*, we apparently operate on the brain, by the sense of touch, and as it were tickle the mistress of the *sensorium* out of her senses. Like the tickling on

the external surface, producing a strange mixture of pleasure, pain, and violent action, this tickling of the brain, by means of this *gas*, produces violent, irregular, and exhausting operations of the mind. If then, this sense is so generally diffused through the system, and so intimately connected with the brainular system, with how much care ought we to guard the organs by which it operates, from filth. Let every one keep in view, that if he daub his skin with filth, or fill his stomach with brandy, or inhales noxious air; these all, are in immediate contact with the brain.

Hence it is well said, men steep their senses in wine. There is, however, this difference between filth applied to the skin and lungs, and that arising from the potions of Bacchus, that the latter is the most easily avoided, and generally speaking, begets every kind of filth of body and mind, till its wretched victims, sometimes drag out a miserable existence, being a mere living dunghill. Of such it may be said,

Poison not only lurks in every vein,
But filth too, at length, crawls among the brain:
Teazing, and increasing from ill to bad;
Until past endurance, the man runs mad:
Or, if by constitution good and strong,
He is enabled to pursue the wrong;
Why not see the fate of those gone before,
And on the road to ruin find one more.
Or, how on such dire warning can he tread,
While wife, or children, tears in rivers shed.

## SECTION II.

### *Of the Sense of Taste.*

The organs of taste are situated on the tongue, and like those belonging to the touch, are little nervous *papillæ*, or points; they are only to be found on the edges and end of the tongue. The upper side, and middle of the tongue being scabrous, or rough, is only suited for moving the food through the mouth. The use, and appearance of the tongue is so well known, that I have only to observe, that it is covered with a true skin, something like the skin of the body.

The taste of man is so much abused and perverted in his infancy, that we can discover little or no relation between the aliment and the taste. While the Englishman delights in his beef and pudding, and the Frenchman prefers his light savoury articles, there are people found, who drink down rancid train oil with rapturous delight.

The people of the United States have no national taste unless it be for coffee.

The experience of ages has shown, that man may vary his food greatly; but the same experience teaches us, that to be healthy, we must be temperate; or, in other words, we must not multiply our dishes too much, or disease is the invariable forfeiture. The taste must be considered the lowest sense belonging to man; it, however, is one which tends to equalise: from the king to the beggar, disease will follow intemperance in eating or drinking.

We are well assured, that many great men who had scarcely exercised this sense at all, lived on the most simple diet to a good old age.

To brutes, pretty generally, it is a tolerable guide for selecting their food; not so with man; for whosoever sets about to whet up this sense for enjoyment in gormandizing, obtains no more pleasure than the brute enjoys daily, without instruction and without pains; and he seldom fails to pay "dearly, very dearly, for the whistle."

It may be said, that while the taste stupidly licks up the poison, perhaps rolled in honey, the noble eye points to danger. Has your enemy the advantage of the eye, in position, the touch, roused by violence offered, never deceives in announcing danger; and are you surrounded by darkness, the sense of hearing sounds the alarm; but the taste, like the insidious serpent, beguiles its votaries. Then, let me admonish you, beware; for, like a turbulent and unruly fellow, it must be kept low. It is a kind, sweet servant, but makes a vicious master.

## SECTION III.

### *Of the Sense of Smelling.*

The immediate organ of smell is a pulpy expansion of the *olfactory* nerves on the fine membrane covering the *ethmoid* bone, called the *sneiderian membrane.* How this nervous expansion takes up sensation and carries it to the brain, we can form no conception; but we know that all bodies which we can smell, emit effluvia, or very fine particles, which, by coming in contact with the pulpy nerves, give impressions according to their nature.

The pleasure arising from the smelling of many articles is considerable; but much is owing to habit, some liking best what others cannot endure: and further, it may be said, most perfumery is unwholesome when much indulged in.

Through the organs of smell we can often operate beneficially on persons affected with hysterick fits, or in some cases of fainting, by means of pungent articles, as burnt feathers, volatile spirit of hartshorn, &c., when all the other senses are, as it were, locked up.

By applying suitable articles to the nose, we rouse the slumbering energies of the system, and often enable the person to recover recollection and muscular action, without the use of any other means.

It may be said of this sense, that we are less dependant on it than any other, some persons having lost the power of smelling, without experiencing much inconvenience.

## SECTION IV.

### *Of the Sense of Hearing.*

The appearance of the external ear is well known; we may however observe, that it owes its form to cartilage; that it is admirably contrived for the purpose of collecting sounds; and its internal parts are defended from accidents, in good measure, by a secretion of wax, and

by hair within, which prevent dust or insects from entering.

From the internal ear there is a passage into the mouth, called the *eustachian tube*, which is subservient to complete hearing.

The auditory nerves are deeply seated, and are acted on by the vibration, or undulatory motions of the air, for sound cannot pass through the exhausted vessel of an airpump.

Such is the intricacy, multiplicity of parts, and wonderful contrivance in the structure of the human ear, that nothing in the body is less understood; nothing more beautiful; nothing more strongly manifesting the wisdom of the omniscient architect.

We speak of the drum of the ear, and of its hammer, &c.; from which men were once contented to believe, these parts by their mere mechanical contrivance, performed the act of hearing; but these speculations are now at rest, for instances have been found, where not only the drum and hammer, but several of the bones, have come away without very much impairing the hearing.

That all the parts are necessary for the most perfect enjoyment of this sense, is certain; but for the common purposes of life, this sense may be quite good, and sufficient, after all those parts, which were once supposed to be the exclusive organs of hearing, have come away, from suppurations.

Again, the ear may be perfect in all its parts, and the nervous power still wanting, by which the impression could be carried to the sensorium, and this is a hopeless source of deafness, unless it be symptomatick of some other disease.

None of the senses are more liable to morbid acuteness; so high is the sensibility at times in the nerves, that common sounds become painful, and false sounds arise within the ear, resembling the noise of boiling water, the tinkling of bells, &c.

The healthy ear, perfectly formed, and suitably exercised, is a source of the most sublime enjoyment. All nations adopt musick in their forms of worship. The dulcet sounds spread like seraphick wings, and as it

were, abstract the soul from the body, to soar aloft; and tower there! till the sound dying away, the mind falls again, gently, like the mild dews of heaven.

Who can enjoy the rapturous melody arising from harmonious sounds, without catching a glimpse of heaven?

## SECTION V.

### *Of the Sense of Seeing.*

The organs of this sense, are beautifully formed of a variety of parts, many of which it would be useless to mention here. Some of its most conspicuous parts may be enumerated with advantage; indeed it is absolutely necessary for every person, to have some knowledge of this important organ, that they may be enabled to understand the oculist, when speaking of its diseases. The rational creature who does not acquire some knowledge of himself, is remiss in duty to his Creator, for it is by contemplating the works of nature, we discover more and more, the wisdom and goodness of the SUPREME.

The eye, considered as a whole, is a hollow globe, filled with fluids. The substance which forms this globe, is of a membranous structure, formed of different layers, called *coats*. The external *coat* is a strong whitish substance, and surrounds the whole eye, (except a small part in front;) it is called the *sclerotick coat*. It terminates in a circular opening before, and into this opening there is a circular transparent *coat* inserted, called the *cornea*; this resembles the chrystal set in a watch. Over the *sclerotick coat* is spread a thin coat, containing a great number of veins, which are apt to become very full and red when the eye is diseased. It may be dissected away in part, without injury to the eye, when much inflammed.

From the inner side of the *sclerotick coat*, near the termination of the *cornea*, goes off a partition, which divides the hollow globe into two chambers, called the *anterior* and *posterior chambers*. This partition is called the *iris*, and is that part which gives colour to the eye;

as the blue, hazle, &c.; it is perforated in the middle with a round hole, called the *pupil.*

Such is the wonderful structure, and power of the *iris,* that it opens, or dilates the *pupil,* so as to regulate the quantity of light which strikes the eye; in a dark place it opens the *pupil* to a great size, in a strong light it contracts it to a mere point.

Immediately behind the *iris,* lies a small body, somewhat like the glass of a spectacle, called the *chrystaline lens;* this is the seat of cataract. This *chrystaline lens,* the water in the anteriour chamber, and the jelly-like substance, filling the greater part of the eye, have got the very improper names of *humours* of the eye, and are known by the name of *aquaous, chrystaline,* and *vitrious* humours.

Behind the vitrious humour, and on the inner side of the bottom of the eye, is a pulpy expansion of the optick nerve, called the *retina.* How the light operates on the nerve, and causes it to convey sensation to the *sensorium,* is altogether beyond our reach.

I shall now endeavour to explain how the light operates to impress the image of objects on the *retina.* Light moves only in rays, or thread-like lines, and these lines or rays, always retain a course perfectly straight, from point to point. When these rays pass from a rare, to a denser body, they form an angle striking inward, towards the centre; when they pass from a dense, to a rarer body, they diverge, or strike outward, or from the centre.

Again, the rays of light are influenced by the surface of bodies; opaque substances, reflecting the rays in various directions, while they pass through transparent ones, and are altered in their course, according to the shape of the surfaces, at which they enter, and pass out.

If the transparent body be of regular shape, as a spectacle glass for instance, the rays striking on, and passing out of a convex surface, the rays are thrown together, and form a point called a *focus,* and this *focus* will be nearer the glass in proportion to its convexity.

Now when the rays of light are reflected from an object, and strike on the eye, the *cornea* being convex,

the water being denser than the air, and the *chrystaline lens* and *vitrious humours* still more dense; the rays of light are brought to a *focus*, on the nerve at the bottom of the eye, and here gives the image of the object before us.

If the eye be too flat, or its *humours* too thin, the rays of light will not be brought to a *focus*, but strike the *retina* scattered, in a circle, which gives but a very imperfect knowledge of the object that we wish to see.

This defect may be remedied by common convex spectacle glasses, which by bringing the rays sooner to a *focus*, enables the long sighted person to view the object nearer to the eye; and this we see daily in the aged using spectacles.

There are persons whose eyes are too convex, and therefore, they require concave glasses; these by spreading the rays of light before they enter the eye, extend the *focus* on to the *retina*, and gives the image of objects, which with the naked eye, were not discernable.

The importance of concave glasses to near sighted persons, may be conceived of, when we see the spy-glass bringing objects into view, which the naked eye could not discern at all.

The importance of vision is such, that every one must be conscious how vastly he is indebted to it for the enjoyments of life. By this sense, we survey the works of nature immediately around us, and with the aid of optical instruments, reach in some measure the immensity of other worlds—the twinkling stars, centres of other systems—the exhaustless sun—the mighty globes within the solar system—the placid moon, within our orbit—*these* lead us to believe, indeed, that, "after millions of ages have revolved, the great FATHER of the universe will become more and more incomprehensible." And well may we say, "the human mind sinks beneath the weight of the infinite object of its future contemplations and of its own sublime and happy destiny."

## SECTION VI.

### *Of the Senses in General.*

Under this head I shall give a short recapitulation, and conclude with a few inferences. The organs of touch are the terminations of nerves in the skin, and seem to exist in all the surfaces of internal parts.

The tongue is furnished with the organs of taste, which also are nervous *papillæ*. The people of the present age abuse this sense in particular.

The smelling power resides in the pulpy expansion of the *olfactory* nerves, and though subservient to man's comfort, is of less moment than any other sense.

The hearing is effected through intricate organs, is closely allied with religion; and a source of high enjoyment.

The sight is, seemingly, of the most indispensable nature to man, a source of his greatest enjoyments; its organ the eye, better understood than the other organs of sense.

But after all the wonderful powers, and beautiful symmetry, which are found in the living system, we are humbled with the fact, that they are but animal in their nature; and we are met here by a still more humiliating fact; so totally are the powers of body and mind perverted and abused, that man, comparatively, is often below the quadruped of our farms.

But revelation opens to our view powers imperishable; when the nervous power shall die and pass away, the immortal mind shall rise superiour to death, and abide the decrees of the righteous Judge. That the mind and body are mutually dependant here, is certain; but I fear we too often forget the great distinction.

Dare I adopt a new word, I should speak of mind as the living *innervous* principle, while I should refer all animal actions to a nervous principle, and according to common phraseology, an alliance offensive and defensive exists between them.

SECTION VII.

## *Of the Cause of Animal Life.*

I have thought proper to enter next on the *cause* of animal life. Here I am conscious of a knotty subject, but, however little we can understand, or explain the living principle, in the present unsettled and imperfect state of physiology, we are enabled, by examining into some of its laws, to discover useful truths.

When we examine the body soon after death, we frequently find every part to appearance sound, but the spirit of life is fled, and with it, sensation and thought. If our examination is made pretty soon after death, we discover a power of motion in the muscles, and by means of galvanism, can throw them into convulsions.

Hence comes a natural inference, that life is continued by the impressions of stimuli on the living principle. Of this principle, we can form no distinct conceptions, but its operations are evident; it is the hinge on which both health and disease turn; and it is by accommodating stimuli to this principle, we preserve our health, or remove disease. It has been named, most generally, excitability.

Health consists in an equal distribution of this excitable principle throughout the whole system. An animal body wanting this excitability, has no powers, and soon undergoes decomposition.

On this excitability various stimuli act to support life. Thus light stimulates the eye, sound stimulates the ear; the air stimulates the lungs, and the food stimulates the stomach; while the blood stimulates the heart, the brain, nerves, and in short, every part having excitability. I have said, health consists in an equal distribution of the excitability; now, as this excitability is exhausted by stimuli, it follows, that if we over stimulate any one part, we produce derangement, and if long continued, or too forcible, disease follows.

When we operate on the excitability, by stimuli, we produce excitement, and a due balance between this excitement and the excitability, constitutes health.

If we take a large quantity of any article into the stomach, it may stimulate by its quantity, although mild in its nature; or if we take ardent spirit, or other very strong articles which stimulate by their quality, we exhaust the excitability; if they are carried too far, indigestion, or disease follows. If we exercise moderately, we raise the circulation and produce a moderate excitement, and thereby expend the excitability, slowly and equally, and are benefited by the exercise; for sleep soon comes in to replenish the store-house. But if we exercise violently, or continue it too long, we exhaust the excitability too rapidly, and unequally, and disease or inability to proceed, follows.

After a certain expenditure of excitability, the body begins to languish; and we feel a propensity to sleep. We place the body at rest and endeavour to avoid the stimulus of light, sounds, and motion and thought: thus situated, sleep kindly accepts the invitation, and spreads her veil of temporary oblivion over every sense. We pass several hours unconscious of existence, if thus comfortably situated; but if loud sounds assail us, this mild goddess of the night, retiring in alarm, the senses experience a temporary confusion.

It has been remarked that old age resembles childhood; but in respect to sleep, there is a vast difference. While the child during sleep seems buried in death, and may be carried from place to place without waking, the aged generally find their sleep slight and imperfect. How the excitability is restored, during sleep, we cannot even guess; but we know, sound and refreshing sleep can only be had by avoiding stimuli, to a certain extent. The stimulus of air on the lungs, and that arising from an increased circulation during sleep, are the only stimuli absolutely necessary; a moderate stimulus from food in the stomach, is probably favourable to sleep. I shall speak more particularly when treating on the nonnaturals.

I have also said, mind is dependant on a suitable conformity of bodily organs. Let us then extend charity and forgiveness to those who do wrong, and endeavour, by example and kind measures to reclaim them. And

if we see the mind dormant in the idiot, let us not uncharitably suppose the Almighty has forsaken him. The capacity of mind is still there; and unfettered from its prison, may rise clothed in glory, even without blemish. Is thy brother, then, thus afflicted in this life? Take heed, lest your lustful passions shall condemn thee, while he fares well. From the lowest grade of idiotism, let us view man as destined for immortality; nor dare to despise him.

By Revelation we are bound to believe, that man is accountable for the deeds done in the body; and it is experimentally known that the sum of happiness, of any community, is proportioned to the practice of virtue in it. It is also experimentally known, that drunkenness not only impairs the mind and body, but that it completely destroys the moral faculty in many persons. Drunkenness being generally the source of other vices, is a heinous crime, and ought to be named *infidelity*.

## SECTION VIII.

### *Of Mind.*

On a slight view, it may be thought, medicine has little to do with the mind; but on a little reflection we will find, that in civilized life, at least, the person who has not some knowledge of the mutual influence of mind and body, is neither acquainted with disease, nor capable of administering relief. I shall not pretend to any nice distinction of the attributes of mind, or attempt any conjectures of its nature, further than to give a few clear positions, from which a few practical inferences may be drawn.

First. Mind, as associated with animal life, is a capacity merely, and therefore, it is through the senses only, we can awaken and exercise it into reasonable maturity.

Secondly. Mind active, or dormant, resides in every human creature; and being a created something, must be subject to change; for nothing but DEITY can be immutable.

Thirdly. Every thing subject to change must be susceptible of deterioration, as well as improvement. In a rational creature, there can be no merit, and probably but imperfect enjoyment, without temptation to do evil.

Fourthly. There resides in every human creature, a moral faculty, or power of distinguishing right from wrong; if it sleeps among sound brainular organs, it must be for want of incitements to awaken it.

Fifthly. Disease may impair every attribute of mind, the government of the passions, the memory, will, judgment, all, are often impaired by disease—nor is the moral faculty, exempt from the operation of physical causes.

Sixthly. Mind, although connected with sensible organs, is wholly independent of them in one respect; for when the body shall perish, the mind shall enlarge, and flourish in renovated vigour, till a new body rising up at the smile of our *Saviour*, shall unite therewith and form a *new creature*, destined for immortality. A God! a Heaven! a creature immortal! all these! in view of man, oh! favoured mind of man, how art thou exalted; how canst *thou* then, refrain from aspiring with constancy after this, thine destinity.

I have said mind is a capacity only, how much then, does it behoove us to improve it with the most sacred care. It is a luxuriant soil, and unless instruction, and example shall awaken the mental faculties to the practice of virtue, vice, like the weeds of our gardens, will grow vigorously; for the seeds are within, and bad example is never wanting, for corrupting the weak or unthinking. Now, virtue under every form is temperance, and therefore, by the constant practice of it, we improve both mind and body.

## SECTION IX.

### *Summary of Physiological Sketches.*

Having now arrived at the end of my observations on the healthy body, I shall conclude with a very short recapitulation; and then enter on the nonnaturals, on the

morbid pulse, and give some directions respecting *bleeding*, before I treat on the diseases to which we are subject. We find the human body a wonderful assemblage of parts: moving solids, and moving fluids; with organs of perception, constitute this complex, yet beautiful living system. We find it undergoing perpetual renewal; for which purpose we must immerse it in air, defend it from the cold, and sustain it by food and drink; enjoy its reasonable animal pleasures; and lastly, we find a powerful mind, evolved from the exercise of the various parts of the body.

We find the mind capable of directing us, and destined to lead to immortality. If, then, we find our bodies beautifully formed; let us not forget they are feeble. If we find life vigorous; let us not forget it is short, and uncertain. If we find man destined for immortality; let us not forget, we may lose its blessings. If we find a mutual connexion between body and mind, let us with equal care nurture and defend them. Enjoyments! health! and future prospects! are bottomed on *temperance* and *activity*!

# OF THE NONNATURALS.

PHYSICIANS under this name include *air*, *food* and *drink*, *sleep*, *clothing*, *exercise*, *excretions*, and the *passions*. I shall take them up in the order in which they have been mentioned, and endeavour to give a few general rules, respecting each of them.

## SECTION I.

### *Of the Air.*

The atmospherick air which we breath, is a compound of two ingredients, called *oxygen*, and *azote*, diluted to a great extent by heat. *Oxygen* is the vital part, while *azote*, is even deleterious; they exist in the proportion of about twenty-seven of the former and seventy-three parts of the latter. This at first view seems a small proportion of the sustaining principle, but, on examination we find more *oxygen* would hurry on *life* too rapidly, and would soon exhaust the powers thereof.

We know, that a variety of salts, &c. can be dissolved in the same water; in like manner, a great many articles will dissolve in air. The dissolving power of the air, is much greater than is generally imagined; almost every substance in nature may be dissolved in it; even the metals can be volatilized, and suspended in the air.

The sense of smell discovers a great variety of floating bodies, in the air we breathe.

We are here met by a surprising fact; so regular is nature in many of her most important laws, that a deviation from them can scarcely be found. While the air of the mountain is light, and that of the valley heavy, and that of the city loaded with millions of effluvia; still we find the proportion of the two great component parts,

to be ever nearly the same. The most accurate chymical experiments finds the air of the city, and that of the country alike.

We fill the surrounding air with myriads of articles, arising from our ravages on natural and artificial substances; we contaminate vast quantities by our bodies; yet bounteous nature, from her immense laboratories, pours out quantities inexhaustible.

From pole to pole, from mountain to mountain, from sea to sea; or from hillock to hillock, this precious balm of life sweeps the surface: true as the sun to his celestial course, this second parent of organization and life, incessantly displays her charms, and without price, gives to myriads of creatures conscious existence.

It is only in obstructing her course, or wantonly filling the space around us with filthy effluvia, that in general begets the evils arising from the air.

We are however, compelled to acknowledge, that here, as in many other cases, the Creator has thought proper to mix evil with good; and with the good gift, has made the mild breeze to come sometimes loaded with disease and with death.

And at times, the air, as if alarmed at its own langour, seems to take an alarm, and rising up in terrible majesty, pours out, with irresistible force, her powers; and drives the sea into mountains of water, or with a single sweep, prostrates a whole forest.

It is an unquestionable fact, that we are under a great weight of air. If we set a tube, a pump-stock for instance, in water, and exhaust the air by means of a piston or sucker, the water will rise about thirty-two feet without any force; hence it follows that we move under a column of air, which, is equal to the weight of a column of water thirty-two feet. This is a great weight; but when we consider its application to the surface of our whole body, it will appear an immense load. From this, we may plainly see it is not necessary for us to draw air into the lungs; if we empty the lungs by contracting or lessening the chest, the heavy air rushes in.

To be healthy, it is probable nothing is necessary but a due proportion of *oxygen* and *azote;* a reasonable

temperature, and elasticity, comes as a matter of course. However, happily for us, many articles floating in the air do us no material injury; neither is great precision necessary, as to temperature: man enjoys health almost from pole to pole.

Believing as I do, that no one will doubt the influence which air must have over us, nor that it is susceptible of, and actually does take up a great variety of articles, many of which are unhealthy, as the effluvia arising from marshy grounds, covered with decaying vegetables, (the source of agues) or the seeds of some diseases, as the smallpox, I think it necessary to give a few general directions.

Houses ought to be built in open, high situations, so that nuisances may be washed away, and that we may have a free circulation of air.

We should carefully remove all filth from about our houses; and remove our manure frequently, and endeavour to cover it with the earth as soon as possible.

We should white-wash our houses frequently with lime: the papering of common sitting-rooms, or bed-chambers, is certainly improper.

We should burn all the useless offals of our kitchens, and of our manufactories, that we cannot convert immediately to manure, and have removed.

We should not confine ourselves too much at night; exposure to the night dews is generally unhealthy; but our bed-rooms ought to be very spacious, or well ventilated. If you dread leaving open your door, or windows, in summer, at least, you ought to have ventilators in your doors or windows. It is always best for but few persons to sleep in the same room.

Endeavour to avoid ponds of stagnated water; and if you cannot remove them, keep vegetable, or dead animal substances, as much from them as possible.

Too many trees near your house cannot be wholesome; they at times keep up too great a moisture, and at all times they give out unwholesome air at night: it is a fact, that the vegetables which to the light of day, give out *oxygen*, to the darkness of night, give nothing but foul, carbonated air. A good garden near the house,

with your trees at a reasonable distance, is both beautiful and healthy.

Children ought to be freely exposed to the air: it is better to expose them to severe cold, or even wet by times, than to keep them too close.

Cities, in general, are destructive to health; but it is, perhaps, more owing to obstructions given to the current of air, and to filthiness, than any other cause; and hence it is probable, modern cities are much more healthy than ancient ones; because, our streets are more open, and our rooms more spacious; we are more cleanly, and without walls or ditches: with due attention to these things, it is probably the old tales of contagion will soon be forgotten.

All large manufactories ought to be in the country, and remote from cities.

We ought to have as few animals in cities as possible; they contaminate a great deal of air, and leave much filth.

We ought to bury our dead reasonably remote from cities, and when convenient, they should be enclosed in metal coffins.

We ought to build our churches of the most substantial materials, as best brick or stone; they ought to be spacious, openly situated; built high, with large doors and windows; they should be freely ventilated, by opening the doors and windows often, or have large ventilators; they ought not to be kept dark; the sun should be admitted freely every day. In damp weather they should be well dried with stoves, even in the summer. The floors should be often cleaned, as well as the seats; and the walls should be frequently whitewashed. With these precautions, the valetudinary would have nothing to dread from going to church. But as things now stand, it is a lamentable fact, that many delicate persons are seriously injured by going to church, because they are damp, poorly ventilated, constantly kept dark, too small or too low, or perhaps decaying, or in stifled, low situations; or loaded with filth on the floors, seats and walls.

If you would approach the Supreme Ruler, let it be the first wish of your heart, when you come more particularly into his presence, to come clean and pure; and into a place suitable to the great errand on which you go. For even an approving and accepting Heavenly Father, has chosen in general, to bless his people by the operation of general laws. If these are not attended to, our work is often lost, because He in his providence has ordered that man shall only reach *the throne*, through his own efforts, aided by the intercession of the LAMB, which shed light over the world! then died to rise in new splendour! not fierce like death, but lovely as LOVE! which is the great "I AM THAT I AM." (See *Exodus*, chap. 3. ver. 14. and also the *Spectator*.

## SECTION II.

### *Of Aliment.*

Such is the amazing variety of nature's bountiful provision of aliment for man, that I consider it preposterous in the extreme, to attempt any thing like a particular account of each article, for such is the variety of articles; such the idiosyncracies in the human stomach, that volumes would not suffice to point out the particularities of each case.

In as much as every man must have a stomach of his own, you might as well look for a similarity of features in the face, as for stomachs precisely alike; and therefore, no very precise rules can be laid down. Nay, more, the very same stomach is liable to great changes, so that articles that were once the most agreeable, become unfriendly and even dangerous.

Let us not then pretend to too nice a distinction, for it is a true saying, that what is one man's meat, is another man's poison. I shall therefore confine myself to a few general remarks, for much must be done by each individual whose stomach is impaired, to discover what articles are most agreeable. Fortunately, the generality of mankind have little to dread from all common articles of food, unless they are used in excess.

That we, as creatures of nature, are subject to natural laws, must be clear, but we may mistake our own shallow conceits for her laws. Men have been found advocating the using of our food, as near a state of nature as could well be, and hence comes the custom of eating raw beef. But I think, a little inquiry will convince us, that man was not designed, like the lion of the forest, to eat his animal food raw; because, the using raw animal food almost invariably begets a ferocious disposition. Did man long after the bleeding carcase,—wo be to the world, for it would be a scene of horrour, and desolation.

Perhaps the only thing which invariably and absolutely distinguishes man from all other animals, is his knowledge of the use, and proper management of fire.

The daring ourang outang walks the forest, and mocks the proud erect walk of man. Many animals discover a sagacity which may well surprise us, but man only, under all circumstances, perceives the use of fire, and applies it to his wants. Although we must acknowledge some few exceptions, mankind in general, apply it to the preparation of their food.

Now as there is not such a thing as half truths or half laws in nature; it would seem to follow as a fair induction, that we must either take a thing wholly from nature, or trust wholly to her own process. If you take nature for your cook, be consistent, and use your animal food reaking in its blood, and not carry it to your table scorched on the outside, and bleeding within; this is a mockery of nature, a slur upon your cook, and the bane of your health. It follows, that I am an advocate for having animal food well done.

The animal food of the United States consists principally of the following familiar articles; and as standing articles, they are used most in the order in which they are mentioned: beef, pork, mutton, veal, poultry, and fish. All of these in common use, are wholesome agreeable food, when used temperately.

Where circumstances do not forbid, they are best used fresh, being more wholesome and giving more nourish-

ment. More vegetables ought to be eaten with salt meat than with fresh.

Eggs, butter, and cheese, are articles in very common use; in moderation they are all sufficiently wholesome, but I have no hesitation in saying too much cheese is used, and too much rancid butter, in this country, If butter cannot be had nice and fresh, the better way is to melt it in small parcels at a time, and use it in pies, dumplings, &c.

Butter should always be eaten sparingly, and rather than eat it rancid, take dry toast. I also think I may with propriety say, too much salted meat, and fish are used, if not generally, at least in many families. It must be obvious to all, that persons who labour hard, require more solid animal food than those who lead sedentary lives.

Too much animal salted food, is neither nourishing nor wholesome; persons who use it freely must use vegetables, or scurvy is the consequence.

The United States are blessed, in a peculiar manner, with a variety of the choicest vegetables suitable for bread, and every other purpose; and also plenty of fruit; many of them natives, and others which prosper abundantly with us.

First in value, as food for man, we may place wheat, rye, speltz, Indian corn, potatoes, barley, rice, and buckwheat. Bread for common use, is probably best made of a mixture, of wheat or speltz, with corn, or rye, or even both.

To make good bread it must be well raised, but to talk of fermenting dough, in the common acceptation of the word, is wrong; but there is a peculiar fermentation which dough undergoes, very properly called the bread, or panary fermentation. This species of fermentation is very rapid, and in general, the more rapidly dough is carried through it the better; for it soon changes into the acetous fermentation, which at once sours and spoils the bread. With good sweet yeast, warm flour and water, and a warm place to keep your dough; not more than an hour will be necessary to raise bread. It is well ascertained, warm or very fresh bread is not wholesome;

in general, I would recommend to families to bake twice a week.

Frequent changes of the lighter kinds of bread, is pleasant and wholesome; but in general they are eaten too warm, and with too much butter. A suitable portion of molasses, honey, or apple-butter, will be more wholesome; and to those in good circumstances, who prefer either of the above mixed with their butter, they will find it more agreeable to the stomach.

The poor of the United States neglect the use of the potatoe, shamefully. It would be better for them to use potatoes as a standing article, than either rye or buckwheat; and it would often be in their power to procure a nourishing food, for a large family, from a very small patch, which would not cost but a few days' labour; for nothing produces more abundantly; and I have no hesitation in saying, they are infinitely better than bad-made bread, even from wheat. Many men of firm stamina, and lively, vigorous minds, have been raised on this article, with milk.

The sweet potatoe is also very nourishing, and a good substitute for bread; but is of difficult culture, except in a very few places. The common potatoe thrives every where, with reasonable care; and easily could a poor man raise as many with a hoe, as would feed a cow, and support a smart family with a reasonable portion of animal food. Such people would gain in health what the rich lose by living too high. The poor man will labour a whole day for a bushel of wheat, and very often less; in one day he could perform labour equivalent to that of raising twenty bushels of potatoes; from these he gives no miller's toll; but the tenth of a good crop will keep a hog, which yields in time a delicious feast of meat, sausage, &c. But, unfortunately, even the beggar, in this country, would be ashamed to be caught making a meal without bread: such is the prejudice in its favour.

Before quitting this subject, I beg leave to say, we use a great deal too much bread in this country. The vast number of mills which every where prosper, plainly show it. If the rich, with whom the toll is no object, prefer filling the stomach with light bread at every meal,

let the poor be assured, that by using much of his grain boiled, he not only saves the toll, but, may also save himself from a great deal of trouble, loss of time in borrowing horses, &c. for which he often exposes himself to the frowns of his neighbour. Nothing is more pleasant than well-boiled hominy, or boiled barley, or, where it is cheap enough, rice, and nothing is more healthy; and even in the use of his flour, and of Indian meal, much fuel will be saved by using them in dumplings, &c. Children are universally fond of dumplings, puddings, &c. and I am satisfied they would nourish a king.

While speaking of the potatoe, let us not forget that a great patriot, a Marion, was not ashamed to dine before the proud Britons, on this root alone.

No vegetable, perhaps, in the United States, is so much neglected as the beet; we seldom see it unless in a slice or two of pickle, and yet nothing is more palatable, when well boiled and eaten as sauce; nor more wholesome and nutritious; besides, nothing will yield such an immense crop from good ground.

The poor also neglect the onion; eaten raw, as they generally are, they are harsh and indigestible; but when well boiled, are a mild nourishing article.

We are blessed with an astonishing variety of vegetables, in the form of leaves, roots, or fruit; those that are eatable, are generally known, and require little to be said respecting them. Ripe fruits are best used as nature matured them, but we preserve such as will not keep, in sugar; in this form they should be used more sparingly. Unripe fruit can be used in moderation with safety, cooked with sugar.

Vegetables, if cooked at all, should be well done; for by merely parboiling them, you toughen and render them more difficult of digestion.

A reasonable proportion of condiments are at all times necessary with our food, whether animal or vegetable; of these, we have quite a sufficiency for the healthy stomach, in our own country: they are principally salt, mustard, horseradish, garlick, onions, red pepper, pickles, vinegar, &c.

It may perhaps not be generally known, that flour moderately sour may be rendered sweet, pleasant, and wholesome, by using a very little pot or pearl ash with it; the potash must be dissolved in a good deal of water, and mixed in making the dough; if you add too much potash, your bread will be yellowish, and unpleasant. This kind of flour is best used in the form of cakes, dumplings, and puddings; all of which it will make nice, pleasant and wholesome.

With soups, formed of our meat and vegetables; our milk, with rice, hominy, potatoes, or mush, &c. the American might pass the year, and at its end return the most grateful thanks to his Creator for having thus bountifully blessed him; but this is far from being the case, and we are obliged to speak of foreign articles before we conclude.

And first comes coffee, this although an exotick, has in a manner become the second staff of life. Coffee no doubt, is a pleasant grateful cordial, when taken in moderation; but did not our country bless us with a plenty of substantial articles, we should soon become as lean as the king-fisher, on coffee.

Nearly the same thing may be said of tea, when good, but much of our tea has lost its *aroma* before it is used, and of course, is inferiour as a mild pleasant cordial to many of the herbs of our mountains and gardens.

Chocolate when good, contains some nourishment, but is less cordial than tea, or coffee, &c. too often it is made of rancid oils, or fat, and is then certainly less friendly than milk, in some form.

Upon the whole, we would be infinitely better, was coffee, tea, and chocolate, banished the country; or at most, they ought to be reserved as in times of old, for a treat to a friend or for the sick. That they should have become principals in our diet, is a disgrace to our country, and a high offence against the bounteous gifts of heaven.

The people of the United States found a second paradise. They multiplied and rose, under a kind providence, to be a great nation; great in industry; great in simplicity; great in unanimity; and great in plenty.

Their cornucopæ, spacious as the heavens which overspread them, poured all the real comforts of life over their head, most plenteously. And they were also enabled to spare a little for the luxuries of life; wines, spiceries, and a few other articles, were obtained in exchange for the products of their soil: This, I fear, was the golden era of America; but would to God, I may be mistaken, and that my country as it ever has been, shall continue to be, the admiration of nations, and the favourite of heaven.

But ah! long since has busy ambition, pride, and avarice, the enemies of freemen, began their career—their daring, but smiling witcheries, have caught the rising generation, and with gigantick strides, like the bounding lion on the lamb, they are crushing the nation—rise, then, from your slumbers, ye growing angels,* and rather lick the dust of your country, than satiate your stomachs with the honey of Europe. There the poison lurks; then beware, and if you love your country, love her productions. She is the august parent of a Washington; of millions of freemen, and of every rational and reasonable comfort.

I shall conclude this article with a few general rules, which, if attended to, may be useful.

Vast injury is done by eating too much; therefore, we ought in general, instead of oppressing the stomach, to eat rather less than the appetite calls for.

A suitable mixture of animal and vegetable food is not only to most persons most agreeable, but absolutely necessary.

Our country abounds with milk; and we ought to use it plentifully.

It is safer to exceed in a vegetable diet, than in one of salted animal food.

In cold weather we may use oily articles more freely; thus nuts seem designed for winter; while, the greater number of fruits are suitable for summer. More vegetables, therefore, in general, should be used in the summer, than in the winter months.

*Our youth.

It is always unhealthy to fill the stomach with two or three kinds of meat, fish, and cheese, at one meal, which is done by many persons every day: the more simple your meal the better.

No one article of diet ought to be long continued; experience justifies the belief, that those who use simplicity in diet, but vary it almost every day, are the most healthy; and it certainly is most agreeable to most persons.

The aged ought to eat the most succulent and nourishing diet; to eat very frequently, but never oppress the stomach; long intervals between their meals are extremely pernicious; and I have no doubt but many are hurried away by inattention to this particular.

Those, then, whose duty it may be to cherish the declining parent, should let nothing interfere with the procuring of them a constant store of savoury, nourishing articles; for of all the organs which receive impressions from suitable stimuli, the stomach is the last to yield to age; and I have said, (see animal life) that life is supported by stimuli. As a general rule, it will hold, that the aged need less salt and less spiceries, but more fresh animal food and cordial drinks; and never let them retire to bed without a reasonable supper of something solid; nor fast long in the morning. Their sleep is imperfect, and they are distressed and exposed to danger if they do not obtain an early breakfast.

It is improper to take the principal part of our food at one meal per day: it had better be four, and ought never to be less than three meals. Those who smile at the clown who takes his hearty breakfast and supper, and suppose he only can be genteel who takes all his food at dinner, may take care lest the gout turn their levity into sorrow. If I mistake not, this custom savours much of gluttony, and above all things, is calculated to enervate the body. They who practise it, have generally to force the stomach with brandy or wine; by this means they may move the load slowly off the stomach; but it is like whipping a team through the mire, and never fails to exhaust the powers of the stomach.

When habit does not forbid, supper is probably the best meal; but we are accustomed, from our infancy, to light suppers, and therefore, in general, although they ought to be reasonable, they should not be heavy.

He who lives most on the products of our own country, certainly lives most wisely, and will have the best chance for health.

All our food, both animal and vegetable, should be at least perfectly sound; inattention to this will often produce disease.

To those who cannot do without coffee, I would recommend the mixing the coffee bean with barley, or wheat; and am certain it would be healthy, and a vast saving to the country, Barley, if slowly and thoroughly toasted, without burning, or wheat bread sliced thin, and toasted through, without scorching, will make a coffee pleasant and wholesome.

Our posterity will probably blush, at some future day, to acknowledge, that for the luxuries of coffee and tea, we expended sums nearly equal to the proceeds of all our exports of eatables. The day may come when these follies shall be considered as extravagant, as the feasts of peacocks' tongues, of the vain of a former age.

An observance of the foregoing rules, will generally be sufficient for those in health. For the valetudinary, and the sick, directions will be given in their proper place. It therefore only remains under this head, to say something respecting our drink.

At first view of our drinks we are struck with a vast variety, but by a little reflection, we are taught that the base of all of them is water, and, as a diluent, it is perhaps, all that is necessary. But custom has adopted a great variety of pleasant drinks; some of which are slightly nourishing, and others cordial.

A cordial, strictly speaking, is that which excites sensation, and involuntary motion, without giving any substance or actual nourishment.

Therefore solids may be cordial in their nature. as opium for instance, which in low grades of action in the blood vessels, gives comfort and strength, but certainly yields no nutriment.

The best idea which I can form of the action of a cordial is, that it operates immediately on the nerves, and through the sense of touch. (See the article, *Sense of Touch.*) If the body is cleansed, and soft, pleasant clothing applied, and we enjoy a fine mild air, we for a while feel almost a new life. We feel lively, strong and good humoured. Here we receive no actual nutriment, but are operated on through the medium of the sense of touch, by the pleasant stimulus applied to the surface.

In like manner, when we take a fluid or solid cordial, it operates immediately on the nerves of touch, which exist on every surface, in or out of the body, and carries a grateful feeling to the brain; and thence, almost instantly, throughout the whole body. So far as my recollection serves me, this opinion is my own; and I hope it will be found sufficiently simple and rational.

Now, it must be observed, that cordials being a mere stimulus, and imparting to the body no nutriment, it can no more support us than the agreeable stimulus before mentioned on the skin; but both act as a mere spur on the living system, while the nutriment must come from other sources. On the other hand, if we apply something very rough to the surface, or if we tickle a person violently, we produce pain, and exhaust the system, in proportion to the continuance of the violence; and through that very organ (the skin) which received the pleasurable impressions in my first case: we can tickle a person, perhaps, even to death.

In like manner, if we take too much ardent spirit, or opium, without infusing one single particle of substance, or nutriment, we stimulate the nerves of touch violently, and produce a rapid exhaustion of the principle of life. All cordial drinks only give an actual support to the body, in proportion to the quantity of gelatin, oils, or sugar, or water, which they contain. Alkohol, the base of spirituous drink, is wholly different from any thing existing in the vegetable, from which it is produced by fermentation, and before it can enter the circulation must be decomposed.

Like the spur which goads on the horse, with spirits we drive on the powers of life to great exertion, and soon

exhaust every energy, without adding one single particle of support.

When we consider through how many different mineral articles water passes, many of which are unwholesome, and that many places have no pure spring water at all, we are compelled to acknowledge, that man is sometimes obliged to prepare other articles for drink.

When pure water can be obtained, it is probably the only beverage necessary; but a little variety is pleasant, and perfectly wholesome. The articles in most general use in this country, are malted beer, cider, cideroyal, metheglin, mead, molasses-beer; all of which are pleasant and wholesome.

Many other articles may be used to advantage, such as molasses and water, milk and water, butter-milk, &c. Malted beer is the most nourishing; but, for common use, contains too much bitter. The bitter is principally necessary for *preserving* the beer, and therefore, if we were to use it pretty fresh, less hops would do.

It is a great misfortune that, where those things are made a business of, men are too often disposed to impose on the publick by adulterations. The London brewers are known to use vast quantities of aloes.

Bitters seem to operate on the body much like cordials; they stimulate, but give no nutriment.

It would be best for every family to prepare their own drinks.

I have said the above articles were in most general use; I mean such as are wholesome as common drink. But it is a lamentable fact, that grog, and the use of ardent spirits, are the favourite drinks. These liquors, as an occasional spur to the languid, or for those exposed to much dampness, or those who labour in the sun, may be useful; but perhaps habit has a large share in rendering them necessary; and under all circumstances, when used freely, they are destructive of the healthy operations of body and mind.

Many of our fruits yield wine, which becomes fine and wholesome, when of sufficient age: what a contemptible thing, then, that we must have all our wines from abroad! Nature, although ever bountiful, is punctilious; and he

who tramples on her favours is sure to be corrected: she is slow to anger, but sorely avenging when provoked.

If you would woo her, use the productions of your country as standing articles. Disease, or loss, swims in every glass of foreign liquors.

We shine in war—we spread a dazzling splendour over the seas—we flourish as statesmen, and are exemplary as patriots; but, in our domestick concerns, we exhibit a degrading contrast in the eye of Europe.

In vain we pursue the horrours of war, the terrours of the sea, or the ennobling paths of science, while we seek our nutriment, &c. from other countries.

It is a natural operation of the human mind, that where we seek aid or support, we are considered below the bestower. Thus the world witnesses our search abroad for a host of articles, which it would be too tedious to mention; they naturally conclude we are "poor and naked," and if they knew all, might add, we are "blind" also.

True national greatness consists in independence, not alone in our thoughts, but in possessing internal resources of every kind. I am not an advocate for a Chinese policy, but to admit into any country so much foreign articles as to render them principals in our wants, or so far as to leave the exchange against us, is unwise, and must entail disgrace and want. Posterity will weep over our infatuation, in consuming so many articles of foreign growth or manufacture; for by it we shall load them with debt, and what is worse, with gout and myriads of nervous diseases. I shall conclude this subject with a few general rules, which ought to be observed.

Endeavour to use succulent bland food, and you will seldom have occasion for much drink.

If pure water can be had, let it at all times be a considerable part of your drink; water should be colourless and tasteless, without smell, and ready to mix with soap; with these properties it is generally good.

It is better to suffer a little thirst than to load your stomach with fluids; they impair digestion.

The aged require cordial drinks, but the young ought to use them with great caution.

Genuine old wines are the best cordials, and nothing stronger ought to be used by young persons; to be useful, they must be used sparingly.

Ardent spirits should never be used early in the day; the excitability is then active, and too easily excited to the stomach; the consequence of this is, that the general system is robbed of a large share of its excitability, while the stomach suffers equally from an excess of it. Unequal excitement is a strong predisposition to disease, and in the case before us, is extremely injurious to every constitution.

It is the duty of all heads of families to prepare as much as possible of their drinks.

Pleasant drinks can be made extemporaneously, by mixing a little fruit jelly with water; apple-jelly, currant, strawberry, gooseberry, and many other articles, are pleasant in this way; this is perhaps the most allowable way of using spirits, mixed with these vegetable juices and sugar.

Domestick spirituous liquors ought to have a good age before they are used; many of them are superiour to nine tenths of the foreign liquors consumed in the United States.

Let us not forget, that all cordials are but spurs on life, and impart no real strength or substance to the human body.

These rules will be found sufficient for those in health; for the sick, directions will be found in another place.

## SECTION III.

### *Of Sleep.*

Those who are temperate, and use proper exercise, will in general enjoy sound sleep. It is, therefore, a subject on which much need not be said; a few remarks may perhaps be useful.

People should consider it a matter of the utmost importance, to go to bed at a reasonable hour; and always

rise early; this last will not only promote health, but is a source of profit.

Children may be indulged in as much sleep as they desire: after about the seventh year they often require correction in this respect, for they are certainly prone to sleep too much. The best rule is to get them early to bed, and oblige them to rise with the family; this will bring them into a good habit.

People in the vigour of life, had better not accustom themselves to much covering in bed, many constitutions are injured in this way. They ought not, in general, to sleep more than eight or nine hours in twenty-four; and in warm weather at least, ought to sleep on beds reasonably hard.

The aged should be laid as free from noise as possible, their rooms ought to be warm, but not too close; they should have plenty of woollen covering, and good soft feather beds, when they can be had; and in general, they should take a little solid food before going to bed. Their sleep is imperfect, and therefore they cannot easily sleep too much; a little sleep in general will be proper after dinner for them.

All beds ought to be kept clean, often exposed to the sun, and the clothes, often changed; nicety in this respect is very essential, and the housekeeper who keeps nice clean beds, free from bugs, will always be found a good housekeeper in other respects.

Sleep is often interrupted for want of a little nourishment in the stomach; to promote sound sleep, the brain must be duly stimulated, so that if you go to bed too languid, or over stimulated, you cannot sleep, for there is a state of action necessary within, which has properly been called the sleeping point.

The evening ought, if possible, to be ushered in with reasonable mirth. The practice of going to a neighbour's house, after the business of the day is over, is a great promoter of sleep. Nothing is more unfriendly to sleep than intense thinking, or angry operations of the mind; the checkered conversation of an agreeable neighbour relieves the mind, and above all, concord and plea-

santness at home; leads to sound sleep; or pleasant dreams.

Never sleep with your clothes on, nor sleep in the daytime, if it can be avoided; if circumstances require it, undress when you lie down, (see the observations on animal life, in a preceding chapter.)

## SECTION IV.

### *Of Clothing.*

This article is a source of vast expenditures to the people of the United States, and therefore, it must be evident that unless we make a good part of it ourselves, or exchange our products for it, that we must soon exhaust our coffers. One might believe the present age supposed, that they too, like the lilies of the vallies, *toil* not, neither do they *spin*, yet Europe, clothed in all her glories, was not like one of them.

Strange infatuation, that people should think all distinction consisted of trinkets; and that unless their clothing is fashioned so, or so, they are disgraced.

The guardian angel of our *liberty*, may weep over the shining tinsel, for it cometh not of our industry, but often at the expense of our posterity. Let the statesman dream of importing our manufactures, or, let the dashing beau tell you he gets his clothes cheapest in London, still, unless they can show you mountains of gold or silver, or find a market for your products, it must be that they are indirectly enemies to their country.

After all our pains to appear fine, it is a lamentable fact, that our citizens generally, especially the female part, dress too thin. It was the opinion of one of the greatest physicians that ever lived, that more people died from inattention to, or want of clothing, than from the sword and pestilence together. We ought, therefore, to use every precaution in suiting our clothes to the state of the weather. As a general rule, we ought to dress rather warm, than otherwise.

We should not change too early in the spring, for the weather often continues very variable till we are well

advanced into the summer; and when we do change, it ought to be done gradually.

Aged persons should, if possible, wear woollen next the skin; the want of suitable warmth is the greatest enemy the aged of this country encounter.

People in vigorous life, who exercise freely, will probably do as well without flannel, but for the sedentary, females generally, and children, they are always necessary. Children are certainly often injured by too much clothes, both in and out of bed: were it not for the wet to which they are subject, they would be better without flannel at all, for it is a fact, that they bear a great deal of dry cold, not only without complaining, but often to their advantage.

It is necessary at all times to avoid tight garters, waistbands, &c.; they are productive of a great deal of injury.

The great desideratum in dress, is to have it clean, loose, and sufficiently warm. Above all things, it is necessary to have dry warm feet; this is best obtained by wearing strong leather shoes in wet weather; and our shoes ought to be well coated with oils and wax. The aged should have their shoes lined with soft woollens, or the skin of some animal, with the hair on.

I believe the monstrous tight lacing which the young women wear, are not only the source of many diseases, but are really calculated to belittle the heart; and have, by the reflecting generally, been considered an evidence of a littleness of mind.

This ungracious squeezing of the abdomen, confines the viscera of the chest, and makes a woman all sensibility: thus, while she startles at a feather, the woman of nature will meet death without much terrour. While she weeps over the tale of fiction, the woman of nature has her heart at home—while she faints at the sight of danger, the woman of nature big, yet good of heart, will defend herself.

It seems to be much lamented that nature was so awkward in modelling woman. In all countries they seem dissatisfied with themselves, and are ever prone to improve their shape, &c. The Chinese women, by long torturing their children, have deformed their feet

until they are scarcely able to walk, and this they have done by confining the feet for successive ages, until it has become a part of their constitution. Can we doubt, then, that if the feet by pressure can thus be lessened, that the viscera may not also. There can be no doubt, but improper confinement does actually lessen the heart, and renders the woman feeble and irritable. I shall say more respecting this practice of tight lacing, in my observations on the diseases of females.

People who are much exposed to the weather, should wear oil cloth. Three or four shirts, or waistcoats, will afford more warmth than a great coat.

## SECTION V.

### *Of Exercise.*

This is of vast importance to man; what a pity then he is so prone to avoid it. Exercise is the great physician of all animated nature, and without it human life is feeble, painful, and generally short. While we freely expend heavy sums for clothing and for food, this great source of health may be reached not only without price, but is in general, the source of constant lucre. How wondrous strange then, that man, from the remotest antiquity, has viewed exercise as a curse. It must be the natural state of rational creatures, for without motion thought was never elicited from a created being. Is it not through the exercise of the organs of sense that we expand the mind?

Without motion, nature is dead, and void; but a benevolent God has impressed this property upon atoms and creatures, and worlds, and a universe!

When we cast our eyes around us, we behold myriads of creatures displaying their joyous gambols, whether in the briny deep, the silvery rivers; on the verdant pastures, the beauteous flowers; or even the loathsome mire, or corrupting carcase, *all, all* teems with life, and life with motion.

Or, if we raise our eyes to the celestial bodies, we see all obedient to laws of motion; and shall man alone be

exempt from this universal law? Heaven has forbid it! Shall the bright morn be ushered in by the melody of the plumy songsters—by the lambs, sporting over the green pastures, and by millions of living creatures, while lazy man slumbers on beds of down? Nature has forbid it, nor will she pardon the transgressor, for it cometh of perversity!

The great body of the American people are in habits of constant exercise, but in general, they are unmindful of its advantages, and many of the athletick agriculturists, blessed with all the real comforts of life, sigh for the enervating habits of the city.

Our cities have grown with a rapidity unparalleled, but like the hotbed, they are rearing many tender plants, and with rapid strides we are endeavouring to raise a race of people, who shall sleep on down, live on luxuries, and hold wholesome exercise in contempt.

Parents who have been raised with firm stamina, from exercise, will bear relaxation from labour in the decline of life; but the rising generation despise the habits of their ancestors, and seem to aspire after mind without body; but experience teaches us that healthy, sound organs, are essential to vigorous mind.

Let me admonish every member of society that they owe it to society, to themselves, and to their Creator, diligently and actively to exercise, if not for lucre, for health. Surely it must be a vicious crime to shut your eyes against reason and experience; and does not experience teach you that idleness entails disease and vice on your offspring?

The guardian angel of your health cannot smile propitiously on the rebellious sloth; but while she weeps over your folly, active *Pandora* shall fill your veins with poison.

It is one of the great mysteries of this world, that in no one thing is there a more universal agreement among mankind, than as to the salutary nature of exercise; and yet there is nothing which they are so prone to avoid; and this has been the case from the remotest ages.

Many are seen wallowing in idleness and intemperance, and seem to enjoy good health, even to a good old

age; but besides the heinous crime of bad example, they generally entail disease on their posterity. There is unquestionable evidence on record, that temperate offspring have kept down gout till the second generation; and that then, without any change of habits, the lurking gout of the grandfather has burst out like a ravenous wolf upon whole families. Who then can doubt, but idleness and intemperance may implant disease in the child, while the father, by superiour force of constitution, shall escape.

Man can never be an insulated being; he owes it to his country to marry; he owes it to his offspring, and to his Creator, to conduct so far as in him lies, to avoid entailing misery on a living creature; but that the father should, for the gratification of appetites, which would disgrace a brute, run the risk of inflicting incurable misery on his offspring, is fit work for a demon.

It remains to offer a few remarks on the regulation of our exercise.

By labour, the circulation is augmented, the lungs dilate more freely, and thus enable the ambient air to *drive home* the oxygen, and impart to the blood the *requisite* of vigorous life: a healthy blood lays down healthy solids, and action propels the blood through every fibre, and gives the glowing colour which constitutes "beauty without paint." But, to be useful, it must not be excessive; and he whose employments leads him to great exertion, must be cautious; or, by too rapid action, he exhausts his powers and brings on disease, or premature old age. Exercise, then, to be useful, must be constant, and regulated according to the strength. But as capital in dealing increases in a certain ratio, so from exercise, properly regulated, we obtain a constant accession of strength.

Those who exercise in carriages, ought to partake of it freely, otherwise it will be insufficient; and in general, they should walk a good deal; for it surely never was intended by nature that man should not walk: she has given us no carriages, save the graceful carriage of a well-bred person, who has strength to walk freely without fatigue. It is in the employment of walking that man or woman display their charms: with what ease and ma-

jesty moves the well-bred man or woman with firm muscles! At such a sight, all nature may smile and angels approve.

Next in point of natural dignity, appears the stately man or woman on the prancing steed, who, disdaining inaction, presses on with his precious guide, and while he passes on with a celerity which is truly astonishing, at command he stays, and leaves his sprightly rider renovated in every fibre. People of cities! if you value your children put them on horseback: let them learn to admire this noble animal, in preference to the glittering carriage. If you want healthy children, encourage riding-schools; it is better than dancing, because it is useful in every period of life. I consider this advice of vast importance.

The health and constitution of a Cicero was renovated by riding on horseback.

I would most seriously advise every person, who is able to keep a country seat, to keep their horses there, and use them freely. When our youth are seen daily on horseback, we shall hear less of consumption. Physicians for ages have recommended this mode of exercise, to the valetudinary, and to those in health also.

It would be a good rule with sedentary people, who walk for exercise, to take an agreeable companion; intense thought on such occasions, will destroy all the benefit of the exercise; the varied discourse of a friend, will relieve the mind from too close application.

We ought not to exercise immediately after meals.

Children seldom require any incitement to exercise; let them be indulged freely, and we seldom find them inactive.

Inactivity renders the circulation languid, the oxydation of the blood imperfect, loads the body with fat and glandular obstructions, impairs the tone of the muscular fibre; weakens digestion, fills us with wind and vapours, and spleen, and besides a host of evils to the body, ruins the spirits and tone of mind.

I shall have occasion to speak of exercise in treating of consumption.

## SECTION VI.

### *Of the Secretions.*

The excretions from the body are many, as the *alvine*, urinal, sensible, and insensible perspiration, expectoration, and a large discharge from the lungs in the process of respiration.

It must however be evident on a slight view, that these are governed, so far as we have control over them, by the other nonnaturals. Attention to food and drink, exercise, apparel, wholesome air, with a suitable control over the passions, will generally secure healthy excretions; or rather such as are conducive to health. It follows, that I need only refer the reader to the other articles under the head of nonnaturals; and to the sick promise instructions when I come to treat on diseases.

It may not be amiss to observe here, that obstructions of the secretions often occur without producing disease; but such disorders, at all times, predispose strongly to disease, and therefore we should never neglect to use some mild suitable means, when we are sensible of a diminution of the excretions, as costiveness, small discharges of urine, and this of a too acrid quality; an unpleasant dryness of the skin, attended with languor or some confinement or stricture about the breast. We are also to bear in mind, that we are liable to excessive discharges of all the secretions, which are equally injurious as defection of them.

## SECTION VII.

### *Of the Passions.*

These are, love, grief, fear, hatred, jealousy and anger; they seem to have appeared in the order in which I have enumerated them.

In his primordiate and perfect state, man probably could only be affected with love and grief; love to the SUPREME, to his fellow creatures, and for every created

being; grief might find place in contemplating the state of fallen angels; this, however, would operate as a zest to his enjoyments; not indeed that he could have felt pleasure in their misery, but by comparison, he could appreciate his own happiness.

Fear, hatred, jealousy and anger, seem to be a part of the mental curse inflicted upon man, while a general deterioration, impaired in great measure, the state of love and grief. Man seems to have felt the influence of fear immediately at his fall, for we are told, that God demanded of Adam, "where art thou?" and he said, "I was afraid because I was naked;" and in the second verse preceding, we may infer, that Eve felt this passion also.

Enmity being pronounced between the seed of the woman and of the serpent, the foundation of hatred was laid in the human breast. The other degrading passions soon followed; for jealousy, rising up like a consuming fire, in the breast of Cain, ushered in raging anger, and slaying a brother, full scope was given to all the foul passions which defile mankind! From this early period the passions form a part of our constitutions, and it becomes our duty to curb and regulate them by the precepts of religion; and avoiding the physical causes which operate upon them.

Their operations are very different, but like the excess, or detraction of stimuli, they all centre in the same point. Although anger generally rouses the powers of the body, there are many exceptions, where anger enfeebles and renders the man pale and trembling; and this sometimes terminates in fear. All the passions, when in force, impair digestion, debilitate the body, and corrupt the mind. There is constitutional operations of the passions, we cannot always control, but ninety-nine hundredths of their effects are the result of our own conduct. They are the result of bad example, of intemperance in strong drink, or of our neglecting to curb them in time.

When we see the dreadful effects of ardent spirits on the passions, how can we doubt the effects of ambition, avarice, and even intemperate eating. Idleness and irregularity of every kind may stir up the passions; cruelty to brutes is the source of many gusts of passion.

A few words of advice shall close this article. Love is the highest attribute of a created being, but man having fallen, this passion suffered with him; and hence is liable to abuse or wrong direction. Therefore, in the exercise of this passion, let it be a sacred act of the judgment to determine whether the object is attainable, before you advance, for it is a slippery path, and many would turn when in it, but fall, and fall victims, very often, to their indiscretion.

If you find irritability of mind arising from long fasting, from want of sleep, from spirituous drink, &c. shun them as you value the welfare of your own health, and the peace, and quietness of your family, or those around you.

If fear possess you, call up your faith; a sovereign remedy here, is an easy conscience.

If you find your passions generally unruly, apply more closely to business, recreations, or study. So closely are the organs of life connected with the passions, that death has been the forfeiture of indulging every one of them: Some of them are slow in their effects, but every age of the world, bears testimony of their fatal termination.

There is an affection of the mind somewhat allied to the passions; but it is often artificial; and when it does not arise from diseased organs, (which is sometimes the case,) it admits of no excuse: I mean religious melancholy; it has slain its thousands. Of all the human weaknesses this seems the most strange; that a rational creature should so far forget his duty to his fellow creatures, and the liveliness and loveliness of natural objects, and more especially, that in contemplating a God who is all perfection and love, he should veil his mind in gloom. This affection often arises from habits imposed on themselves, by which they expect to become religious in the eyes of men. To have a reasonable concern about our future prospects is the duty of all; but let each one endeavour to do his *duty* and trust in God, for he giveth to whom he will. The bright prospect opened to our view by the christian *light* will probably, some day, stamp joy! and loveliness! and continual rejoicing! on the face of every rational creature!

## OF THE PULSE.

I HAVE thought proper, before entering on a description of diseases, and of the usual remedies for them, to give some account of the pulse, in a state of disease: and I hope I shall be excused for handling this subject pretty freely, for it is a subject which has been much neglected, and one which is well worth cultivation.

I think proper to premise this article with a very short description of the circulating system. I have observed, in my sketch of anatomy, that the heart has four cavities, that the blood passes through these cavities in succession, that the *aorta*, or great artery, arises from the left ventricle of the heart, and carries the blood from thence throughout the whole body. I have also observed, that the blood was carried through the heart, by means of a constant dilatation and contraction of its cavities; the first act is called the *diastole*, and the latter the *systole* of the heart.

It follows, from the above facts, that at each and every dilatation of those cavities, that there must be a suspension of the projectile force, till they contract again, and thus a kind of interrupted motion is given to the blood, which we may resemble, in appearance, to that of a common pump, which although it keeps up a constant stream, brings the water through the valve, while the piston descends only; so with the action of the heart, its *diastole* and *systole*, are performed so rapidly that a constant stream of blood pours into the great artery, but still a jet-like motion is given to the blood; and this jet-like motion, arising from an alternate dilatation and contraction, exists throughout the whole arterial system, and constitutes that beating so easily discovered in the wrist; this is what is technically called the *pulse*. It is

to be felt in the temples, neck, fingers, foot, and in short, exists throughout the whole system.

Having now, as I hope, given a sufficient account of what is meant by the pulse, I have only to remark, that the action of the arteries is in some measure different from, and independent of, the action of the heart; and this position will be clearly established in detailing the *variety* of action, which occurs in the pulse, in a state of disease.

To enter into any intricate disquisition upon the pulse, would be foreign to the intention of this work; therefore I shall confine myself to a few obvious and necessary distinctions, and conclude with a few observations on the information which we may derive from a knowledge of the pulse, and how far we may reasonably depend upon such information as a guide in cases of disease.

When a physician speaks of a *full pulse*, he means that the artery is fully dilated or expanded, and consequently, that there is an increase of the arterial channel, and that this expansion is owing to a larger column of blood passing through the arteries.

When *he* speaks of a *corded* or *tense pulse*, he means that the artery is more firm, and less yielding to the pressure of a finger upon it than usual: this state of the pulse may exist in the *full pulse*, the *small*, the *feeble*, and in short, in every other variety, except the *soft* pulse, and seems to be a spasmodick state of the muscular coat, or fibres of the arteries.

When we speak of a *quick pulse*, it is meant that the artery contracts in the shortest possible period of time: its dilatation may be as long or longer than usual; so that the pulse may be *quick*, and not have more, or it may even have less strokes, in a given time, than the healthy pulse.

When we speak of a *frequent pulse*, it is meant that the artery beats or pulsates rapidly; and this state of action may exist in the *full*, *tense*, *feeble*, *soft*, and, in short, in every state of the pulse, except the slow.

An *intermitting pulse* is not very common: in this state of the pulse the artery may beat *quick*, *full*, *feeble*, &c.; but after a certain number of strokes, there is a

pause for a short period of time, and this pause again is succeeded by a certain number of strokes. This kind of pulse is mostly unfavourable, and generally accompanies the hour of dissolution.

A *soft pulse* is known by a yielding condition of the artery; that is, when we apply the fingers we can easily depress the artery, and it is free from any remarkable jerking of the artery. It is mostly accompanied with a moist skin.

A *feeble pulse* is where there is but little action in the artery, and it may be applied to a state of direct or positive weakness, or it may be applied to a state of indirect weakness, or mere oppression. Its most correct application, however, is to the former state only; for in cases of indirect debility, it is more correct to call it the *depressed pulse.*

A *weak pulse* is synonymous with the term *feeble pulse.* But a *depressed pulse,* is that state of the artery which arises from oppression, and is a consequence of an excess of stimulus: it is to be found in malignant fevers, in cases where narcotick poisons have been taken, as spirits, opium, &c., in excess.

A slow pulse is where the pulsations are repeated at longer intervals than usual.

There is also what has been called the *shattered pulse,* and also known by the name of the *quill pulse:* in this, there is a kind of indiscribable sensation imparted to the fingers, which is a kind of creeping, tingling or thrilling feeling; this is always an unfavourable pulse.

There is also a state of the pulse which has been called the *locked pulse;* and this, I suspect, is yet but imperfectly understood. I think I have most generally found this state of the pulse, in *common* inflammatory diseases, of the highest grade, such as *phrenitis* and *pneumonia,* &c.

The *small pulse* is such a state of the artery as suffers it to contract and lessen its column of blood; and this smallness of the artery may exist, and its action partake of the *quick, feeble, frequent;* but it is seldom soft. I have sometimes found the artery *small* and *soft.*

## A TABULAR VIEW OF THE PULSE.

### 1. A full Pulse

May be *quick, corded, slow, intermitting, or regular,* seldom feeble in its *beats.*

### 2. A tense or corded Pulse

May be *full, quick, slow, feeble, frequent, intermitting, small, depressed, shattered, locked.*

### 3. A quick Pulse

May be *full, frequent, corded, intermitting, feeble, soft, depressed, small.*

### 4. A frequent Pulse

May be *feeble, depressed, small, intermitting, soft, tense, quick, shattered, not often full.*

### 5. An intermitting Pulse

May partake in its strokes, of the *feeble, shattered, full, small, slow, quick.*

### 6. A soft Pulse

May be *full, small, feeble,* but seldom if ever partakes of the other states of the pulse.

### 7. A feeble Pulse

May be *locked, shattered, depressed, tense, small, quick, frequent, intermitting, slow.*

### 8. A slow Pulse

May be *full, quick, intermitting, locked, soft, feeble, depressed.*

### 9. A shattered Pulse

May be *feeble, quick, frequent, intermitting, depressed.*

### 10. A locked Pulse

May be *tense, intermitting, quick, small, feeble, slow, shattered.*

### 11. A small Pulse

May be *quick, frequent, feeble, shattered, locked, intermitting, depressed, slow, seldom soft.*

I come now to make a few applications of the different states of the pulse, and shall take them up in the order of the foregoing table.

1. The *full pulse* is found, principally in persons of good constitutions, and in the vigour of life, when labouring under inflammatory diseases, as pleurisy, smallpox, measles, &c.; and where it is simply *full, quick, tense,* and regular, the case is seldom dangerous. But where the *full pulse* is *intermitting*, or *slow*, it portends rather a more dangerous disease; and this kind of *full pulse* is often found in asthma in reduced habits, and in many diseases arising from mere irritation, or in other words, entirely independent of inflammation; nor is there any possibility of lowering this pulse by the lancet; on the contrary it seems to increase at every bleeding, the coats of the artery yielding more and more; this kind of pulse is found sometimes in hysterical, and what are called nervous habits; and where we know the habit to be really such, or where we find the pulse dilate, after reasonable bleedings have been practised, we may conclude that the fulness arises from irritation or weakness, and can only be reduced by tonicks, or more especially by opiates. This state of the pulse, that is, the *full intermitting* one, is generally attended with a *buffy* appearance of the blood, and this seems to arise from the rapid action, which operates on the blood precisely as high toned action, in cases of inflammation; but the solids are in a very different state, and require the use of opiates and tonicks, and a suitable regimen, which, by giving tone to the solids, lessens this morbid force of the circulating system. The patient at the same time, is

carefully to avoid all irritating things, in food, drink, passions, &c.

2. A *tense*, or *corded pulse*, often attends common inflammatory diseases, particularly in those of rather weakly constitutions: in typhus and typhoid fevers, sometimes in malignant diseases: in a majority of cases, this kind of pulse requires the use of the lancet: but great caution is necessary in distinguishing between this and the *feeble pulse*.

3. The *quick pulse* does not particularly indicate the form or grade, or nature of the disease; it is to be found perhaps in every disease, by times, and in general, it is less dangerous than the very *slow*, or *intermitting*. Few persons pass through a state of convalescence from severe disease, without this state of the pulse: and an *increased quickness*, if accompanied with a general amendment, may perhaps always be viewed as the forerunner of health; this kind of *quick pulse*, however, is *soft* and *tolerably full*.

4. The *frequent pulse;* it is remarkable of the *frequent pulse*, that, although it is to be found at times in every disease, and perhaps few persons pass through a severe disease without this state occurring at some time of it, yet a *frequent pulse* is by no means a certain sign of disease: exercise, frights, simple debility, &c. may excite the *frequent pulse*, so that we, perhaps, derive less distinct information from this state than any other.

5. The *intermitting pulse*, generally portends danger, and mostly arises from congestion, or some visceral obstruction; it is often found in cases where the viscera have been injured by some violence; and in these cases calls imperiously for the use of the lancet; it generally attends the hour of dissolution: but notwithstanding this unfavourable character of the *intermitting pulse*, I have sometimes found it in chronick rheumatism, and other diseases not particularly dangerous, so that we are not to give a rash opinion in cases where we find this pulse.

6. The *soft pulse* is natural to some persons when in health, but is particularly to be found about the *crisis* of a disease; and I think is always a favourable occurrence. In a *pulse really soft*, the artery is nearly natural, its

action, however, is often *frequent*, or quick, the strokes *feeble*, and in some few cases the artery is *small*. Much caution is necessary in distinguishing this from the *feeble intermitting*, or *small tense pulse;* such a mistake might be productive of great danger.

7. The *feeble pulse*, correctly speaking, is a *weak pulse;* but in as much as a *feeble* stroke of the artery is considered a *feeble pulse*, and as this *feeble action* occurs more frequently in inflammatory diseases than others, we are under the necessity of distinguishing the *feeble pulse* by the circumstances of each case. And although the *feeble pulse* occurs in opposite states of the system, we still may designate this *feeble action* by bringing to view other states of the pulse. Thus, a *pulse simply feeble*, is an evidence of direct debility, or exhaustion of the body; and sometimes this kind of *pulse* may be *small*, and still favourable. But a *feeble pulse* that is *locked*, *shattered*, *tense*, *intermitting*, or *depressed*, is mostly found in inflammatory diseases; but to this there are exceptions; and, therefore, we are carefully to examine into every circumstance of the case, before we can determine the character of the disease. I may take occasion here to observe, that the *depressed*, *feeble*, *small* and *locked* states of the *pulse*, are not to be distinguished so much by the action of the artery as from the collective circumstances of the cases; but if we bear in mind that the *pulse*, *really weak*, is mostly *soft*, and that the *feeble stroke* of the artery, from excess of stimulus, or inflammation, is always *tense*, we may in general, judge with tolerable accuracy.

8. The *slow pulse* is apt to partake of the *locked pulse;* and, perhaps, always is accompanied with excessive excitement: it is often found in cases of injury done to the brain; it also occurs in the early stage of many cases of malignant fevers. However, this condition of the pulse may be in some measure natural, and, therefore, it requires caution in examining it; but if we bear in mind the fact, that the *dangerous slow pulse* is, perhaps, always *irregular* and mostly *intermitting*, we cannot easily err.

9. The *shattered pulse* is mostly a consequence of an *aneurism*, it is also found in malignant fevers: it is often present in the hour of dissolution, particularly in cases of inflammatory violence, which have not been subdued by the lancet, or other evacuations. I have also found it present in fatal cases of apoplexy, especially where there was an infarction of the lungs, which produced what is called the *rattles:* these cases were in the evening of life.

10. The *locked pulse*, is found to exist, more or less, in all cases of very high excitement, such as malignant fevers; inflammatory fevers, of a lower grade; in affections of the brain. But, I have said, this state of the pulse is not well understood; thus what is often taken for a *locked pulse*, is a *depressed pulse*, which has added to it, or rather is accompanied with *tension*, *smallness*, and *feeble action* of the arteries: it is true, this is but a variety of the *locked pulse;* but as the artery is always *tense*, and acts with such an irregular *jerking* of the artery, we can seldom mistake this for the *weak pulse*—more especially if we carefully examine into all the circumstances of the case. But in a *pulse really locked*, no man could judge with any precision from the *pulse alone;* for there is almost a total absence of action in the artery; yet it is an unquestionable fact, that in this state of the pulse the blood pours through the arteries with great rapidity; this has been so clearly demonstrated to me in many cases, that I am quite certain the blood often circulates rapidly without almost any action in the arteries; for in the *locked pulse*, if you open a vein, the blood flows with impetuosity; and yet you can feel no action in the pulse, or rather there is no pulse. It follows, that in these cases we must judge from other circumstances; as, the patient's habits, the prevailing diseases, &c. I think I have observed, that in a *pulse full* and *locked*, which does not often occur, we can bring the arterial system most safely to its regular state by abstracting blood more slowly, and frequently repeated; for the dilated artery is an evidence of great prostration in those cases. But in the *pulse locked* and *small*, in general we may venture to bleed largely, by which ac-

tion will soon be restored to the arteries. I think John Bell some where hints at this condition of the arteries.* But I beg leave to assure the reader that I was apprised of it before I read Bell's late works. It is true, the *locked pulse* was well known to Rush and others, but I do not recollect that any one was fully aware of the fact, that in the *locked pulse* the blood was circulating with increased *impetus*. And it is a matter of importance! for there still are many practitioners who cannot, or will not, see the propriety of bleeding where the pulse is not active. I beg leave to say to such, that this is a fact of which they can easily satisfy themselves; for if a patient of good habit is labouring under acute disease, (unless the prevailing diseases are well known to be of a low grade, and the pulse is found *thus locked up,)* by opening a vein they will find that the blood flows with impetuosity; and this is proof positive that we cannot rely on the pulse exclusively.

11. The *small pulse* may be found in most diseases, as the malignant, typhus, typhoid; it is, perhaps, most common in the inflammatory condition; but is seldom found in pleurisy. In a low state of disease, as typhus, &c. it proceeds from weakness. In the inflammatory, or malignant, it proceeds from excess of stimulus or excitement.

Upon the whole, then, we discover the *pulse* veiled with difficulty, and only to be tolerably understood from considerable application to its study in actual practice. To the experienced physician it is a good guide, but even the most experienced cannot judge from the pulse alone; we must, therefore, in examining cases of disease, proceed with extreme caution, and endeavour to investigate, by every possible means, the diseases prevailing; the habits and usual diseases of the patient, if subject to any disease; the eye; the skin; the tongue; pain; excretions; the state of the mind; the probable remote or

* The author here named, more than once observes, that, "to stop the beating of an artery is one thing, but to check the blood quite another." And he intimates that, surgeons have sometimes been disappointed by trusting to pressure on arteries which stopped the pulsations, but not the blood.

exciting cause, &c. A discriminating judgment in those matters is the highest acquisition of the *Medicinæ Doctor*, and is only to be obtained by a long application to the study of diseases, under the direction of those who combine example with their precepts.

By a careful examination of this subject, I think it appears that the terms applied to the pulse have been vague, and require correction: thus, for instance, a *small pulse*, a *feeble pulse*, a *tense pulse*, a *locked pulse*, a *depressed pulse*, are nearly the same thing as respects the action of the artery; and this, strickly speaking, is the pulse. But there is a material difference, at times, between these different states of the pulse: a pulse may be *feeble* and *corded; feeble* and *really weak; feeble* and *locked;* so that, in truth, the real or essential difference between the various states of the pulse is dependant, more especially, upon the condition of the nervous power, and that of the solids generally, than that of the arteries in particular; and it is a fair induction, from the foregoing account of the pulse, that no extent of experience can enable us to adjudge cases of disease without the most scrupulous attention to every other circumstance.

And I hope I shall be pardoned here, for admonishing young physicians in particular, to ponder well, view and review every circumstance; never forget that there are *indications* and *contraindications*. I am led to make these remarks from the fact, that it is a trait in the character of the times, for physicians to prescribe with expedition. The WIG of the Doctor, of the seventeenth century, though it might often cover a weak head, and although I am by no means disposed to revive it, was nevertheless truly emblematick of the physician's character; for it behooves him, with all the penetration, and application of an Archimedes, an Euclid, or a Newton, to contemplate as with mathematical precision, every iota which may reasonably be called to their aid. It is related of the celebrated Cheselden, that he never engaged in a serious surgical operation, without previously offering up a prayer to heaven! and heaven smiled

on him indeed, for he was one of the greatest operators of his age.

Let us then ponder well, the silent eye, while it would reach, as it were, the labouring soul of the suffering patient, should never lose sight of the important truth, that the eyes of heaven, with beams of resplendent light, beholds the solemn *contract;* and he who dares to trifle with disease, may have his name registered in the eternal records as the murderer of him who committed a life to his care.

I have said the arteries have a power of contraction, in some measure independent of the heart. I mean merely that the contractions of the arteries are not always simultaneous with the contraction of the heart; on the contrary, we find in palpitations of the heart, that those of the arteries do not beat synchronically with those of the heart; besides, a simple view of the blood's motion clearly shows, that the arteries possess a propelling power: for, the blood ascends and descends, and therefore, if the blood owed its jet-like motion to the stroke of the heart, it must vary in its rising and sinking course, but we find it the same; and besides we sometimes find the pulse different in the arms of the same patient.

It remains to give a few directions for examining the pulse.

1. It is always necessary to feel the pulse carefully in both wrists, and in strangers we must never forget that the principal artery runs on the back of the wrist of some persons. I have known the case of a gentleman and one of his daughters, having this peculiarity; and hence the necessity of the utmost caution, in one about to examine the pulse, and also of every man's knowing the condition of his own pulse when in health; it is obvious that a mistake of this kind might prove even fatal, as we might suppose there was little or no pulse.

2. Be satisfied that the patient is not labouring under any particular alarm or perturbation; and also that the arm has not been under any particular pressure or confinement, (just then) before you examine the pulse, for these circumstances may materially alter the action of the artery.

3. Never make up your opinion of the pulse, without examining it at least twice, at intervals of a few minutes.

4. Enjoin silence around, and by closing your eyes endeavour to exclude every thought; by practice you may acquire such a complete power of abstraction, as to receive as it were the very *breathing* of the pulse upon your mind. What more solemn sight, than that of the humane and skilful physician leaning his very soul, if I may so express myself, upon the struggling artery of the father, mother, &c.; and at such a sight the host of heaven may pause, till judgment is given, when recording angels shall register the solemn act! then beware, for it may debit or credit you to an immeasurable amount.

5. Apply all the fingers to the artery at once, and feel it under several different degrees of pressure, before you form an opinion.

6. It would be a good rule to examine the pulse first by *time*, as counting the beats for a minute, or less time, if you have a watch beating seconds, and afterwards close your eyes, and examine it again.

I have said, that in general, we cannot form much notion of disease from the frequency of the pulse alone; but although this is generally true, and although it is true also, that the number of strokes in a given time, vary much in different persons in health, still we may set it down as a fact, that a pulse low as forty beats, or as high as an hundred and upwards, always indicates disease; and when it runs as high as one hundred and thirty to forty, above which we cannot distinctly count it, it is always dangerous. This is not the only advantage of ascertaining the state of the pulse by the watch; by it we may discover the *intermitting pulse*, for if we count, say fifteen strokes in fifteen seconds, and in the next fifteen seconds but eight or ten strokes, we discover that the *pulse intermits*. If we now lay aside the watch, and in the most cautious manner proceed to examine the pulse, by the sense of feeling alone, we will be enabled, by withdrawing the mind from every other subject, to judge of the *tension*, *weakness*, *quickness*, *lockedness*, of its *fullness*, of its *smallness*, and also whether it is *shattered*. But as respects these states of the pulse, we

can derive no knowledge from the watch, on the contrary, it may withhold the mind in some measure from a perfect cognizance of the case under consideration. In judging of the frequency of the pulse, we must bear in mind, that in infancy the pulse is more frequent; seldom less than a hundred beats, and in disease considerably upwards. I have sometimes been unable to count its strokes, for, where it is so extremely frequent, the sensation imparted to the fingers is rather a tremulous quivering motion, which distracts distinct perceptions.

In the evening of life the pulse becomes frequent again, not, however, to that degree of frequency which attends infancy. At this period of life there is pretty much of a tendency to what are called *ossifications* of the arteries, and should such a thing occur at the wrist, a fatal mistake might be made. A case of this kind occurred at the Baltimore Hospital during the late war, but the patient being lean, the arteries could be seen pulsating in places; for these *ossifications* were in short pieces. I have seen these *ossifications* existing in various parts of the body; I have never seen any resembling bone, and therefore am somewhat surprised, that this incorrect name should be continued: they are always *cartilaginous*, and therefore might be called *hypercartilages*. Since the first edition of this work, I have met another case of this affection of the artery, in the right arm of a male patient, in the Baltimore Hospital.

# OF BLEEDING, &c.

## SECTION I.

### *Bleeding by the Lancet.*

BY the term bleeding, blood-letting, phlebotomy, or venesection, is mostly meant the taking of blood from a vein; other modes have been sometimes practised, as arteriotomy, or opening an artery; bleeding by leeches; or, scarifications, sometimes accompanied by cupping. I shall take them up in the foregoing order, and give such directions as are necessary, for the proper performance of those operations: the proper application of bleeding, in general, must be sought for in the body of this work.

We may remark first, with respect to common bleeding from a vein, that, the intention in view, in applying a ligature or string about the limb, is to stop the blood from passing in the veins, into the body, and therefore, we must always apply a pressure upon the vein, between the orifice and the body; but if we apply this pressure so strongly as to stop the blood in the arteries we get little or no blood, for the blood passes outwards in the arteries, but inwards in the veins: in bleeding in the arm, we always tell by feeling the pulse at the wrist whether our string is too tight, for if it is, there will be little or no pulse.

By far the most usual mode of bleeding is at the bend of the arm. In performing the operation here, we are to apply a soft ligature, about an inch and a half above the place we intend to open the vein, observing first, to feel carefully for the artery beating, which, we must always endeavour to avoid, should we even take a vein less promising; and there is also a thin tendinous fascia, which can be felt particularly tight, just under the skin,

when the arm is straightened; this should also be avoided. This operation is now so generally understood, that I think it unnecessary to say any thing more than to state as my confirmed opinion, that the spring lancet is the safest and most convenient instrument for this operation.

In very fat subjects, and in some few persons whose veins are very deep, we cannot bleed in the arm; in these cases we will generally succeed by immersing the hand in warm water, and opening a vein on the back of it.

Persons who are liable to faint, from being bled, should always lie down, except the case requires that the patient should faint, which is sometimes necessary, in cases of dislocations, strangulated ruptures &c.; but this is an expedient which is only safe in the hands of competent practitioners.

It is sometimes advisable to bleed in the foot, here we are to apply the ligature to the ankle, and the foot must be immersed in warm water. Great care must be taken to avoid cutting immediately over a sinew, or a bone. If we wish to ascertain correctly the quantity of blood taken, the foot may be taken out of the water, and the blood caught in a vessel as from the arm. Where it is thought material that we draw blood from the foot, and find it impracticable, we can often bleed in the ankle to advantage.

*Opening the jugular veins*, situated in the neck, has also been practised in cases of apoplexy, drowning, and other sudden comatose cases of disease. This is an operation that ought not to be undertaken by those unaquainted with anatomy, unless there is an urgent necessity: the vein will generally rise distinctly into view, on a pretty firm pressure being made with the thumb, about the middle of the side of the neck. In performing venesection here, we are to apply the thumb on the vein below the orifice, for the blood is passing downwards in the jugular veins. As an errour here might prove fatal, I think proper to mention that, a ligature or string tied round the neck, for the purpose of filling the vein, might prove fatal, in a few minutes in cases of disease. But where we find much difficulty in filling or raising the

vein, we may often succeed by applying, to the side of the neck, a little pad made of a rag folded several times, and tying this pretty firmly by a string brought up under the arm of the opposite side, and over the pad.

## SECTION II.

### *Of Arteriotomy.*

*Arteriotomy* is only practised on the temporal arteries. When this operation is thought necessary, by examining about the temples, we will discover the artery by its beating; if the artery seems deep, it will be advisable to cut a little opening through the skin, this will bring the artery to view, and enable us to slit it open; a small opening will suffice. When the part has bled sufficiently we must apply a little lint, and over this a bit of lead or silver coin, and bind it on: should there be any difficulty in stopping the blood, the artery may be cut entirely through, as a certain means of stopping the discharge. I have practised this operation frequently on children who could not be bled in the veins, and also in some cases of adults, who were labouring under phrenetick affections of the head, accompanied with a fever, which would not bear bleeding from the arm; and beg leave to recommend the operation as not only safe, but highly beneficial, when properly applied.

## SECTION III.

### *Of Bleeding by Leeches.*

*Bleeding by means of leeches* has been extensively practised in our cities, for many years, and with much advantage, in cases of local inflammation, of the eyes, and other parts; and, I think I am correct in saying, they are much less irritating than the rusty knives usually found in scarificators, used for cupping, more especially where cups are applied; but although this is generally true, there are exceptions, where the more irritating

effects of cupping makes the scarificator preferable, as in rheumatick affections.

To bleed with leeches, it is necessary to cool the part by holding a cold wet rag for some time on it, to rub the part with a little cream or milk, and to put them into a vessel which allows them little room to move about. A common two ounce vial answers very well if the bottom is cut off with a file, and the mouth of it applied to the part, or a common wine glass may be used; the vessel in which they are applied must be filled with water. Leeches are a valuable remedy, much neglected in practice, more especially in the country. And as they are easily obtained during the summer, and may be kept over winter, I shall give some advice respecting the choice of them, the want of which information has, probably, often prevented persons from using them, as it is generally understood that some of them are poisonous.

It is best to get leeches from the clearest water, those that live in dirty stagnated water, produce more irritation and inflammation than those found about sandy bottoms. As they are only to be accurately described by the use of technical language, I shall merely designate them by the colours, and, indeed, this is all that is necessary for practical persons: The back is of a dull greenish colour; the belly a blueish ground, spotted with yellow; on the back and sides are four yellow stripes, running lengthwise, and two of these are broken in places with black. Those which have been objected to are nearly all over brown, with some dirty yellow; but even these have been used with safety, and, I think I am correct in asserting, that, leeches taken from clean water may always be used, but for children they should not be too large.

To preserve leeches, put them into vessels half full of water, and over the top, tie a piece of thin muslin or old linen. Examine the vessel once a week, and change the water; if any die, remove them immediately; keep several small vessels, so, that, they are not crowded; and when fresh ones are taken, or after using, put them into a vessel by themselves. Be careful to keep them from freezing, but their water should be kept cool:

glass bottles answer well for keeping leeches in, and it is well known that they do not require any food. In general we may leave them on till they fall off, but if we have any difficulty, by dipping the finger in strong salt water, and touching the head a few times, they will let go. We may now either throw them into a vessel of clean water, or we may lay them on a smooth board, and while we hold down one end with a finger, we may strip the blood out at the other end, with a finger of the other hand. Should wounds made by leeches, continue to bleed longer than we wish, a little dry lint, pressed upon the part for some time, will check the bleeding; but in cases where we wish to promote the discharge, after they have come away, and which is often necessary, the part may be well fomented with warm water.

## SECTION IV.

## *Of Cupping.*

*Bleeding by the scarificator and cups*, usually called cupping: an instrument may be had for this purpose called *scarificator*, in which there is usually about sixteen short knives, which, by means of a very strong spring, cut so quickly as to produce very little pain; and we can, by moving a slide, set the knives so as to cut deep or shallow, as we may choose to draw more or less blood, or as we may have occasion to cut over fleshy parts, or the contrary. Where we wish to draw some blood, in this way, the part is to be bathed with warm water, and a bell shaped glass or tin cup is to be applied, as quickly as possible after burning a little paper or tow dipped in a little spirit of wine or whiskey, in it. The cups have a small hole in the top, stopped with a plug or bit of wax which will enable us to take off the cup by giving a little vent at the opening. Cupping may be used to great advantage in cases of rheumatism, gout in the feet; in affections of the head, in cases that will not admit of general bleeding.

SECTION V.

### *Of Scarifying.*

*Scarifying, by means of a common thumb lancet,* is sometimes practised to great advantage in severe cases of hooping cough, and other affections of the breast of children. It is done by making from two to four or six shallow cuts about an inch long, between the shoulders; they need not be deeper than just sufficient to cause the blood to flow a little.

## OF DISEASES.

SECTION I.

### *Of Nosology.*

IT still remains, for some future genius, to unfold and explain the laws by which disease, in its varied forms, can be properly and safely distinguished; and until that happy epocha, the practice of medicine must be difficult, and clouded with much uncertainty.

Whether the human race will ever reach this state of vast improvement, is more than I shall dare to predict or deny; but I feel compelled to say, that we never can be thus blessed, unless moral evil shall be brought under subjection.

Many attempts have been made by men of the most brilliant talents to class, or arrange diseases, so as to direct us in distinguishing them from each other. These systematick arrangements of diseases are called *nosology.*

Other physicians, of equal talent, have called in question the usefulness of *nosology,* and have been disposed to simplify; some having gone even so far as to consi-

der diseased action, in the human body, but an unit, and therefore indivisible.

It is to be lamented that such is the effect of climate, habit, and of vice, &c. that diseases are ever varying. The strong, but simple features, which characterized the diseases about a century since, in England, are no longer to be found; and, in their stead, a train of nervous affections have come upon them, which, in systems of nosology, amount to many hundred different diseases.

It is also found, that the same disease is subject to perpetual change: a disease, which to-day is highly inflammatory, may to-morrow be low, nervous or malignant. And further; even epidemicks, which extend over large tracts of country, or over a city, will not yield, in different seasons, to the same treatment.

The yellow fever of Philadelphia, in 1793, yielded most readily to copious evacuations from the bowels, from the use of calomel and jalap; and the lancet; while, in ninety-eight, and some other seasons, sweating and vomits, and, in some cases, even laudanum was found most useful. Besides, diseases are so much influenced and varied in appearance from the use of medicines, or even regimen, that two cases cannot be found alike. Every person has some idiosyncrasy about them, which may vary their diseases. When we review all those things, how vain does it appear to expect any thing like perfect systems in medicine?

We must admit, that *nosology* has done much to adorn and improve the knowledge of disease; but while our habits, &c. are constantly changing, those systems must be constantly varied, and this can only justly be done by men possessing talents little short of a Newton; and after all, before they could be extensively understood, they would no longer apply. It follows then, that *nosological* arrangements are only useful as a dictionary; for, as a scholar cannot well be made without a dictionary, nor yet with it alone, so, with *nosology*, it will neither make a physician, nor can he do without it.

In the following description of disease, I have thought it best to avail myself of the labours of both parties; not by way of compromise, but because I think a middle

course will be most proper; at least, for a work of the nature of this.

The first distinction which I shall make is, to divide diseases into two great classes; these are distinguished from the circumstance that one set arises from excessive excitement; and the other, from abstraction, or exhaustion.

## SECTION II.

### *Of Diseases of excessive Excitement.*

To give a list of diseases, with their symptoms, in each of those classes, would be to compile a system of *nosology*, which I shall not attempt; because, as I have said in the preceding article, diseases are never stationary. They change not only daily, but, in many cases, one hour may completely change the character of a disease.

Diseases of the most fixed and regular inflammatory cast, are principally to be found among people who live regularly, and in habits of industry, but more especially those who are engaged in the pursuits of a new country. They are not marked with that versatility which accompanies the diseases of more polished and enervated people.

Thus, for instance, a genuine pleurisy, rheumatism, or inflammatory fever, which are brought on healthy athletick people, by the vicissitudes of the weather, or some oppression, as straining or fatigue, will yield generally to very simple treatment. Here the skilful physician will bleed; and if that will not do, he bleeds again and again, until the disease is subdued; and when nature is relieved of her unwieldy load, she rapidly repairs the breach, and seldom requires the aid of stimuli or tonicks; nor, indeed, will she often bear it, and requires nothing but rest, mild diet, and regular sleep.

This state of disease is only to be found among people inhabiting healthy districts of country; for so essential is a wholesome atmosphere, that the best constitution, and the best habits, cannot secure from diseases of a more irregular character, as agues, bilious remittents,

and even typhus fever; all of these may be ushered in by inflammatory symptoms; and hence comes a difficulty in their treatment; for, if we suffer ourselves to be led astray by the strong full pulse, the flushed cheeks, or the acute pains or stitches, and reduce our patients suddenly by bleeding, we may produce irreparable mischief. It is true, these diseases often require the use of the lancet; but it can only be used by a skilful physician. Some seasons, they bear pretty free evacuations by bleeding; in others, we must be contented with such medicines as operate on the bowels.

It may be objected that typhus can never require the use of the lancet; but who has not seen a complete typhus transformed into a fever, really inflammatory, and requiring a corresponding treatment.

## SECTION III.

### *Of Diseases of Abstraction.*

In taking a view of this grade of disease, we are not to suppose in all cases, sensible expenditure has taken place; nor that there is not inordinate action somewhere; but it is generally found in other parts of the system than those which are the seat of inflammatory ones, manifesting itself, in the nervous or sensorial system.

This form of disease is occasioned by the gradual loss of animal powers, from intemperance; and from the various debilitating habits of the artizan, recluse, or studious; and sometimes suddenly by a pestilential atmosphere.

Under this head, we may notice first such diseases as are the consequence of actual abstraction, as loss of blood, want of nourishment, or want of air, &c. all of these may terminate in death; but these causes produce the most simple diseases of this class, and seldom require much from medicine; a wholesome air, mild nourishment and rest, are principally necessary; and it is truly astonishing how far those things may be borne without disorganization, or congestion. But where these and other causes operate very slowly for a length of time, they

impair, or deprave the fluids, and this leads to congestions and disorganization, the *destroyers* of animal life.

Here we may next notice, a still more insidious form of disease, arising from exposure to a pestilential air. Such air is often found in crowded camps, jails, &c. and sometimes diffused through the atmosphere generally. These deleterious *gases* act with such a tremendous force, as to hurry the system in a few hours through a violent inflammatory stage, and then prostrate the system below a healthy action; or what is more common, rapid exhaustion, or locking up of the vital powers, prostrates the system at once to a most dangerous degree, and often expends the living principle so far, or at least, so completely fixes it on a particular part, as to leave nothing for medicine to act upon.

This form of disease has generally got the name of putrid; but no such thing as putrifaction can exist in a living body; this is a property belonging to dead matter only. It is true, disease often approaches to the very verge of it, but still, any thing like putricency in the fluids, is wholly incompatible with life, and therefore this term ought to be exploded. The term *malignant* is sufficiently expressive, without conveying false ideas.

Another form of disease exists, the consequence of idleness and intemperate habits, such as necessarily, or viciously attach to refined society, as want of exercise, too cordial and gluttonous diet, sedentary employments, drunkenness, want of reasonable sleep, avarice, intense study, &c. This form of disease, has got the name of nervous, and the name is sufficiently expressive.

The symptoms of this class of nervous diseases are numerous beyond calculation; the various combinations of them has given rise to large systems of *nosology;* and after all, no two cases can be found precisely alike.

But amid all this variety and confusion, we have consolation in the knowledge of their causes, which may often be avoided; and in knowing that they are all bottomed on constitutional debility, and require tonicks adapted to the state of each case. They may be mitigated for a short time by stimuli, but permanent relief can only be expected from the avoidance of their causes,

the use of tonick, exercise, and a proper regimen; and, the use of stimuli will lead to greater evils.

We are naturally led to these conclusions, that although disease is essentially but twofold, that still we gain but an imperfect knowledge of them without further distinctions, for, so rapidly do these opposite states succeed each other, and so much is morbid action influenced by peculiar circumstances, that we can only obtain a reasonable knowledge of them by seeking their causes, and classing their characteristick symptoms.

And, although it be really and undeniably true, that all our remedies both medicinal and regimentous, operate either by reduction and lessening action, or by repletion and imparting action and tone; yet it requires an intimate acquaintance with the laws of the animal economy, with the causes of diseases, and with the nature, or respective force or strength of each article of medicine, &c. to enable us to prescribe with success, or sometimes even with safety.

With these general observations, I pass on to what I consider the next necessary division of our subject, and shall divide them into *epidemick*, *endemick*, *contagious*, *fortuitous*, and *habitual* diseases. It may be necessary to premise, that these are often blended in such a manner as to render it difficult to class them, or to detect their symptoms in each individual case; but much useful knowledge can be had from proper attention to those distinctions. I am aware, that objections may be made to this division of diseases by the critick, but after much reflection, I think it the most proper in a work of the nature of this, it having a tendency to lead the mind to useful practical distinctions.

## SECTION IV.

### *Of Epidemicks.*

These are diseases which arise from causes independent of the sensible qualities of the weather; and pervade whole districts of country, or cities. Of this class no one has been spread so extensively as the influenza.

In the United States, we are subject to yellow fever, bilious remitting fever, influenza, typhoid or low fevers, measles, hooping-cough, *scarlatina*, or malignant sore throat, and perhaps some others.

Although epidemicks in general, are under regular laws which confine them to certain districts of country, and seasons of the year, still they are found to be influenced by circumstances, as the habits of the people, the weather, the climate, and by an influence they have upon each other. Of all these particulars we have some knowledge, but it is very imperfect.

Thus on a delicate people, glandular and nervous affections will be found predominant; while on a people of firm stamina, and athletick habits, *they* seem to operate most conspectably on the muscles and fluids of the body; and when left to themselves terminate mortally, more suddenly than the same disease on the delicate; but are much more easily managed in mild climates by proper remedies.

It is manifest that the weather has influence on epidemicks, for, although sporadick cases of yellow fever occur during winter; as an epidemick this disease never fails to yield to the killing frost of fall.

Climate is known to vary the character of epidemicks; the yellow fever is more rapid in its progress in warm climates, and requires a more prompt treatment, while large districts of country are found where yellow fever never existed.

Epidemicks have an influence upon each other; for we seldom see two epidemicks prevailing at the same time; two of great force are never found together; so much do the more alarming epidemicks affect all around them, that chronick and habitual diseases are affected by them. Here it may be remarked, that it is a pretty general law in nature, that two diseases shall not exist in the same subject at the same time; but there are exceptions; so are there exceptions to this law of epidemicks.

From the foregoing view of epidemicks we may draw a few practical remarks.

Has an epidemick been discovered in a neighbourhood, and distinctly characterized, it behooves every per-

son to become scrupulously temperate, but not too abstemious; avoiding all excess in eating, drinking, exercise, exposure to night dews, curbing closely the passions, and avoiding every sensual indulgence; for, when the atmosphere is loaded with the seeds of an epidemick, any irregularity may excite the prevailing disease. But it must not be forgotten that all extremes meet in the same point; and not to exercise at all, or, to live very much below your healthy standard, will be as prejudicial as an opposite course, and therefore must be equally avoided.

Should disease come on, notwithstanding your care, your precautions will not be lost; for, in ninety-nine cases of an hundred, the disease will be milder for it; and if not, it will be a precious cordial, when brought low, to believe you have done your duty, and have not directly had any agency in bringing on the disease: such reflections will inspire you with confidence in Him who ruleth.

It is now your duty to call medical aid; if it is not obtainable in reasonable time, you will often be in possession of knowledge of the suitable remedies, from knowing what was prescribed by medical men in your neighbourhood; but never let this prevent your getting advice. If you have no such information, you can never be wrong in remaining quiet, and opening your bowels freely with injections; but for other remedies, I must refer to the treatment of each disease.

By keeping your view on the fact that all diseases do homage to powerful epidemicks, you will be enabled sometimes to discover at an early stage of an attack that it is nothing but the prevailing disease; and if you are subject to *habitual* disease, may prevent you from doing irreparable mischief; for the epidemick may be very different, in its nature, from your habitual disease. These observations apply principally to yellow fever, remittents, and typhus fevers: the other diseases, of the class of epidemicks, are either more marked in their character, or less dangerous; and therefore I shall refer my observations on them to my catalogue of diseases.

## SECTION V.

### *Of Endemicks.*

This class of diseases are so similar to that of epidemicks, that I shall have but few remarks to offer concerning them. They are such as are confined to place, and, like epidemicks, are occasioned by an unwholesome air.

The most prevalent diseases of this class are agues, and remittents: yellow fever, and dysentery, may be placed in either class; or, perhaps, more correctly speaking, epidemicks and endemicks are one and the same thing; the former, being a more diffused, and the latter a more local disease. It follows, that the same precautions and views apply to both.

It will not be out of place to observe, that as epidemicks are influenced by climate, and occasioned by a contaminated air, it becomes the duty of all, who conveniently can, to remove to some healthy place. We fly, at the risk of every thing, from before victorious armies; and are we not equally bound to flee from disease? Thousands of lives might be saved in this way. It is the duty of the medical profession to warn the people; not, however, without good ground; and it becomes the religious duty of every physician to stand his ground: he who flees at such a time, is unworthy his profession and of the people's confidence.

## SECTION VI.

### *Of Contagious Diseases.*

There is strong grounds for believing that there is but one contagious disease affecting mankind, and for that we have been blessed with a certain prophylactick. I shall not undertake to say, whether this boon was reserved for the age that put down the *slave trade*, and who are carrying the *light* of the *gospel* to all nations and tongues; but surely it is a pleasing coincidence, and leaves hopes

that similar blessings await our virtuous deeds, should they continue to wax greater.

This terrible scourge knows no dictinction; he dwells in the air, and in the body; from pole to pole, the great or small, black or white, nor age, nor sex, just or unjust, are exempt from its ravages. The sandy deserts or flowery valleys, the heathen and the christian, all, all, feel this domineering scourge; neither winter nor summer, nor temperance, can restrain his wrath.

But a benevolent God, to christian man revealed the *long, long,* hidden *secret,* which on wings of charity, traversed the world with a speed, which no former age could have equalled; and entails on mankind a blessing, which forms an important era, and probably will go far to spread christianity; for to the heathen was given a *Bible* in one hand, and this *blessing* in the other!

I believe then, that this is the great *seal* on contagion, and that it only remains for *man* to live rationally, and the day will arrive when the word contagion shall cease to be known.

I am not disposed to enter into any critical explanations of contagion, but I am confident if my opinion is not correct, it is not mischievous, and that all diseases will arrange properly under that of *fortuitous* or *epidemicks,* which have been usually considered contagious.

## SECTION VII.

### *Of Fortuitous Diseases.*

Under this head, I shall take occasion to warn the unskilful of the difficulty of acquiring a medical knowledge, and of the danger of tampering with disease. Here is opened a multiplicity which bewilders and should convince us, that the Creator has intended man shall not fix his eyes exclusively on this world.

Every part of the body, solids and fluids, and mind, are all invaded by diseases which we can neither trace to their causes, nor reduce to system, because they are ever varying with circumstances. The active and idle, the strong and weak, the male and female, infancy,

youth, and years of maturity, have all their peculiar diseases. And as many of these assail us without any premonition, how difficult must it be to arrive at a knowledge, of them, which shall justify us in prescribing where errours may be fatal, and can never be innocent.

Many of the diseases which I shall place in this class, may be avoided in our present state of knowledge; and the most of them are the offspring of vice or inattention. Thus for instance, a venereal gonorrhœa, or lues venerea, itch, and other diseases, are the offspring of vice, or filth; and the two former can only be gotten at the expense of virtue.

A rheumatism, pleurisy, or simple imflammatory fever are most generally owing to rash exposures to the vicissitudes of the weather, or inattention to suitable clothing, or exposure to the cold dews, after the fatiguing labours of the day.

Again, the colick and hundreds of nervous diseases, are occasioned by intemperance or enervating habits.

Consumption, the greatest scourge of our country, is evidently often owing to neglected colds, or other slight diseases; or it may be excited by inattention to exercise, and to the want of suitable care in our apparel.

An attempt will be made in the proper place, to class and explain those diseases, and sufficient directions will be found for their treatment, so far as may be necessary for the heads of families.

## SECTION VIII.

### *Of Habitual Diseases.*

Many of the habitual diseases arise out of the *fortuitous*, and I have called them habitual, because by certain associations, existing in some constitutions, they recur at regular or irregular periods. As an example, I will take asthma; this is often the consequence of some fortuitous disease; but, when once formed, recurs from various exciting causes, as fatigue, damp weather, &c. and having spent its force in a term of days, goes off, and leaves its victim free from disease, for a period un-

certain in duration. Gout and piles are strongly marked diseases in this class. There are many others, which will be noticed in place. Some of this class of diseases merely lurk in the body, others are always present and distressing. It may be remarked here, that this class of diseases are often hereditary; and when severely and thoroughly established, should be considered a bar against marriage.

What a miserable prospect must a man or woman have, who enter into the married state affected with disease, which may descend to their posterity, and some of which may even be communicated to their partner! Such, we know, is the case with *yaws*. This disease, like most others, is originally *fortuitous;* but may become so fixed as to be *habitual.*

Should people inconsiderately, or unknowingly that they have a lurking disease, enter into matrimony, it is their most sacred duty to try to lessen the predisposing causes of disease, to which their children may be exposed; for this purpose a healthy country residence should be chosen, and habits of the strictest temperance formed; and if they are too feeble to pursue the healthy employments of agriculture, never put them to sedentary employments, unless absolute necessity compels; for, by *aiding* them to exercise constantly, yet moderately, they may acquire, eventually, strength to enable them to throw off their disease by good habits and active industry.

## SECTION IX.

### *Summary of General Observations on Diseases.*

I have said, that however varied in grade, form, or symptoms, the diseases of mankind may appear, and however much disposed to change from one form to another, still there is but a twofold *essence* in morbid action.

There is either inordinate action or high excitement; or, there is feeble, hurried action, or want of excitement or exhaustion.

I have also said, all extremes meet in the same point; thus, where stimuli act with great excess of force on the body, instead of rousing up strong action, they bear down every energy; and instead of powerful action, we have scarcely any action at all. But, notwithstanding this deceptive appearance, such cases belong to diseases of oppression, and require the abstraction of stimuli from the body, by bleeding, purging, emeticks, &c. to relieve nature from a part of the load, and reaction comes on, and nature points out more clearly the real nature of the case, and enables the physician to judge how far he must deplete.

On the other hand, debilitated persons, either constitutionally so, or from the slow, continued debilitating effects of unwholesome air, &c. when seized with disease, nature, as if suddenly alarmed, rouses up a hurried, excessive action; and if we were to judge by the pulse alone, we should, most certainly, think such a case partaking of high inflammatory action.

But this would be an egregious mistake; for, if we were to deplete in such a case, death or great danger would certainly follow. This state of the system being really the opposite of a disease of oppression, is properly called a disease of abstraction or exhaustion; and the sudden sally which nature makes, apparently powerful, is slightly bottomed; and to prevent her from expending the energies of the body in those transient efforts, we must apply stimuli, and endeavour to accommodate them, in quality and force, to the state of the system.

The first case may be compared to the mighty *oak*, borne down by the hurricane; when the wind ceases, it rises, not only to its proper position, but, by reaction, is carried beyond it. But, if the wind cease not, or becomes too powerful, with one fatal sweep down goes all hope. With how much success may we operate against such a force, by strong efforts, in an opposite direction? A tree secured, may be saved from the fatal storm; so the skilful physician, by opposing nature, removes the disease.

The opposite state of the system bears some similitude to a sickly plant wanting light: it grows rapidly;

but if the light be not admitted, in makes an unavailing effort, and then sinks and dies; but if, in due time, light be admitted, it stimulates, and raises new action, and health and vigour follows; so with the exhausted patient: infuse suitable stimuli into his languid system, and he recovers tone and vigour by degrees.

Still, such is the variety of the causes of diseases, and so much are they governed by present circumstances; so rapidly do they pass from one form to another, and so difficult is it to appreciate or apply remedies, suited in form to either state of the system, that we are obliged to class or group our diseases and remedies to enable us, with more success, to trace morbid action, and expel it from the body.

When we trace diseases as epidemicks, we find them spreading through a whole country, and producing, notwithstanding every peculiarity of habit and circumstances, in the *main*, a train of symptoms and consequences nearly alike. This enables us, when we have discovered a suitable treatment for the present season, to proceed with much greater ease and success, and by knowing our liability should induce us to be more careful in our habits; but still there is always such variety as to call for the attention of the most skilful physicians. We often have it in our power to flee from epidemicks; it is our duty to do so. To some of these we are obnoxious but once in life.

When we examine diseases, as endemicks, we find them nearly resembling epidemicks; but have it still more in our power to shun them, because they are located, and are often brought on by intemperance, fatigue, &c.; and because it is often in our power to remove from them, or lessen the remote causes, which are effluvia arising from decaying vegetable and animal matters; by draining ponds and marshes, by cutting down weeds, &c. and removing them to a dry place, or burning them, &c.

When we view diseases as contagious, we are humbled, indeed, to think that a bounteous Creator has rendered us obnoxious to diseases, against which no efforts

can avail; neither climate, morality or immorality, christianity or paganism, cleanliness or filth, nor naught in creation can prevent or restrain! Such was the smallpox; but I feel happy in the belief that the *vaccina* will some day remove this ungovernable scourge from the list of of our diseases, and that we now have it more completely under subjection than any other disease.

Oh! man, if thou canst appreciate the bounteous gifts of Heaven, rejoice that this fell destroyer is chained from those who accept the *cheap, cheap*, proffered favour of a benevolent God! And have you neglected to secure your children? Let not the shades of night over-shadow thee till the good deed is done; for this blessing has gone out, *hand* in *hand* with the *Bible*, to all tongues and nations; and wilt thou alone *dare* thy God to inflict upon your children *that* which he has ordered to sleep, with the blindness of the heathen? Can you dare to survey the pretty face divine of your child, and deny it a favour for which it might justly despise you?

When we turn our attention to *fortuitous* diseases, we see a necessity for further distinctions; they amount to a very great number; but it may be said of them that they are more the consequence of our own inattention, &c. than any other class of diseases; and the causes of many of them being known, we have it in our power often to prevent them.

By suitable inquiry into *habitual* diseases, we may acquire a knowledge of our own constitution, and often be enabled to prescribe for ourselves, with that promptitude which is often necessary, without the advice of a physician; thus the asthmatick might suffocate before medical aid could arrive, unless he is able to prescribe for himself; and if he do nothing but admit a current of fresh air, still it is a remedy, and implies a belief that the patient has some knowledge of his situation.

It may also enable him, by extraordinary care, to keep down diseases, which he knows are hereditary, and were existent in his parents.

Having now premised with these general observations of diseases, and of the general intentions in view, in re-

moving or obviating them, so far as I think they will be found useful, I shall pass on to treat of each individual, to which we are most exposed in this country, and arrange them, so far as practicable, on the plan laid down.

## OF EPIDEMICKS INDIVIDUALLY.

### SECTION I.—SUBSECTION I.

### *Of the Yellow Fever.*

THIS has been known to prevail in the cities of the United States, at considerable intervals, more than a century. In Philadelphia it has been publickly acknowledged in the years 1699, 1741, 1762, 1793, and to a considerable degree, in several years since. All of our cities have sometimes felt its effects. It is a very great errour to suppose that it is confined to cities; it has prevailed in many parts of the country, with a mortality equalling any thing we have seen in our cities.

Sometimes it has appeared as an epidemick; and sporadick cases of it are to be found in every place where bilious remittents are rife.

The most certain guide for those unacquainted with its symptoms will be a knowledge of its prevailing; for where it prevails as an epidemick, or endemick, other diseases are seldom found. It affects all ages, sexes, and colours.

The dreadful mortality with which it has prevailed at different times, most clearly points out, not only the necessity which there is for every person to have some knowledge of its character, &c. but evidently makes it the duty of all to acquire a reasonable knowledge of it, for the following reasons.

Although the cause of this disease is well known to be a tainted asmosphere, still, it is equally well known that

its exciting causes are various. Intemperance, fatigue, exposure to night, and morning and evening air, are some of its most common exciting causes. I mean here, that many persons who breathe the vitiated air, and have the seeds of yellow fever lurking in the body for weeks, often escape an attack of fever by avoiding fatigue and irregularities.

Of how much importance then must it be to be enabled to spare physicians from the extraordinary fatigue and anxiety of mind, exposure to night air, &c.? this can only be done by people possessing a knowledge of the disease; and with the reasonable aid of the physician, at reasonable hours, do that for themselves which may otherwise be frustrated altogether, by loosing their physicians.

Doctor Rush informs us, that from 1793 to 1801 a period of eight years, "the graveyards of Philadelphia contain the precious relicks of three and twenty physicians, who have died martyrs to their affectionate and heroick sympathy," for people affected with yellow fever.

Many of the most observant physicians have noticed, that yellow fever most frequently attacks at night, or very early in the morning; and hence the advantage of each individual having some knowledge of, at least some first powerful remedy, that the disease may be taken in its forming stage.

Besides, where this disease domineers terribly, many or all of the physicians may be unable to attend, and under the greatest advantages, there may be so many patients as to render it really impossible, to get even the advice of a physician in time.

Impressed with the importance of these remarks, I think it unnecessary to offer any apology for giving the publick an abstract from a history of the disease, as it prevailed in Baltimore in the year 1794. This excellent account of the fever of '94, is taken from the Medical Museum, and was written by Dr. Drysdale.

It is the best account of the disease I have at command, and lays down a practice, rational, learned, and correct; and as I have become a citizen of Baltimore, I

have chosen to give it the preference.* I have only to request my readers in the most solemn manner not only to read it, but study it, commit to memory. I have thought proper to point out all words and sentences, which I deem particularly important, by a single comma, before and after such words and sentences, and hope thereby to take the attention of the unskilful, to what is most necesary to be known.

This account is written in the form of letters, to Dr. Rush; and while it does credit to the author's medical talents, is strongly marked with the traits of a benevolent feeling heart.

### SUBSECTION II.

### *Letters from Dr. Drysdale to Dr. Rush.*

"Dear Sir,

You have requested a history of the yellow remitting fever, as it prevailed in Baltimore; and I have perhaps inconsiderately promised to gratify your wish. The difficulties which necessarily accompany such a task, increase in number, as I travel in imagination through the region before me. "Hills peep o'er hills, and Alps on Alps arise," when I contrast them with the powers of my youth; I am almost dissuaded from the attempt. But I now enter on the undertaking with this pleasing reflection, that you will indulge the deficiency of execution, where the critick would condemn, for I am convinced with Dr. Moore, "that those who have the greatest knowledge in their profession, are best acquainted with its uncertainty, and most indulgent to the mistakes and errours of others."

"An account of the weather which preceded the appearance, and accompanied the progress of this awful disease to the close of its career, will be given more properly in another place.

*It may be remarked of the yellow fever of '94, here treated on, that the disease, and the treatment found most useful, corresponds very precisely with that of the fever of '93, treated of by Dr. Rush, who triumphed that season over all opposition.

"But it may not be unnecessary to mention here, the principal diseases which characterized the summer and autumn. In the town the cholera made its appearance among children as early as the months of April and May, but it is very remarkable, that this disease was unknown through the summer upon Fell's Point. On the lower part of Baltimore, the month of May was unusually healthy, a catarrh only affecting children. In the beginning of June, intermittents and dysenteries became more general, and as the season advanced, remittents also made their appearance. These three diseases, especially the first and last, ranged through every part of the country, and infested even the highest grounds.

"The most remarkable disease was the natural smallpox. It appeared very early in the summer, and soon became epidemick. It advanced with the year, and made such devastation among its unfortunate victims, that Baltimore perhaps never before experienced so severe a scourge from this disease. Even they who were innoculated in the spring, required peculiar attention; for it was so unusually insidious, that many unexpectedly suffered from its malignity.

"The first case of yellow fever that I saw, was on the 7th of August. The patient was in the fourth day of the disease, and had been harassed several hours with the vomiting of that dark fluid, so greatly resembling strong coffee, muddy with its grounds. His eyes had been very red but were now, together with the skin, yellow; the latter was dry and cool; his pulse was slow and full. He was either oppressed with stupor, or deranged with a mild delirium. In a few hours he was dead. I could not pause a moment in believing his disease to be the yellow fever. I mentioned freely what I had seen, and expressed my apprehension that this case might prove the prelude of a scene of calamity. The Point was now becoming sickly, and many deaths occurred there suddenly, or after a very short indisposition.

"The several deaths which had occurred, together with the report, that the yellow fever had made its appearance, excited alarming apprehensions in the minds of the people; an inquiry was consequently made by

three of the most respectable physicians, into the state of the health of Baltimore. On the fifteenth of August, they reported, that 'conformably to a request made by the grand jury, we yesterday proceeded to inquire into the grounds of a report, which for some days past had created very serious alarms among the inhabitants of this town, viz. that the West India yellow fever did prevail very generally at Fell's Point, and was accompanied with its usual mortality; that there are no grounds for believing that the yellow fever is among us.

"'After a careful examination of several persons, confined with fevers, and the most minute inquiry respecting those cases, which have lately proved mortal, we are unanimous in the following conclusions: that the prevailing fever of that place is the common epidemick of the season, which annually visits our southern states, viz. the bilious remitting fever: that the late mortality at that place, which had been greatly exaggerated by report, has not been owing to any one class of diseases in particular; that during the late very hot weather, most of the sudden deaths arose from accidental causes. Many of the labouring class of the people were destroyed by the extreme heat of the sun, while employed in their usual labours. 'Intemperance was the cause of death to some, whilst indiscretions of different kinds proved destructive to others.'

"'On the whole, we are of opinion that the mortality of this season has not exceeded that of many former ones, which passed unnoticed, &c. &c.

Signed by Doctors
GEORGE BROWN,
JOHN COULTER,
LYDE GOODWIN.'

"Every funeral recalled to the minds of the Baltimorians, the late calamitous situation of Philadelphia. With the hearse and the grave they invariaby associated the idea of yellow fever, which had destroyed so many thousand citizens of a rival city.

"It is, therefore, not wonderful that an alarm should have been excited disproportionate to the mortality that

had yet occurred. The agreeable assurances they had just received, (and I am confident that the physicians who gave them had not met in their search a single case of yellow fever,) calmed the apprehensions of their minds. It is, indeed, to be deeply lamented, that any subsequent misfortune should have broken this tranquil situation of the town.

"On the fourteenth of August, Master M'C——, (who lived on Bowley's wharf, in the store with the gentleman who died on the seventh,) became diseased. He recovered from his fever; but on the nineteenth, a yellowness was very observable over his body, and soon became as intense as in jaundice. On the morning of the twentieth of August, Mr. M——n called on me for advice. On the first evening of his disease, I suspected the real nature of his fever, and did not hesitate to mention my apprehensions. I attended this gentleman in company with Dr. George Brown, my former preceptor in medicine; a person who truly combines all the merits of a professional character, with all the endearing and respected virtues of a gentleman. Mr. M——e was attacked on the morning of the twenty-second; Mr. A. on the evening of the same day; and Mr. A——n on the following morning. These four gentlemen were engaged in commercial business on the same part of Bowley's wharf. Some other persons, living at the same place, were also diseased at this time, but they did not fall under my observation.

"The peculiar symptoms attending the fever of Mr. M——n, from its commencement to its fatal close, called from Dr. Brown an unequivocal declaration of its nature. His apprehensions were increased by the occurrence of the other cases at the same time, and at the same place. The declaration which I had made near three weeks before, was now seconded by an authority of the most indisputable nature. A town meeting was in consequence summoned, which terminated in the nomination of a committee of health. Their chairman, Gustavus Scott, esq. was a gentleman of the highest honour and integrity; and it is, therefore, to be regretted that his necessary avoca-

tions from town soon took him away from the regulation of their conduct through the scenes that followed.

"Fell's Point was now becoming very unhealthy, and many cases of disease had terminated there speedily in death. On the thirty-first of August I visited, with Dr. Allender, Mr. I——r, in the seventh day of his disease. He had now a constant hiccup, and copious vomiting of the coffee-grounds; his eyes were very yellow; his skin cool; his pulse full, but so irregular as to beat sometimes three pulsations in one sixth of a minute; sometimes fifteen in the same period of time. He died the next morning. On the same part of Baltimore I attended, with Dr. Brown, Mr. Thomas L——, who was taken ill on the twenty-sixth of August; his apprentice boy on the twenty-seventh; and his maid servant on the thirty-first. Mr. C——'s son Thomas was attacked on the twenty-eighth; himself and his son Robert on the following day. A boy of Captain J——'s was attacked on the twenty-seventh. In the town three persons, who had contracted their fever on the Point, came under my observation on the twenty-ninth and thirtieth of August. All of these cases, except one, terminated favourably.

"While this scene of distress was extending on the Point, the town became unusually healthy. Some took advantage of this circumstance to oppose the assertion that a yellow fever had appeared among us, and to ridicule the authors of such a declaration. But the disease soon extended itself so widely that incredulity ceased, and even the tongue of calumny was almost silent.

"About the sixth of September, the healthy tranquillity of the town of Baltimore was again ruffled by the return of remitting fevers, which, together with the intermittents of the season, were almost universally accompanied with catarrhal symptoms. The tenth of this month will long be remembered by the inhabitants of Baltimore, as the day which deprived them of Mr. Stephen Wilson. He died of a bilious colick. His unshaken patriotism as a citizen, the rectitude of his conduct as a great commercial character, the liberality of his soul as a humane and virtuous christian, the dignified simplicity of his manners as a man, and the sincerity of his heart as an inesti-

mable friend, have left on every heart an impression which can wear away only with life itself.

"The yellow fever continued to increase on the Point, in extent and malignity. 'Doctors Allender and Richard Griffith, and Degraffenreidt, were at the same time in imminent danger of falling victims to it. Doctor Dorling had lately died in town, and Doctor Griffith, Senr. on the Point, was carried off after thirty hours indisposition.' The Reverend Mr. Beeston, of the Roman Catholick church, who had been much engaged on the Point in administering the last offices to the dying, was now dangerously ill. So great was the number of the sick about the twenty-fifth, that Doctor Coulter visited and prescribed for more than a 'hundred and twenty' patients daily.

"Before the close of September, a panick spread through the town, and drove a great number of families to seek refuge in the country. As I rode, on the morning of the thirtieth, through the Point, I was struck with the melancholy change induced by a very few days. The streets were no longer crowded and noisy with business or festivity. The eye would scarcely meet a dozen citizens in its longest streets. In the rooms of the sick, I more particularly observed the stillness of the streets.

But a little time before, even when the reduced violence of disease would have permitted them to doze, every slumber was broken or banished by the noise without. The whole day resembled in silence the hours of night.

"A happy change of weather at this time, checked the rapid progress of the fever, and rescued the town from sharing the general misfortunes of the Point. The disease declined, and by the middle of October the health committee closed the account of the dead. The citizens returned to their homes and business, and in a very short time a person passing through the Point itself, would be reminded of its situation only by observing in some alleys the bodies of a number of dead cats.

"I have been, sir, as concise as possible in the preceding observations. To have a more enlarged view of

our situation, while the mind was assailed on the one part by the actual representation of disease and mortality, and supported on the other by the wish and assurance, that our fears beheld the occurrence through a magnifying glass, you must only submit to the guidance of memory, while she bids the misfortunes of your own city to glide before your imagination. The retrospect will remind you of that principle of the human mind, which subjects our senses to our wishes. The eye is unwilling to behold a scene that gives certainty to our apprehensions of misfortune; and we prefer lingering in a state of suspense, (so tormenting on every other occasion,) to an absolute knowledge of our situation. Hope soothes an uncertainty, but deserts us when convinced; We can scarcely believe what we wish to be untrue: so powerful is this principle, that as you must have frequently observed a person while hanging over the body of a deceased friend or relation, cannot form an idea that it is dead.

"Hence, sir, it was long before our citizens could shake off their fancied security, by believing the existence of danger. But when the charm was dissolved, the panick spread like electricity, from mind to mind. 'Now too late, it was remembered that the dictates of reason had been lulled to rest, and truth had been heard but opposed, ridiculed, condemned!' Adieu."

*Letter second.* "We have hitherto, dear sir, travelled only round the borders of our subject. We will now, if you please, take a nearer view of the disease, which, although neglected and despised for a time, at length struck the souls of our citizens with anxiety and terrour.

"The yellow fever as it appeared here, tended naturally to death. A fatal case, therefore, will portray more strikingly its form. 'The eye of the physician entering the chamber of the sick, would be arrested by a countenance of distress; the countenance of one weeping with the anguish of a broken heart. He would behold a face suffused with blood; an eye red, watery, half closed and sad: the parts immediately around it swoln: its silent glance spoke sensibly to the soul, and seemed to demand its pity. He would find the tongue moist, and

white or clean. His hand would feel the skin excessively dry, and parched with heat: a pulse hobbling or intermitting, slow or frequent, full or small, but always tense. He would behold the patient tortured with excruciating pains, rendered less supportable by constant exertion to vomit, till delirium mingled with his groans a frantick laugh or song.'

'At certain periods, the heat of the skin would abate for a short time, but every other symptom would continue with unremitting violence.'

'But at length the skin would become cool; the pulse lose its tension and frequency, and every pain cease. The fiery redness of the eye would disappear, and assume the yellow livery of bile. A yellowness would appear about the neck, and gradually extend itself over the whole body. A vomiting of a black fluid would occur, resembling the grounds of coffee. The patient would be sensible of immense and oppressive weakness. As these symptoms increased, the lips would appear œdematous, and the tongue swoln. The skin would be cold, and impart on pressure a sensation like that of a dead person. The pulse would continue preternaturally slow, and generally acquire fulness as death approached. A hiccup would at length occur, the pulse rapidly seemed to pause after every pulsation, as though it were to beat no more. The blood bursts from different parts of the body; the action of the arteries is no longer felt; the heart gradually ceases exertions, while delirium and convulsions announce the victory of death.'

"The primary cause of the preceding catalogue of symptoms, will require a distinct letter hereafter. We will then search into the origin of a disease, whose ravages have not been confined to one ill fated portion of the globe; and therefore we need only remark in this place, that its appearance in Baltimore 'seems not to have arisen from importation, but from an internal source.' It will appear also that the first cases originated from a domestick cause,' but that its subsequent extensive range depended in part on communication of contagion.*

* Here that correct reasoning which is so strongly marked on every page, seems for a moment to have forsaken our amiable

"But to rouse the original seed of disease into actual fever, generally requires the co-operation of secondary causes to which schoolmen have affixed the name of exciting or occasional causes. Among these we may particularly enumerate,'

1. *Intemperance.*

'Almost all the first victims of yellow fever, were persons habituated to the immoderate use of ardent spirits: and it is a melancholy truth, that very few of these unfortunate creatures could be rescued from death, by all the powers of medicine. So intimately are morals connected with our physical happiness; that we need but look around us with the eye of reason, always to engage in our pursuit of the one, the company of the other. All the first occurrences of mortality by the yellow fever, were generally ascribed to the primary influence of rum. The mind was unwilling to admit of a more hideous cause, while this offered to its choice.

'In drinkers of ardent spirits, the fever was excited not only with more facility, but was attended also with irresistible violence and malignity.'

'Even a moderate, but unusual indulgence in those liquors, soon roused the disease into action. A glass of wine would occasion a headach in those who were much exposed to the exhalations of the sick, or to the air of infected places; and for a considerable time in

author, in supposing the same cause which originated the disease, was not the most likely to extend it. The whole tenour of this history as well as the concurring testimony, of a vast number of the most experienced physicians, clearly establish that those persons who breathe the vitiated air, loaded with that kind of miasma which produces yellow fever, may and do excite the disease in various ways, as by intemperance.

And nothing is more clearly established than that this miasma is independent of febrile action. But when we recollect, that the notions of contagion which had been handed down by the too credulous writers, pretty generally, up to our author's time, instead of wondering at his giving this opinion of contagion, we are compelled to admire his acute discernment, in tracing the fever to its real source.

September, half the quantity would affect me in a similar manner.'

'The intemperate use of food also frequently gave existence to the latent disease. A large supper of oysters excited the fever in one person. Even indulgence in accustomed meals, or in particular substances, was sometimes attended by similar misfortunes. A dinner of animal food would often cause an acute pain in the back for three or four days. The fever was excited in a gentleman before he had completed his supper; and in another, by using a small quantity of cucumbers at his dinner.'*

### 2. *Heat.*

'This was a very frequent exciting cause, especially when combined with fatigue, either of walking, riding on horseback, or labour in the sun. To the latter circumstance must, in a great degree, be attributed the more general prevalence of the fever among the labouring class of the citizens. The heat of a fire produced, in several instances, the same effect. Hence blacksmiths suffered peculiarly with the disease. Sitting, in the cool evenings or mornings of September, over a fire, caused an exacerbation or return of fever in some who were in a convalescent state.'

### 3. *Cold.*

'Cold,' says Sydenham, 'has destroyed abundance more than the sword, plague and famine, together.'

'The cold air and dews of night excited the fever in a great number of those who were diseased. These powers acted with peculiar force, especially when preceded by sleep. A gentleman was attacked with the disease immediately after falling accidentally into the river. The transition of the atmosphere from heat to cold, which occurred about the twentieth of September,

* Some of those trivial exciting causes mentioned, may be accidently simultaneous with the attack: a lurking disease may break out from exciting causes, which are not remembered, and induce us sometimes to attribute the attack to *that* which is present.

and continued three or four days, added considerably to the number of the sick; nor did the cold weather, which occurred after the beginning of October, check the progress of the disease until aided by heavy frosts.'

### 4. *Sleep.*

"Many persons awoke, in various hours of the night, with a chill or fever. Some were not attacked till the dawn of day.

### 5. *Marsh Miasma.*

"I am disposed to rank this among the exciting causes, when the body had been previously exposed to contagion; nor is it one of the most inconsiderable.* This acted, when those already enumerated appeared to have been insufficient to produce disease; for a person, in whom the seeds of the fever were received, very frequently escaped its powers by exposition to pure air. Hence the disease prevailed most virulently about its primary source; and seemed more innocuous when carried to another place free from the influence of marsh miasma. *On Bowley's wharf, the prevalence of a northerly wind during one day, would be succeeded by the sickness of several persons.*

'The wind blew the water out of the docks so much, as to expose the mud to the action of the sun. The noisome exhalations combined their powers with those of the contagion already acting on the body, and excited

* Here our author is misled again in his notions of contagion. Such is the force of habit, in reasoning, as well as in bodily actions, that the lessons which he had gotten were so strong as to deceive his own better judgment. Nothing can be a stronger argument against contagion than the variance of the facts here detailed, with the extension of the fever: it was confined to the lower part of the city! It is somewhat strange, then, that Dr. Drysdale, whose discernment enabled him to discover the existence of yellow fever before contagion could exist, should afterwards place *miasma* among the exciting causes, when it was evidently the remote and predisposing cause. But the mind, when chained down by fashion, is often confined to limits, which detract from the judgment.

fever. On the Point the gentle showers of rain which frequently fell, were succeeded by an increase of patients; those sources of miasma, which had been dried up by the sun, being again supplied with sufficient moisture and heat to generate putrid exhalation.

"Accidental circumstances sometimes excited the disease. A mate of a vessel, having received a blow on the head from a cable, was immediately attacked with the fever.

"Among the exciting causes, some of very discordant properties are enumerated. To account for their effects in producing the same disease, we must recur to the peculiar nature of the fever itself.

'The debility attending it, like that of pleurisy, is of the indirect kind, or produced by excessive action of stimuli upon the body.' That it was of this nature, may be inferred from the symptoms of the disease, and from that mode of treatment which proved most successful in its cure. "Causes which produce direct debility, are not preceded by a t nse pulse, nor can their effects be counteracted by debilitating medicines. It may be inferred also from the means which prevent the contagion, when the body is impregnated with it, from arising into actual fever. Did it tend to direct debility, would not those powers which abstracted stimulus from the body and gradually weakened all its functions, accelerate the formation of disease? And would not those persons, already labouring under direct debility, be most subject to its influence? But the causes of the yellow fever, like that of the smallpox, and wine, produces debility of the indirect kind. In the latter disease, physicians endeavour to counteract this effect by debilitating remedies.

"A moderate quantity of wine gives increased action to the heart and arteries; but when drunken in excess, it is followed by indirect debility. When the body is impregnated with the contagion of yellow fever, disease must not necessarily ensue. Its own stimulus is not always sufficiently powerful, by itself, to produce this effect; but when assisted by ardent spirits, animal food, heat, or violent exercise, fever is excited. Is it not suf-

ficiently obvious that, under the influence of these causes, excess of arterial action must ensue?

"Dr. Condiet, in his inuagural thesis on contagion, published last spring, has, in my opinion, sir, treated this subject so ingeniously, that it will be unnecessary to dwell here any longer on this part of our subject.

"But among the occasional causes are cold and sleep, and to these we may add grief and fear, which cannot be said to stimulate the body. I admit this truth under certain restrictions. So far from these powers giving increase of stimulus to the body, they tend to induce direct debility, because they are of a negative nature. But let this principle in philosophy be remembered, that the abstraction of stimuli from the body is followed by increase of its excitability; this being necessarily augmented when the means of exhausting it are diminished in number.* Evacuations which have been injudiciously immoderate, have occasioned the occurrence of fever on the same principles which explain its formation after cold or sleep.

"Those who were exposed to the contagion, would be affected with headach, a heat and sense of fulness or oppression in the stomach, want of appetite, a disagreeable taste, and costiveness, a burning of the hands and feet at night; restlessness or drowsiness; heat of the skin, alternately with profuse sweats, frequently of a yellow colour. These symptoms were not always succeeded by disease, yet they proved the precursors of the fever.

"Those premonitory symptoms did not precede every case of fever. It would often seize upon its victims with sudden violence, while occupied in the various em-

* This was the philosophy of our author's day, and continues, perhaps, to prevail very generally; but I am disposed to call its accuracy in question. Excitability, whatever it be, is subject to expenditure, and it is expended by exertions, or stimuli operating on it. Now, although it seems to be a law of the animal economy, that more effect shall arise from the application of a stimulant, in a debilitated body, yet that increase of effect is not owing to an augmentation of excitability, but to a morbid susceptibility of this principle, from which it is liable to be thrown into inordinate action.

ployments of life, or engaged in the pursuits of business or pleasure. A shaking or chill would usher in the disease in some, and from its degree of intensity we might suspect the violence of the ensuing case.

"The influence of the late yellow fever was discovered under the following appearances as it related to the

## PULSE.

"The pulse was tense in every form of the disease, from its first appearance till its declension in October. It bore this peculiar character in the remissions of the fever; and even when it commenced its career, under the insidious cover of an intermittent. It was also quick; the mind would be deceived into a belief, that the pulse was slower than it really was, upon account of this peculiarity of its nature, the systole of the heart being performed in an instantaneous period of time.

"Under the impression of every temperature of the air, and under every degree of violence of the disease, the pulse held forth another emblem of its character, by hobbling through its functions. A full pulsation was succeeded by another of less force, and no two strokes resembled each other in frequency. In one person, I counted three pulsations in one sixth of a minute; in another sixth, they amounted to the number of fifteen. This irregularity was more or less observable in every case, and in every period of the disease.

'The tension of the pulse is so common an occurrence that it will be useless to dwell on it for a moment. When the fever was uncontrolled by medical aid, or treated improperly, the blood vessels were ruptured by the violent morbid action. In these cases also, which were not opposed with sufficient force, even when the patients were rescued from the grave, hœmorrhages would occur in a small degree, before the final crisis of the disease. The blood bursted more generally from the nose, but it poured also forth from the ears, mouth, bowels, and urinary bladder.

"Respiration was much impeded. It was hurried and laborious. As the coldness of the season increased, the

determination of the blood to the lungs, became more obvious. Pains in the breast became more common, and a cough, with sometimes expectoration of phlegm, more frequently accompanied the disease. The nerves were not so much diseased, as to occasion frequently tremours or twitchings of the tendons. They in some cases acquired such a morbid degree of sensibility as to render the whole body sore to the touch. The total destruction of the appetite for food was very remarkable in the yellow fever: nor did it return in the least degree during its remissions. It marked so well the violence and danger of the fever, that a return of appetite for food proved the most certain sign of a favourable issue; nor could the patient be ever declared out of danger, while the total disrelish for food continued, notwithstanding the presence of other symptoms apparently favourable. The thirst was excessive in some instances; but in general it was moderate and sometimes absent. When present, water was much desired, and acid drink, such as lemonade were grateful.

"I will now proceed, sir, to mention that mode of cure to which the yellow fever submitted. I have long observed the superior efficacy of mercurial purges over those of any other kind, in bilious diseases. Blane, found 'five or ten grains of calomel succeed in evacuating bile, when other purges had failed in this effect.' Mercury not only cleanses the bowels, but acts also powerfully over the whole glandular system, and causes a diaphoresis, when other medicines have proved ineffectual in opening the skin. It seemed, therefore, excellently adapted in combatting the yellow fever: 'and a soreness of the gums, or a gentle salivation, gave me pleasure on their appearance, as the first tokens of the impregnated state of the body.

'The good effects of such a circumstance have been noticed by Wade and Chisholm: the former gentleman lost no patient; and the latter, but one out of a very great number, in whom the mercury caused a salivation. You, also, sir, have added another testimony to theirs, by informing us that you lost but one person, in whom a ptyalism occurred; and out of many who came under

my observation, I know not an exception to their recovery from disease.

'To give small doses of calomel in yellow fever, is to diminish the probability of a cure by losing time. Their effects, if they produce any, will be of very little consequence. If evacuations be too sparingly made, says Pringle, a bilious remittent will become continued.

'As a purge,' says Dr. George Davison, of St. Vincent's, 'calomel has been used with the greatest advantage; sometimes by itself, but more frequently combined with some active purgative medicine, such as jalap. From some peculiarity, an uncommon quantity of calomel is necessary to affect the bowels and salivary glands. As I found small quantities of it did not produce the effect wished for promptly, I gradually increased the quantity, until I now ventured to give ten grains of it, combined with five of jalap, every two hours, until stools are procured. The calomel is then given by itself.'

'There are many other testimonies in favour of large doses of purging medicines, to remove childish fears in their exhibition. The great Sydenham used to administer twenty grains of sweet mercury in a dose, either alone or combined with other purgatives. Chisholm gave an hundred and fifty grains of calomel in one case, with evident advantage. You have adduced irrefragible proofs of the utility of a similar practice.'

"At the first appearance of the fever, I combined jalap with calomel; gave each in a small dose of eight or ten grains: they were repeated every five or six hours, until the bowels were freely opened. From four or five such doses, exhibited during the two or three first days; I did not observe an instance of salivation; and although frequent evacuations from the bowels occurred, yet they were small, and brought with them but very trifling relief. The patients were harassed by repeated calls to the closestool, and the necessary exertions on these occasions, weakened them more than the discharges with which they were attended. This circumstance, together with the reflections that I always failed in my endeavours to excite a salivation after the third day, in violent cases, by means of the ointment and small quantities of

mercury, determined me to increase the quantity of each dose, from the first hours of the disease. 'Fifteen grains of calomel, still combined with the jalap, flattered my hopes, by the increased advantages obviously following their administration. The evacuations from the bowels were less frequent and harassing to the sick, than when smaller doses had been given, but being much more copious, they were accompanied with speedier and more sensible relief. Yet a salivation scarcely ever occurred. The jalap seemed to carry the calomel too quickly through the bowels. I, therefore, omitted it entirely, and gave the mercury alone, in doses of twenty grains, every four or six hours, until two or three copious discharges were produced. If one dose of this medicine acted, it seldom operated more than twice. The addition of twenty more grains scarcely increased the evacuations beyond their natural quantity. In another case, thirty-six grains of calomel operated but twice; thirty more grains required the assistance of castor oil to produce another discharge. In another case, forty grains in two doses, one taken at nine o'clock in the morning, and the other at three in the afternoon, produced but three stools; another scruple was now given, which operated once or twice more. These uncombined doses of calomel soon excited a gentle salivation. As soon as this occurred, I had recourse to other purgatives to open the bowels two or three times daily: castor oil, small doses of salts, glauber salts and cremor tartar, but more especially emollient glisters, produced the desired effect. When large doses of calomel were given, the evacuations from the bowels were very copious and few. The exertions of the patient were more than compensated by the discharges which required them; the oppression was removed, and he felt revived. 'I never saw a case in which fifty or sixty grains of mercury had been given in three doses, accompanied with one half of that sense of immense weakness which attended the exhibition of fifteen or twenty grains divided into three or four parts. The weakest constitutions were not injured by large doses of calomel. Delicate girls and women derived advantages from it, equally with robust men.' The life of an infant,

scarcely five months old, was preserved by taking frequently five or six grains of calomel in a dose. The effects of calomel purges were great and obvious. Their operation was assisted, and perhaps sometimes varied, by the bleedings used at the same time.

1. "In some instances, the mercurial purges in two or three hours, produced sensations of needless dartings through the whole body. These lasted but a moment, and were succeeded by an universal sweat.

2. "The first dose often excited vomiting two or three times, but being attended with very little nausea or retching, it proved a more safe and less irritating emetick than the preparations of antimomy, and vomited only when there appeared to have been an accumulation of bile.

3. "The large doses produced but few discharges from the bowels: they were very copious, however, and attended with great relief to the sick.

4. "By removing excess of stimulus and immense oppression, they revived the patient, and gave him an increase of strength.

5. "When the pulse was very low, the copious evacuations from the bowels were followed by increased fulness and diminished frequency of the pulse. And when it was preternaturally slow, they raised it to a more natural degree of frequency.

6. "They moderated the violence of the fever, removed the pains especially from the back, and obviated the return of severe exacerbations. Hence they alone were frequently sufficient to arrest the progress of the disease.

7. "They caused the vomiting to cease when it accompanied the commencement of the fever: and very often small doses of calomel, repeated every one or two hours, prevented the return of the vomiting of coffee grounds, even after they had made their appearance.

8. "By means of large doses the whole system was soon impregnated with mercury, and the various glands resumed their suspended functions. The general diffusion of this medicine through the body, was announced by a tenderness of the gums. 'I saw no case terminate fatally after a salivation, however violent they had previously been. The sooner the bowels were well opened,

the greater was the prospect of recovery;' and when a salivation was excited, it was necessary to procure at least three stools daily, by castor oil or glysters. This prevention was very necessary for the lapse of a few hours, without an evacuation was frequently followed by increased anxiety, an increase or return of the fever.

"I shall now consider the effects of blood-letting in yellow fever.

1. "When the pulse was very frequent, venesection rendered it more slow; when very slow it gave it frequency, and when depressed and small, it gave it fulness. This latter circumstance is often remarked by sir John Pringle in remittent fever, and by Donald Monro, in dysentery.

2. "Venesection removed the delirium and the comatose state, with which the sick were tortured or oppressed: it likewise removed wakefulness; and very frequently acted like an anodyne, being succeeded by two or three hours' refreshing sleep.

3. 'It promoted the operation of the calomel in opening the bowels.' Hence I have frequently heard the patient call for the closestool, while the blood was flowing from his arm, although the bowels had previously appeared obstinately costive.

4. "It checked the violent vomiting in the first stage of the disease, which had resisted every other remedy: and when a hiccup accompanied its first attack, it yielded to the same remedy.

5. "It was frequently succeeded by a general perspiration, and sometimes by a profuse sweat.

6. 'It removed the sense of oppressive weakness, and inspired the patient with new strength and vigour.'

"The pains did not always vanish after bleeding; they were frequently increased by one or two detractions of blood. Where pain had only been felt in the head, one bleeding has caused it to rage also in the back and limbs. This occurrence was not new to me: I had formerly bled an old negro man, who complained of some fever, and considerable pain in his breast: he lost one pound of blood, but in the succeeding hour, the pain had so much increased, and had become so intolerably acute, that I

was obliged to permit the blood to flow, until it produced an abatement of his state: this was affected by the additional loss of twenty ounces, by which his cure was completed. Whenever this circumstance may occur in the yellow fever, the increase of pain ought not to deter us from a repetition of blood-letting: a second or a third bleeding may be necessary to subdue the violent motions to which the vessels had been restored by the first.'

"When the system was reduced by purging and bleeding, so far as prudence would direct the repetition of these remedies, and when the action of the vessels was still affected with some degree of febrile irregularity, blisters were applied with advantage to various parts of the body, particularly the head and wrists. In many slight cases they were made use of in the first stage of the disease. But I am inclined to believe, that the patients would have recovered sooner without them."

'When towards the close of the disease, a burning pain was seated in the stomach, a liniment of laudanum and sweet oil sometimes proved serviceable: but when it was more obstinate, equal parts of molasses, milk, and castor oil, taken frequently in small doses, effected its removal.' The troublesome vomiting which occurred on the third, fourth, or fifth day of the fever, was frequently appeased by the same remedy. A large draught of new milk, sometimes equal to a pint, assisted very much in checking the black vomiting in some instances, in which it was tried. But the remedy on which the most reliance could be reposed, was emollient glysters, occasionally administered. 'Glysters were always productive of good effects, after the necessary exhibition of mercurial purges. They prevented the occurrence of vomiting and checked it when existing. I have sometimes checked the last harassing vomiting, by small doses of calomel, very frequently repeated. After the reduction of the system by the evacuating plan, an interval succeeded, in which medicine was no longer required. To use stimulating or tonick medicines was dangerous. The cure, therefore, was submitted to something a little nutritious, as weak broth, in small quantities; and the symptoms soon indicated whether stimulating soups, oysters,

chocolate, mush and milk, &c. might be admitted.' In this stage the case was almost totally relinquished to such means, and to the attention of the nurse."

"Cool air was as necessary to the sick in the disease, as bleeding." 'I always ordered the room of the patient to be kept well ventilated, by opening the windows, removing the bed-curtains, and placing the bed when practicable, in the middle of the room. The good effects of air, were well demonstrated by the influence a confined room exerted over the sick.'

The application of cold water alone, or mixed with vinegar, to the head, on napkins, moderated its burning heat, and afforded the most grateful relief to the patient. It greatly mitigated the confusion of the head. Washing the face, hands and feet with cold water, always proved equally serviceable. While it refreshed the patient, it sometimes totally removed the remains of a severe headach. I experienced this circumstance also in my own case, when a large dose of calomel had proved insufficient to remove the pain. "The drinks also used by the sick were either cool or cold. Mild herb teas, lemonade and jelly, tamarind, apple, or very weak chicken water,* toast or milk and water, in every stage of the disease were used indifferently, according to the wishes of the patient. Water alone was frequently desired, but could seldom be granted. A table spoonful was sometimes given, but this drink was very apt to excite vomiting, especially in the advanced state of the fever.

In some cases drinks acidulated with some of the vegetable acids, proved most agreeable. The elixir vitriol was always nauseous, and frequently occasioned vomiting. Weak '*coffee* and *tea*,' were pleasant, and used with safety in any stage of the disease. 'Wine' was universally nauseous, even in the smallest quantities,

* I am constrained here, to caution the reader against any thing like a liberal use of chicken water. In fevers of high inflammatory action, it cannot possibly be a suitable drink; but so soon as there is good evidence of abatement of the disease, it will be a grateful cordial, and give a little sustenance, at a time when it is first necessary, or perhaps even safe.

and in every form in which it could be taken, its effects resembled, on a smaller scale, those of laudanum. When swallowed in the fever, if it did not occasion vomiting, it caused a burning heat in the stomach, or delirium.

'A view of the yellow fever as the synochus of Dr. Cullen led to a pernicious mode of treatment. The patient was first bled, then bark, laudanum, &c. were administered, in order to provide against an expected state of debility.'

'The mind was prepossessed with a notion of approaching putridity, and the appearance of inflammatory action in the commencement of the fever, was totally disregarded, or looked upon as a foe in ambush! How much to be regretted, that the name of a disease should ever have more potent influence over the judgment, than the symptoms with which it is accompanied!'

"During the prevalence of the late yellow fever, it is to be remarked, that the smallpox did not vanish, but retained its ground. But this is not an objection to the opinions hitherto advanced. Is not the yellow fever a disease highly inflammatory? So is the smallpox. Was this remitting fever more inflammatory than usual, and from the particular constitution of the season? So was the smallpox."

I here close this abstract, and regret that this account could not have been presented entire. Its length, however, would not well admit insertion in a volume of this size. I shall now close the subject of yellow fever, by a few practical remarks.

### SUBSECTION III.

### *Concluding advice on Yellow Fever.*

Has the yellow fever become prevalent in a neighbourhood, it becomes indispensably necessary for all those who cannot leave the place, to become particularly temperate in every respect. By due attention to moderation in eating, drinking, exercise, sleep, &c. many will escape the disease. Should an attack come on, it

is no longer safe to attempt removal; death is the certain consequence of such a measure. It will now be the safest course to remain quiet, and attack the disease with spirit. If medical advice, in which you confide, can be had, it is the duty of every citizen to procure advice If that cannot be had speedily, it will always be advisable to take fifteen or twenty grains of calomel, with half that quantity of jalap, every three hours, till your bowels are freely opened. If this should not afford manifest relief as soon as it has operated freely; a bleeding will be necessary, and should be regulated according to the constitution, and violence of the disease. From twelve to twenty ounces may be taken.

Should the symptoms even now abate, get advice if practicable, for this fever is sometimes extremely insidious; and putting on an appearance of retreat, too often leads its victims into false security. If advice is still not to be had, take calomel in doses of from three to six grains, according to age, &c. every two or three hours, until you procure a slight soreness of the gums. Should the symptoms run high, the bleeding must be repeated till all violent pains or fever are subdued; and, at the same time, keep the bowels freely open by the use of injections.

Should the attack be moderate, still it will be improper to delay: use the calomel as above advised; and if you should, notwithstanding, become worse, bleed; and repeat the calomel and opening injections. In violent attacks which seem to oppress the stomach particularly, or where it has been preceded by nausea for some days, it will be advisable to combine about twenty grains, more or less, according to circumstances, of ipecacuanha with the first dose of calomel. This will generally operate freely, without much straining, and instead of weakening, will generally impart strength to the patient.

A free admission of air is as essential as medicine; and, therefore, a large, well-aired room, with a hard*

* The patient's habits may, however, be consulted respecting their bed; for corpulent or very delicate persons, the bed should not be too hard.

bed without curtains, should be preferred. Animal food of every kind, even chickenwater, is improper; at least, in seasons when the symptoms run high; or, perhaps, more correctly speaking, in seasons in which a very inflammatory constitution of the air prevails. It has been remarked, both in the foregoing account of yellow fever, and also by Dr. Rush, in '93, that tea and coffee were always grateful drinks. They ought not to be taken too warm. Lemonade, toast and water, milk and water, and very weak pleasant herb teas, as balm, ground ivy, and hysop, &c. are pleasant and proper drinks. I have great partiality for toast and water as a drink, in all cases where the stomach is disordered.

Wine, or ardent spirits, are even poisonous in every case, in the early stage; and are seldom admissible till the convalescence is well advanced. I think it may safely be laid down as a general rule, in this disease, that stimulants ought never to be used without the advice of a skilful physician.

Have you been under the necessity of combating the disease yourself, and well assured your disease is checked; leave the rest to nature, remain quiet; take mild, nourishing diet, in very small quantities, and if the appetite calls for it, repeat it often; taking great care to begin with the milder articles first, as chocolate, mush and milk, well-boiled rice, or barley, reasonably seasoned; then light broths, &c.; and lastly, with the utmost caution, resume the use of meat.

Should you have checked, in good measure, the more severe symptoms, and a lingering feverishness, want of appetite, with occasional nausea and imperfect sleep, &c. continue, it will be advisable to apply blisters to the wrists, or ankles, or even the stomach, if that viscus is affected; but it ought to be well ascertained that the force of the fever is broken, before they are applied: these, with the free use of glysters, will generally remove those lingering symptoms.

To sum up all in the fewest possible words, those unskilled in medicine ought to trust, where advice is not to be had, to the liberal use of calomel; the lancet, free exposure to cool air, and the constant use of injections:

with the reasonable use of tea, coffee, toast and water, &c. as their common drink. They are carefully to avoid spirits, wine, broth, and cold water: to this last there may be exceptions; but cold water, generally, is nauseating to the stomach in this disease.

Should a patient unfortunately be found, who has been labouring under the disease to the second or third day, nothing is to be expected from stimulants. The only hope which remains, is to open the bowels with calomel, in doses of ten grains, more or less, according to circumstances, given at intervals of four or six hours; with this, the use of injections should be added, and large blisters should be applied to the stomach and ankles; a vein should be opened, and from three to eight ounces of blood taken, according to circumstances, and repeated every hour or two, till there is an abatement of the symptoms. In such a case, weak chicken water, or coffee, will be the best drink; wine, and other cordial drinks, must carefully be avoided. I would also advise, in such cases in particular, and perhaps in all cases where the calomel does not affect the gums at an early stage, it would be equally advisable to use mercurial ointment, freely rubbed into the thighs, feet, &c.

When the powers of life are prostrated very low, and we wish for the speedy action of a blister, nothing will answer the purpose so quickly and completely as an ointment made by rubbing a few grains of corrosive sublimate of mercury, with a little soft ointment or lard; it will often act, where cantharides are ineffectual.

It would be a good rule in doubtful cases, to abstract blood in small quantities, and repeat it often, so as to unload the system gradually. Purging at an early stage of this disease is not easily carried to excess.

By referring to the section on nosology, it will be found that, the yellow fever sometimes appears as a disease of a low grade, requiring but small evacuations of any kind. In some few cases laudanum was found useful, but I feel satisfied that this grade of yellow fever occurs but very seldom, so that, nothing of the stimulant kind can be used without the utmost hazard by those unskilled in medicine.

By referring to the section on the pulse, it will be found that, I have stated, that in all cases of depressed or weak pulse, arising from an inflammatory state of disease, the pulse is found corded or tense; and this state of the pulse was found to prevail throughout the inflammatory fever of '94, and continued, says Dr. Drysdale, even during the remissions of the fever.

## SECTION II.

### *Of the Bilious Remitting Fever.*

The bilious remittent of the United States, is but a milder grade of the same disease, seen in the form of yellow fever. It has often prevailed as an epidemick, but it is most generally in the character of an endemick. Nothing has given more strong conviction to my mind, of the impossibility of reducing diseases to system, so as to prescribe by their names, than the extraordinary variety which I have seen in various parts of this country, in remitting fevers. Its more common appearance, or characteristick symptoms and termination, is familiar to almost every person. But in the years 1799 and 1800, a fever of this kind prevailed, very different from what I have seen any where else, on the Ohio, at Wheeling. It commenced with the usual symptoms of a remittent, but in spite of any treatment, in many cases, it terminated in three, four, five or six days, in all the symptoms of typhus; low muttering, delirium, or *coma*, violent *subsultus tendinum*, low irregular pulse, black tongue and extreme debility, were its most prominent symptoms The most healthy robust persons in the prime of life, were its most common victims.

Every kind of treatment was equally ineffectual, until I forsook every common path of instruction, and placed my whole reliance on the free use of calomel, and mercurial ointment. With these, however, it was always necessary to use bark, wine, brandy, &c. Blisters were also found useful. Such was the success, that the second year, out of many patients I lost not a single one.

I had two patients in particular, who were evidently rescued from the grave by this treatment. Each of those patients, took thirty grains of calomel every day, for twelve or fifteen days, and yet, but a soreness of the gums was excited, without a salivation. They were both three weeks entirely unconscious of things around them, and were sustained by wine and brandy, which was given to the amount of a pint of each, every twenty-four hours.

Every method had been tried to prevent the bilious remittent from terminating in this dangerous typhus; but ineffectually. If large evacuations were made, with a view of procuring an intermission, which would bear the bark, the typhus seemed only to be hastened by it. Neither would the bark given early, after cleansing the stomach and bowels do better, but, by augmenting the disease, lessened in a very high degree the chance of recovery from the typhus, which was sure to follow.

The symptoms of a common remittent are generally, headach, backach, nausea, slight chills, especially running along the back; warm skin, which very often to the patient feels cold, a sense of oppression about the stomach. Sometimes the chills are scarcely perceptible, and the patient finds himself at once in a burning fever, with full frequent pulse, at other times a strange mixture of warm and cold sensations are felt on the skin. After several hours are passed in this manner, during which adults can seldom sleep, the symptoms gradually abate, until the situation of the sufferer is tolerable. After enjoying this respite, without however, getting wholly free from those symptoms, his distress returns, and very often with increased violence, at periods of about a half a day, or sometimes a whole day or more.

*Treatment.*—This fever if taken early, will generally yield to two or three bleedings, and very often one or two will be sufficient, together with opening the bowels freely, by means of purges, in all of which calomel should be freely used. After those remedies, cooling powders of nitre and tartar emetick or ipecacuanha, will be useful taken in snakeroot tea; cremor tartar may also be used. But I have long since remarked that very little depen-

dance can be put on any cooling article of medicine, that does not actually purge. Glysters are always useful. If the case is protracted, and sufficient evacuations have been made, blisters will have a good effect. We must touch stimulants or tonicks with great caution, and indeed they are very seldom necessary.

In seasons when agues prevail most, and our remittents approach in some measure to their nature, which is sometimes the case; the bark will certainly shorten remittents, when cautiously administered in the time of the most complete remission. But this is a practice extremely unsafe without the advice of a physician. Caphorated powders are often useful, at the close of remittents, after sufficient depletion.

*Regimen.*—Abstain entirely from meat, or broth, wine, spirits, &c. Drink plentifully of weak teas, toast and water, apple water, milk and water, &c. Nothing solid should be eaten till the disease is well subdued, and even then, it must be resumed with great caution. Roasted apples, toasted bread soaked in water, or weak mulled cider with bread, will afford a sufficient diet, till the patient is convalescent, when broth, chicken, puddings, &c. may be taken, but great care is necessary to avoid overloading the stomach. If the appetite is good the patient should eat frequently, but never much at a time.

Cool air and cleanliness is an essential part of the cure, therefore take a large airy room when practicable: open your doors and windows freely, and give preference to a hard cool bed.

## SECTION III.

### *Of the Influenza.*

This disease travels with a speed, and to an extent, surpassing that of any other disease in the world. It is seldom mortal; but on our seabord, and near it, deaths are sometimes occasioned by it. Consumpted persons are also liable to be hurried off with it. Some of its most troublesome consequences are abscesses up the nose and in the ears.

*Symptoms.*—This disease is so universally known, that I shall only give a few of its most prominent symptoms. They are a peculiar sensation of rawness or soreness low down in the throat or breast; watery eyes; itching and heat up the nose; sneezing; considerable debility, with bad taste in the mouth; not apt to be accompanied with nausea; more or less fever generally attends it. Influenza has the peculiarity of making persons who are subject to *habitual* disease, to feel as though they were attacked with their old complaint, especially at its onset.

*Treatment.*—Few cases of influenza require the use of medicine, temperate living, but by no means low, with proper attention to clothing, will generally carry the patient safely through the disease. But, where the febrile symptoms, or affection of the breast, is considerable, bleeding may be necessary; but it ought never to be had recourse to without the advice of a physician; death has sometimes been the consequence of a rash procedure of this kind. For the cough and rawness, paregorick, in very small doses, taken in flaxseed tea, will be useful. Broths, and even animal food, may generally be safely eaten. Very gentle opening medicines, or rather injections, ought to be used, so as to keep the bowels laxative. Toast and water, or a little wine and water, may be used for drink; but, perhaps, nothing is preferable, in this disease, to milk and water, or weak flaxseed tea made savoury with a little hyssop or other pleasant herbs.

Where the disease is severe, the patient ought by no means to be exposed to the vicissitudes of the weather, should he even be able to go abroad; but free ventilation and cleanliness are essential to a speedy recovery.

## SECTION IV.

### *Typhus and Typhoid Fevers.*

Fevers of those grades have prevailed throughout various parts of the United States for some years past, and, in most places, with great mortality. It would require volumes to lay down the symptoms, remedies, and opin-

ions, of the medical men throughout the country. It is a new disease of insidious character, and, withal, is certainly a very ungovernable scourge; for few, or perhaps no physician in this country, can console himself with having treated it with a success satisfactory to his own mind. It is principally found in the winter months.

I shall first notice a disease of this class, which made its appearance in Adams county, Pennsylvania, in the year 1810 and '11. It commenced with sensations of heat and cold succeeding each other; severe pain in the head, limbs, and back; mostly a cough with uneasy respiration; pulse nearly natural, but a little tense; blood generally like pleuritick; symptoms, generally, increased towards night; boils, or imposthumations, often appeared at the close of the disease, but did not seem to be critical; delirium was a very common symptom, and when considerable, indicated danger. An affection of the lungs and chest was so constant, that in many cases where it was absent, at the beginning, by reason of the violence of fever and pains in different parts of the body, I was able to predict, with certainty, that a cough, and peripneumonick symptoms would appear, as soon as the action of the blood vessels was lowered. In children, it very often put on the livery of incipient dropsy of the brain. It could seldom be checked in less than fifteen days, and upwards. Although its symptoms were evidently inflammatory at the onset, yet large evacuations were unsafe. An unusual torpor of the bowels existed in some cases. The best plan of treatment which I could devise, was to bleed, once or twice, moderately; open the bowels with calomel and jalap; and in many cases it was necessary to add a few grains of gamboge; and also, to assist those articles with glysters. Nitre and camphor, in form of powders, were useful as soon as moderate evacuations had been made. Equal parts of laudanum, and sweet spirits of nitre, was serviceable, at least, when given at a late hour of the night; at which time the fever was declining, and leaving the patient in a state of considerable debility. The use of calomel, in such quantities as to effect the gums, had evidently a

very happy effect in some cases, and certainly rescued the patient from the grave.

Tonicks, or powerful stimulants, were never necessary; mild, nourishing diet, with a decoction of Iceland moss, infusions of valerian or *snakeroot*, were generally the best remedies, during the early stage of convalescence, and very often after a single bleeding. As usual with febrile disease, this too often changed suddenly from a low grade of action to one strongly inflammatory, and required a repetition of bleeding, &c. to bring it down.

One very remarkable case occurred, where the disease was protracted, and had twice changed its character, completely, from a very low to a high grade of disease. This patient certainly owed his recovery to the modern mode of treating disease according to present symptoms, instead of being led astray by deceptive names. After a very severe disease of about three weeks duration, this man became convalescent; a diarrhæa came on with some pain, and copious discharges of blood from the bowels. Tonicks and astringents were given, as opium with white vitriol, sugar of lead, &c. but to no purpose; the disease seemed unmoved by the use of those articles, and the patient was rapidly declining. I had read of Sydenham's fever turned inwards, of Rush's misplaced fever, and on this great authority I resolved, in this unpromising case, to bleed; the loss of about twelve ounces of blood, taken from an arm apparently all skin and bone, with mild laxatives, gave an immediate check to the disease, and the patient had a most rapid recovery.

In my observations on bilious remitting fever, I have given some account of a typhus fever. Such is the variety of the fevers under consideration, as influenced by different constitutions of the weather; by change of habits; by improper treatment, &c.; that I shall conclude the subject by admonishing every reader to place his dependance entirely on the physician; when one is to be had; when not, a careful perusal of this article; that on bilious remittents; and especially, by referring to my observations on diseases of excessive excitement, and

defective excitement or exhaustion, a tolerable knowof the disease can be obtained.

Of typhus fever as arising from exposure to the foul air, of dirty hospitals, jails, or camps, I shall speak when treating of fortuitous diseases; my views being here confined to epidemicks, it cannot be the proper place to speak of a disease entirely local.

It may be observed that, I have, in various parts of this work, made use of the terms *dirty hospital*: lest I might possibly be misunderstood, and my words construed into a disrespectful opinion of hospitals, I think proper to observe here, that, I have in all places wished to convey the idea that, hospitals kept properly clean, and suitably arranged in other respects, are as healthy as any private well kept house: and therefore, lest I might be understood as mentioning such places as being unhealthy, I wish to say once for all, that it is of hospitals improperly kept I speak, when I mention the most usual places of malignant fever, &c.

## SECTION V.

### *Of the Measles.*

Here I have thought proper to leave the common tract, and class measles with epidemicks. I am not singular in the opinion, that measles are not contagious. Professor Potter, of the University of Maryland, is decidedly of the same opinion.

*Symptoms.*—This disease commences with alternate chills and heat, nausea, a short cough, with slight soreness of the throat; heat, itching, and obstruction of the nose, with severe sneezing; watery inflamed eyes; considerable lassitude; are its most remarkable, forming symptoms. About the fourth day, an eruption appears about the neck, breast and face, and spreads gradually over the whole body: they resemble flea-bites, being a little elevated, but not so much as smallpox. The appearance of the eruption relieves the stomach and bowels in some measure; but the cough and difficulty of breathing, most commonly increase. Bleeding at the

nose is common in this disease. About the sixth or seventh day; the eruption begins to turn pale, the whole skin having taken on a high colour; by the ninth or tenth, the eruption is gone, having peeled off in branny scales.

If the patient has been properly treated, the disease now declines pretty rapidly; but if an improper regimen, or medicines, have been used, the symptoms become now more particularly dangerous; and those who die, are generally carried off about this time. A violent purging, *petechiæ* or purple spots, are among the dangerous symptoms brought on by improper treatment, and are attended with great danger. A sudden striking in of the eruption is likewise a frequent consequence of a too warm regimen and stimulants, and portends danger; it is generally an evidence of the system having been exhausted by excessive inflammatory action. This symptom may generally be prevented, but, when formed, will most generally yield to mild stimulants; for, in most cases, it is now too late to deplete; but there are cases where the lancet is absolutely necessary, after the occurrence of this symptom. This could only be judged of by an experienced physician.

There are, however, cases where this sinking in of the eruption is owing to want of energy in the blood-vessels, and can only be counteracted by mild stimulants. This generally arises from constitutional debility of the patient; to his having just passed through some other disease, or to a particular constitution of weather, which strongly predisposes to low grades of fever. No disease more strongly calls for the skilful physician; for it not only is dangerous in its course, but lays the foundation of many subsequent diseases, as consumption, and is apt to rouse up lurking scorfula, &c.

*Treatment*.—There is almost an universal errour in keeping patients too warm in this disease. Exposure to the weather, or a current of cool air, would be improper, but they should always, when able, be dressed and lay on their bed during the day, and be but reasonably covered during the night. Nine tenths, and, perhaps, a far greater proportion of patients will be injured, nay,

life endangered, by using any thing cordial. Weak flaxseed tea, wherein a little hyssop, balm, or other herbs, has been steeped; milk and water, barley water, and such like, are the best drinks; and they should all be used cool, but not cold. For diet, toasted bread soaked in water, weak chocolate, baked fruit, &c. will be sufficiently nutritious in severe cases; in more mild ones, a little broth, panada without wine or spirits, mush and milk, &c. will be suitable, and in all cases it will be necessary to resume a full diet slowly and cautiously. Cordial drinks can scarcely ever be safe; in low cases, coffee may be allowed. Where there is much affection of the stomach, an emetick will be advisable. This, with the use of injections, and very mild purgatives, and the regimen pointed out, will answer every purpose that is to be expected from medicine.

But the principal, and perhaps the only remedy which is generally necessary, is bleeding; the patient should be bled as soon as practicable, and it must be repeated till the fever and cough abate. In all severe cases, bleeding will be necessary about the time the disease has formed a crisis, and this remedy must be repeated even after the disease is over, while any considerable affection of the lungs or breast continues.

In short, persons unacquainted with diseases, will know the measles best by knowing the disease prevails, for it always comes in the character of an epidemick, or endemick. And as no disease is more easily mismanaged, they should get advice when practicable. If good medical advice is not to be had, bear in mind that reasonable bleeding, often repeated in severe cases, and a cool low regimen will seldom fail to carry the patient safely through the measles. All rash exposure to cold or heat, severe purging, strong diet and cordial drinks must be scrupulously avoided.

But at the close of the disease, after due depletion, great advantages may sometimes be had from taking small doses of paregorick, or sweet spirits of nitre with an equal quantity of laudanum, this will mitigate the troublesome dry cough, which now harasses the patient.

It may be remarked, that measles generally prevail in the latter winter months, and in the spring. And that, it is a disease to which we are subject but once.

## SECTION VI.

### *Of the Hooping-Cough.*

This disease is so well known that any description of it would be useless. It may be remarked, however, that it prevails as an epidemick, more frequently than the measles, and fewer persons escape it in infancy.

This cough, may often be known by the extraordinary gushing of blood into the face; even, before any hooping sound is observable. Such is the great length of continuance of this disease, that it will always be necessary, to keep an eye to this circumstance; and, be cautious how we reduce the patient. Where the symptoms run high, bleeding may sometimes be necessary; but in general the cure may be trusted to laxative mild medicines, as rhubarb, or senna and manna, gentle emeticks of ipecacuanha. Light but pretty nourishing diet; as broth, puddings, milk with bread, or mush, light fresh meats, oysters, &c. For drink; cold water, or toast water, and especially, milk and water are proper articles. Removal, so as to get the patient into another air, where it is convenient, will be found useful. Advantage is sometimes obtained from the use of tincture cantharides, paregorick, and other articles, but they should never be used without the advice of a physician. A pitch plaster worn between the shoulders, will sometimes be useful, and in severe cases, I have seen the most marked advantages from a large blister, laid between the shoulders. This disease will continue for several weeks, in spite of all remedies, and I am fully persuaded much mischief is done by giving too much medicine.

Thousands of nauseous articles are crammed down the throats of the poor little sufferers, which often do them much more mischief than the disease. Keep your children from rash exposure to the weather, from over-

heating themselves, or eating too much solid harsh diet; and if in the winter, keep them in a room at night, of the same warmth, as near as possible, to that during the day, and this disease will seldom require any other treatment.

Like in all other diseases, there will be found cases of hooping-cough, where evacuations cannot be used with safety, but where we must give a cordial diet, the bark, as a tonick, and even wine whey, will be necessary. Such cases are only to be found in children of very weak relaxed habits, or where they are attacked at the close of some severe disease.

## SECTION VII.

### *Of the Scarlatina Anginosa, or Malignant Sore Throat.*

This disease partakes of every grade of morbid action, from the typhus to the most inflammatory disease. No disease more imperiously calls for the skilful practitioner than this. Its most usual symptoms are chills and sickness at stomach; swelling, and inflammation of the throat, which renders it difficult to speak or swallow, or even breathe with ease. The *tonsils* (glandular bodies, situated in the upper part of the throat, just behind the root of the tongue on either side) are highly inflamed, which terminates in suppuration or mortification; and sometimes brings away large sloughs; sometimes swellings behind the ears and blotches in the mouth. Most generally there is an eruption on the skin. This symptom sometimes precedes the others, and *vice versa*. In seasons where this sore throat prevails, similar, eruptions are found on some persons, without any other evidence of the disease, but generally accompanied with some fever.

When this disease partakes of the malignant cast, similar to the malignant typhus, which is most common, it is very mortal; and, therefore, requires skilful and prompt treatment.

Where advice cannot be had in this disease, an emetick of ten or fifteen grains of calomel and half a dram

of ipecacuanha, combined, should be taken, and worked off with chamomile or sage tea. The calomel should then be continued in small doses, as three to six grains twice a day; and if it keeps the bowels more than reasonably laxative, laudanum should be given to restrain that effect. A gargle of honey and water, with a very little calomel combined, or an infusion of red pepper in water, or the steam of hot vinegar, should be constantly used.

If nausea continue, repeat the emetick; then give reasonable quantities of wine, with ten to twenty drops of antimonial wine, every three, four, or six hours; but the antimonials should never be carried so far as to keep up nausea; it will be a safer course to depend on mild laxatives, as senna and manna, or rochelle salts, or injections, placing principal reliance on calomel. The outside of the throat, and behind the ears may be rubbed with the ointment of corrosive sublimate; this will soon excite blisters.

Cordial diet, with the use of snakeroot, or Iceland moss, in tea, and the use of light cordial diet, will generally be sufficient in the close of the disease.

Although I have said this fever is highly inflammatory, as is evident from its appearing so constantly in Philadelphia since the year 1783,* during the most inflammatory constitutions of the weather; still, such is the force of the local affection, or inflammation of the throat, that the general system is hurried, in a few hours, through an inflammatory stage, and prostrated below a state in which evacuations, by the lancet, would be safe; more especially as the disease is fixed to an unalterable course of inflammation, and suppuration to go through.

The use of broths or coffee, or mush and milk, may be allowed through the course of the disease; but in all cases the quantity must be small; and it is also essential that very little be taken at once. Barley water, toast water, or chamomile tea, or porter and water sweetened, will be allowable drinks. The utmost cleanliness is necessary, and free ventilation without rash exposure to

* See Rush's Medical Inquiries and Observations.

cold air. The gargles should be used constantly during the night; reasonable allowance being made for sleeping, if the patient can sleep.

For children, who will not use gargles, a mixture of honey and water, with a very little calomel, may be frequently put into their mouths, and suffered to pass down; or the honey and water mixed with a little soda, say half a dram to a gill of the water, and a tea spoonful frequently put into the mouth.

I have seen a solitary case of this disease in the Baltimore hospital, during the late war, terminate fatally; yet, by great attention to cleanliness, no disease was communicated. It is true, this patient was removed to a single ward, but was attended by several persons, and I frequently inspected his throat, &c. The disease here treated on is so distinct in its character from common inflammation of the throat, or quinsey, that I shall reserve the latter for a section, under the head of fortuitous diseases.

## SECION VIII.

## *Of Dysentery, or Bloody Flux.*

The dysentery frequently prevails in the United States as an endemick, or epidemick, and sometimes prevails over whole neighbourhoods, or large tracts of country, and is found in remote places, where no possible communication with infection could have existed; so clearly is this disease dependant on a particular constitution of the air, that a physician ought to blush when he pronounces it contagious. That filthiness will increase the disposition to this disease, or that unwholesome diet and exposure to the hardships of a dirty camp, may excite a dysentery, I have no doubt, but this argues nothing for specifick contagion. Yellow fever and bilious remittents, by this way of reasoning, and even agues are contagious. But a person labouring under a dysentery, if carried to a healthy atmosphere, will no more communicate the disease, than a patient would labouring under yellow fever.

I have seen this disease existing as an epidemick several times, and always unreservedly examined my patients; often administered injections, inspected the stools, assisted friends to the closestool, but never had a symptom of the disease.

I have strong grounds for believing, I saw several families affected with dysentery from the imprudence of emptying an old necessary, and carelessly fouling the streets with its contents in the summer season. The disease was not prevalent that year, but two seasons of dysentery had just preceded. We are seldom affected with dysentery in the middle states, according to my observation, except at the close of summer, and the beginning of the fall months.

This disease generally commences like fevers with light chills, loss of strength, and appetite. Severe gripings, and bloody, frothy, or slimy stools, without natural feces. Sickness at stomach, and considerable thirst. The stools have soon an appearance of stringy substances in them, and sometimes are almost wholly blood; the pain is very acute with bearing down, which is apt to terminate in *tenesmus*, or, a protrusion of the rectum or lower gut. Such is the persecuting nature of this distressing disease, that its unfortunate victims, have scarcely a moment's respite from the closestools, whilst they are borne down with anguish and debility.

I am well aware of the vast importance of cleanliness in this disease, and believe that a want of attention to it will be a powerful predisposing cause to the disease, and often renders all efforts for its cure ineffectual. But to frighten people constantly with the notion of contagion, as some authors do, will lead to more mischief than good; it is the worthless part of mankind, who are moved to do their duty from a sense of fear only; to alarm such with false accounts of things is to continue them in ignorance; and while ignorance clouds the human mind, man does his duty sluggishly, harshly, and is too often guilty of cruelty to his fellow creatures, and finds a pretext for his actions, in the notions, thoughtlessly, or unwisely instilled by others.

Let me here admonish every christian, that it is his duty to approach his afflicted neighbour, and aid him so far as necessary; and here, as in all other cases he will find an agreement between his duty and his own welfare. Approach your sick neighbour without dread, provided due care is observed to cleanliness, and no unnecessary crowds of persons to hinder free ventilation; nothing is to be dreaded from the scarecrow contagion. These are sentiments I carried with me during a practice of several years, I have spent many hours with patients labouring under every disease to which this country is subject, and, thank God, I never had any reason to repent my conduct in this respect.

Has symptoms of dysentery come on, attended with nausea, a dose of ipecacuanha, as twenty to thirty grains for an adult, should be taken; and perspiration encouraged by drinking plentifully of warm tea during its operation. Should the febrile symptoms, as chills and heat, with full pulse, run high, it will be necessary to bleed, and even repeat it if those symptoms do not abate. Injections of starch dissolved in warm water, or a decoction of slippery elm bark, three parts milk, and one part lime water, or mutton broth, should be used three or four times every twenty-four hours, during the violence of the disease. As soon as the stomach is well composed after the emetick, which will generally be in from three to six hours, or where the patient has strong objections to an emetick, ten or fifteen grains of calomel ought to be given, and carried through the bowels with rochelle salt, castor oil, or common glauber salts, or rhubarb. Should the stomach reject those purgatives, and no discharge of natural feces follow, it will be necessary to take another emetick; or to lose blood, but advice should be had if possible. If the foregoing treatment should not open the bowels so as to bring away natural stools, the calomel should be repeated and followed up by the other opening medicines. So soon as natural stools shall have been procured, the griping may be obviated by anodynes; take half a dram of soda, six table spoonfuls of water, and two small tea spoonfuls of laudanum; shake the whole together, and let an adult take a table spoonful

as occasion may require, not oftener than twice or thrice a day. Rubbing over the bowels with the hand, or a flesh brush may have a good effect.

In most cases of dysentery, the most simple and successful practice, is to open the bowels with injections; calomel and other purges, as early as possible in the day, and at night, to take a pretty full anodyne; a pill of opium and ipecacuanha, from one to three grains of opium, and three to five grains of ipecacuanha, will be proper for an adult.

The above treatment is best adapted to the healthy people of the country, but like all other diseases, this too is found of various grades, and in very weakly habits, or malignant constitutions of the weather, it requires a course somewhat different. Here calomel and opium, with the constant use of injections, and a large blister applied over the abdomen, are our principal dependance. The best drinks are a weak decoction of slippery elm, mullein tea, milk and water, barley water, or linseed tea. At the close of the case, more cordial or astringent drinks will be proper, chamomile tea, dewberry tea, thin broth, and coffee, will be suitable drinks. In cases of a low grade, wine whey, wine and water, or weak punch, may be allowed, but not without caution, for if we over-stimulate; we will increase the debility, and do our patients much mischief. For diet, broth may generally be allowed, and panada, ripe fruits, milk with well mashed potatoe, bread, or mush, mild soups generally; a soup made of fresh cider is a good article. Raw apples are always unsafe where the stomach and bowels are much debilitated; they are apt to produce colick. I have seen several cases, some of which terminated fatally in a few hours.

Lastly. It is of the highest importance to observe the strictest cleanliness, in removing all filth, and ventilating the patient's room at all hours, sprinkling the floor (that is first well cleansed) with vinegar, and washing the patient's hands and face, and rinsing the mouth frequently with vinegar and water, will often go far to keep down nausea. And in all cases it is essential that the patient put on flannel next the skin, and wear stockings, or at

least socks, when they rise to the closestool; for want of attention to this, many persons are lost, by constantly having the perspiration turned inwards upon the bowels.

Great caution is necessary in returning to a full diet, and to former habits generally; the bowels are left weak, and we are very liable to relapses: due temperance, and wearing warm clothes, are the requisite securities. Slight relapses, or a looseness, which sometimes follows, will generally yield to mild astringents; as a pretty strong decoction of the dewberry root or leaves, of logwood, iceland moss; or the elixir vitriol in water.

In obstinate cases, white vitriol, or sugar lead, in the form of pills, with opium may be necessary; one grain of opium, and two or three of either of the other articles, may be taken once or twice a day.

The *tenesmus*, and a falling down of the *rectum*, is sometimes extremely troublesome; and sometimes mortification has been the consequence. The part ought to be washed with warm milk and water, where this symptom has progressed; when reduced, or replaced, the parts ought to be well bathed with cold water, and often repeated. When early attention is given to this affection, injections of cold water and starch will be found a good remedy.

Sometimes the *rectum* is found so highly irritable, that the smoothest glyster-pipe cannot possibly be introduced, here, setting the patient in a warm bath, which rises up over the *pubis*, made of poppies, mullein, or milk and water; or, when early attended to, a bath of bitter herbs will, perhaps, be most suitable. For the *tenesmus*, starch glysters will generally answer our wishes.

We sometimes meet with cases where there is such a forcing down, that no injection can be passed. In such cases, this troublesome affection may be removed, should the bath fail, by putting a small pill of opium, a little within the bowel, and holding it there a few minutes.

## SECTION IX.

### *Of the Ague, or Intermitting Fever.*

The ague is a disease well known, and prevails over a great part of the middle states, at least. It is most common along our waters, or in marshy, low grounds. A genuine ague is seldom attended with danger; but many of our most malignant fevers are ushered in by symptoms so strongly resembling ague, that people are often led into fatal mistakes. And hence the necessity of carefully reflecting, what diseases are prevalent, and of getting good advice, or refraining from the bark, or other stimulants, till the character of the disease is well ascertained.

We are some where told that two of England's monarchs died of this disease; it is, however, highly probable their deaths were occasioned by other diseases, wearing the livery of ague.

It may be remarked here, that agues, or intermitting fevers, are distinguished by the terms of quotidian, tertian, and quartan. The first, is where there is a paroxysm every day; the second, has a paroxysm every other day; and the last, every fourth day inclusive. These forms are sometimes double or blended; but in all agues there must be a complete interval, from every symptom of disease, for some time, or the disease is called a remittent.

When it is well ascertained ague is formed, take an emetick of ipecacuanha; or, what is, perhaps, preferable here, white vitriol, (sulphat. zink) in doses of from ten grains to thirty, dissolved in water, and repeated at short intervals, till it causes free vomiting. Less attention is necessary here, respecting warm drinks; they may impair the tone of the stomach, and are never necessary in large quantities; chamomile, carduus, or centaury tea, should be taken in moderate quantities. The next day a purge may be taken; and I prefer the following pills to any other: take jalap and rhubarb, each ten grains; aloes and calomel, each five grains; make

eight pills, for a portion, for an adult; but the patient's constitution must be consulted.

It is not material whether the vomit or purge be given first; and in cases where strong objections exist against vomiting, one or two purges, containing some calomel, will answer every purpose.

If it is known that an inflammatory constitution of the weather prevails, and the fever, headach, and pains in the bones, as it is called, run high, bleeding once, and in some rare cases, even several times will be necessary, before the bark is admissible. But in general, so soon as the stomach and bowels are cleansed, the bark may be taken, commencing as soon as the paroxysm is off, and taking it in such quantities as to take from one to two ounces before the next expected chill. If the bark will not lay on the stomach, it may be combined with about thirty cloves, and two drams of cremor tartar, to each ounce of bark. If this still disagree, and the constitution of the patient is good, take more calomel and jalap, or another emetick; or the bark may be mixed with cinnamon water, and magnesia, for delicate persons.

If none of those forms will succeed: a strong anodyne, as a grain or two of opium, given as soon as the chill is perceived, and repeated two or three successive times, at the near approach of the chill, will generally succeed. In the intermissions, a decoction of bark, generous diet, good wine, or some pleasant bitter, will be useful.

I have generally succeeded in curing agues with equal parts of Peruvian bark, and that of dogwood, or black oak. Arsenick and white vitriol, and opium are among the most valuable articles for the cure of agues, but they ought never to be touched without good advice; they may be the cause of dangerous visceral obstructions.

Agues should be promptly treated, and relapses will often be prevented by temperance, and avoiding the night air, and by generous living. After recovery, it will be advisable to take a little bark occasionally. The bark in all cases may be taken in port wine, or snakeroot tea, or even water or milk, as is most agreeable. It has

been supposed, wearing a waistcoat with bark quilted between its folds, is useful in preventing agues in children.

Where agues are protracted into the cold weather, and sometimes attended with swelled ankles, one or two bleedings, with the application of a couple of blisters to the ankles will generally remove such remains of the disease; these with warm clothing, generous but temperate living, and in severe cases the moderate use of the vitriolick, or nitrick acid, well diluted with water, will answer better than the bark, or perhaps any other remedy. About forty to sixty drops of elixir vitriol, or the same quantity of the nitrick acid may be taken for a day or two, and then omitted for the same time, and so continue alternately for some time. Delicate persons, or those of sedentary habits will be benefitted generally, by the use of the cold bath, or riding on horseback, after the removal of agues.

## OF CONTAGIOUS DISEASES.

### SECTION I.

I HAVE, in a previous article, given as my opinion, that we have but one contagious disease, at least, in this country, and for this we have a certain preventive in the vaccina, or cowpox. And it is only to be lamented that there is people ignorant or wicked enough to resist this great gift.

Some are found who pretend they leave the issue of events to the Creator, but those people must either be extremely narrow sighted, or wilfully criminal. To place a dependance on Providence without the suitable exertions which form a part of our duty, and very relation to the various parts of creation, can only be consistent with professions where it is practised as a gene-

ral rule. The Turk who is ignorant of the plain fact, that the Creator has chosen to govern this world by general laws, acts a consistent but blind part in facing every danger, because he believes the Great Father will protect him.

But how different is the case of men, who viewing things by halves, will dare to say that God has sent the smallpox, and therefore their children may take their chance, and yet refuse to acknowledge the goodness of Him, in sending a preventive also. This is in plain terms, saying the Deity has sent evil, but the good is the work of man. I am constrained to observe here, I never personally knew a man neglect his duty in this respect, that was not a niggard at heart. This scourge is still found among us almost every year, I shall, therefore, offer a few remarks on the smallpox.

## SECTION II.

### *Of the Smallpox.*

This disease attacks much in the same manner of other inflammatory fevers, by chills and heat, headach, backach, nausea, or vomiting, &c.; about the fourth day afterwards, an eruption appears, and spreads over every part of the body; these gradually rise up into pimples, and they fill first with a limpid fluid, which turning to pus, gives the pustles the appearance of little yellow bladders: these appear about the tenth day, and disappear or dry up by the fourteenth. It has of late been distinguished by the terms confluent and distinct; but even for this there is very little necessity; the distinct being the same disease, but of less violence than the confluent.

*Treatment.*—The patient must carefully abstain from all animal food, even broth, butter, cheese, or eggs. Milk with bread, &c. weak tea or coffee, ripe fruit, toasted bread soaked in water, boiled rice or barley, &c. will be suitable diet. For drink; milk and water, toast water, apple water, and milk whey are proper drinks. The bowels ought to be opened with mild cooling physick; the patient to be kept quite cool, at all hours; free vetilation, and lying on the bed during the day, and but light

covering at night are necessary. There should never be more than one patient in the same bed. In persons of good constitutions there never can be any necessity for cordials. In full habits where the febrile symptoms run high it may be proper to take a little blood, and purge pretty freely.

There are cases where the patient is too weakly to enable the blood vessels to throw out the eruption in due time; even here we must by no means dispense with cool drinks, cool air, and a cool regimen. A little cool wine whey, chicken broth, chocolate, coffee; with a few drops of laudanum occasionally, will be the safest treatment.

When the disease is protracted and accompanied with heavy eruptions, which form crusts or scabs over the whole body, it will be necessary to use bark freely, with the reasonable use of opium or laudanum, and elixir vitriol. These can never be necessary till the close of the usual time for the scabs drying, and even here, we must stimulate with caution. In short as we generally meet with this disease, almost every thing depends upon cool air, low diet, reasonable purging, cooling weak drinks, and in the close of the disease, a little laudanum once or twice a day.

To reduce the patient in an early stage of this disease, is dangerous, for it must run its course, and requires a reasonable energy in the blood vessels. But to stimulate or heat in this disease is certain death, or maiming, and sometimes an horrible emblem of neglect or ignorance is the consequence of such treatment. This of all others, is the most loathsome dreadful disease; and in every case, where it is practicable, the best advice must be had. Having now according to my plan, treated of epidemick, and of contagious diseases, I come to speak of fortuitous diseases.

# OF FORTUITOUS DISEASES.

## SECTION I.

### *Of Consumption of the Lungs.*

THE first disease which I shall treat of in the class of *fortuitous diseases*, is consumption of the lungs.

While the yellow fever levels hundreds in a season, and excites the commisseration of a whole nation, consumption destroys thousands, unpitied, because its victims are taken singly. I am, however, of opinion, that many cases might be prevented by due care, and a vast many might be removed after they are formed.

Much errour is practised in this disease by substituting medicine for regimen, which alone can cure the disease. This applies more particularly to consumption connected with scrofula; where it arises from common inflammation of the lungs, medicine alone can arrest the disease, in its forming stage; but when confirmed, leaves nothing but chronick debility to be removed by exercise and regimen.

From a most careful examination of this disease, I have thought proper to view it first in two divisions, which are in some measure opposite in their nature, and therefore require some difference in the treatment.

1. Such as are connected with scrofula, which, lurking in some part of the system, is liable to be roused up by inflammatory affections of the lungs.

2. Such as arise from pneumonick affections, or other debilitating causes; and cases which have been improperly treated, neglected, or from violence done the lungs by inflammation, leaves a predisposing debility, which is readily acted on by cold, intemperance, &c. Each of those kinds of consumption have three distinct stages, as the inflammatory, hectick, and typhus. These dif-

ferent stages of this disease are with difficulty distinguished from each other, and hence arises one of the greatest difficulties in the treatment of it.

I believe with the great Rush, that scrofula is not a frequent cause of consumption in the United States; but we are well assured that the reverse is true in England; and, from the rapid manner in which we are succeeding that country in a round or succession of diseases, from more and more debilitating habits, we are warranted in believing, that in our cities in particular, and even in the country, we are to look for scrofula as a growing cause of this disease. I ascribe but little to turbercles, in my view of scrofula; these are, perhaps, always a consequence, and not a cause of a consumptive habit. They are, probably, the effect of chronick inflammation, which may be, and probably often is, wholly independent of scrofula; and simliar to tumours found on the omentum from yellow fever; on the intestines from dysentery; and, indeed, all inflamed surfaces seem disposed to take on this appearance, or at least exudation and much inequality of surface.

I believe it to be an undeniable position, that both kinds of consumption are bottomed on general and chronick bebility. And further, I believe that so far as the lungs are concerned in this disease, it is one and the same thing; and, consequently, that the difference of consumptions consists of a difference in the general system.

Scrofula is the consequence of morbid debility, inherited or brought on by weak unwholesome diet, want of exercise, &c.; and it is highly probable the lungs are less disposed to take on scrofulous action, than many other parts of the body. I will go even further, and declare my unequivocal opinion, that scrofula seldom, if ever, is principally seated in the lungs, until invited by chronick debility of this organ, arising from neglected colds, measles, intemperance, &c. Hence it follows that scrofula is no more disposed to induce consumption, than any other kind of chronick debility. And the only reason why scrofula is so generally a predisposing cause of consumption in England, is owing to *this* being the most common effect of chronick debility in that country. For

a knowledge of scrofula, I must refer my readers to my observations on that disease.

I wish to suggest here, that it is of the utmost importance to distinguish between a scrofulous habit and one of mere debility. For the latter may exist as a mere diminution of bodily powers, while scrofula is ever debility of a morbid cast. Hence, when a patient is threatened with consumption, it behooves us to ascertain whether there is lurking scrofula in the habit; for if there is, the use of mercury would prove destructive. In no stage or form of scrofula can mercury be given without the utmost danger; whereas, hundreds have been speedily relieved from consumptive symptoms; at an early stage of the disease, where there was no scrofulous taint, from the use of that medicine.

Having now endeavoured to show the necessity of distinguishing consumption of scrofulous habits before we can safely attempt the cure by mercury, and declared it as my settled opinion, that consumptions of this country will partake more and more of that character, I shall make a few observations on the disease arising from general debility, independent of scrofula.

And first. It is a fact well known, that the Indians of our country are affected with pleurisy and pneumonick complaints, but exempt from consumption.

2. It is a truth, that of the many cases of wounds in the lungs, from bullets and bayonets in the army, &c. scarcely any terminate in consumption: all these circumstances go to show that consumption is not a primary disease of the lungs, but of the general system. And the circumstance that it affects females, the delicate, and those debilitated by intemperance, and succeeds large evacuations, as excessive purging, debilitating diseases, as measles, protracted pneumony, &c. plainly shows the disease of the lungs is secondary, and is excited and maintained by general debility. It is true, this general debility is often induced by pneumony; but of all the causes from which consumption may arise, this is one most easily reached by proper remedies. Indeed, no disease will yield with more certainty to medicine than an incipient consumption from pneumony will to the use of mercury, succeeded by suitable exercise. It is true, the lungs seem

to be a centre on which the principal force of chronick debility operates after they are brought into sympathy; but in all dangerous cases this is secondary.

Hydrophobia, malignant sore throat, smallpox, and other violent and dangerous diseases, operate on the general system primarily; but still, their essential character consists in local affections. So with consumption, an essential characteristick is an affection of the lungs; but danger is principally to be apprehended from the prostration of the general system, it being primarily and more deeply affected.

But, lest I confuse my readers with my attempts at reasoning on this disease, or possibly bewilder myself, I shall now endeavour to point out the disease in its different stages, and conclude with some practical instructions.

In giving the symptoms of the first or inflammatory stage of this disease, I have copied them as described by Dr. Rush.

"The symptoms which mark its first stage, are seldom observed; or, if observed, they are too often treated with neglect by patients and physicians. I shall briefly enumerate these symptoms. They are a slight fever increased by the least exercise; a burning and dryness in the palms of the hands, more especially towards evening; rheumy eyes upon waking from sleep; an increase of urine; a dryness of the skin, more especially of the feet in the morning; an occasional flushing in one and sometimes in both cheeks; a hoarseness; a slight or acute pain in the breast; a fixed pain in one side, or shooting pains in both sides; headach; occasional sick and fainty fits; a deficiency of appetite, and a general indisposition to exercise or motion of every kind."

These are, most generally, the premonitory symptoms of consumption; and, if proper attention is paid to them, before there is a confirmed cough, they will generally yield to such remedies as are calculated to restore tone and vigour to the general system. These are the careful avoidance of all debilitating causes, as intemperance, exposure to the vicissitudes of the weather; wet feet; damp beds; confinement; too thin clothing, &c.

The use of iron in the form of filings or rust, with bitters, or the use of the bark, and elixir vitriol with

attention to the bowels, and exercise, more especially on horseback, will generally remove these premonitory symptoms, and restore good health. It is in this stage of consumption in particular, that voyages to sea, or travelling will generally cure; and so will constant exercise, gradually increased according as the system acquires strength.

Should the disease, notwithstanding our efforts to obviate it, advance, and the cough become fixed, with expectoration of phlegm, blood, or pus, or should occasional hemorrhages occur from the lungs with increased inflammation of the trachea, as manifested in the increase of hoarseness, an increase of debility, some difficulty in respiration, with a disposition to sweat at night, and an increase of lassitude after eating; we may now view the disease as arrived at the height of the inflammatory stage. This view of the case is applicable to both kinds of consumption, or more correctly speaking, applies to the disease whether accompanied with scrofula or not.

I beg leave here, once more, to give a strong view of my notion of the connexion between consumption and scrofula. Consumption is a disease *sui generis*, so is scrofula; they may and sometimes do exist together, but either may, and does most generally in this country, exist alone. Scrofula may be a predisposing cause, or may be roused up from its lurking place by consumption, so may consumption pass by a scrofulous taint, and leave it undisturbed, provided it does not continue too long, and hence, the advantage in all cases of taking this disease early. This also suggests another cause for caution in the use of mercury for this disease, for this medicine will rouse up a lurking scrofula more certainly than consumption itself.

I am irresistibly led into a digression here, and offer as my opinion that the dreadful consequences which sometimes arise from the use of mercury, is owing to its rousing up scrofula, which was dormant, and would probably have remained so, with due temperance of habits generally.

Let us not then, if we meet with those unfortunate cases sometimes, attribute the mischief to the abuse of mercury, or to the virulence of the disease, but to *this*

foe in ambush Without extraordinary imprudence mercury will never produce any disease, but when it meets scrofula in its travels through the living system, dreadful consequences ensue from their meeting, and the preoccupant always comes off victorious, but not without angry expressions for such intrusion.

A consumption having arrived at the verge of its first or inflammatory stage, as manifested by the symptoms just mentioned, together with liability to getting repeated colds: it will now be necessary to abstain for some time from every article of diet but milk, in any form in which it can be taken best. Where the stomach does not seem to relish it, we sometimes succeed by trying it in every way, sweet, sour, new, skimmed, with its cream, or skimmed and diluted with water, or buttermilk, or the milk of the goat, or ass. Where none of this will succeed, a little seasoning of ginger will answer, or boiling the milk and mixing it with flour, or well boiled rice with a little sugar. If none of these will succeed, gruel or sweetened milk whey, or toast and water will answer. In short unless the patient is of a very weakly constitution, they cannot well live too low; regard may also be had here, to the prevailing constitution of the weather, if mortal epidemicks prevail of a low grade, it will be prudent to use a little broth or coffee.

In all cases, mush of well mashed potatoes, Indian meal, or rye, or bread, and choice ripe fruits may be used. The morning and evening air, as well as night air, is to be carefully avoided. Warm clothing, especially warm dry feet, and one or more flannel shirts must be worn. Nothing but milk and water, or weak cool infusions of pleasant bitters ought to be drank. But moderate covering at night, and a spacious or well aired room is absolutely necessary; a hard bed at least in summer, and sleeping alone is best. The bowels ought to be kept pretty open with injections, or very mild purgative articles, as rhubarb, or rochelle salts, or sulphur and cremor tartar. Bleeding once or twice a week according to circumstances is indispensable; gentle and constant exercise is necessary, as well as going abroad every day during good weather. But in this stage of the complaint, nothing can possibly be more ruinous than fatigue.

Should the symptoms decline and evident improvement advance, this course may be continued for a few weeks, but ought, perhaps, never to exceed five or six. If the patient seems to fall away, without any great amendment of the cough, hoarseness, night sweats, &c. this course must be changed, and the patient is now to be viewed as being in the hectick stage of the disease.

The hectick stage as it becomes more confirmed, is attended with chills, and increase of fever, great disposition to flashes of heat after eating, with a more marked hectick colour of the cheeks, increased night sweats, or greater discharges of urine, frequent irregularity of the bowels, increasing expectoration, hoarseness, and cough, continues with increased difficulty in respiration. In this condition of the system, I view the debility as being more equalized, but of a more morbid character, for it is a fact, that a diet tolerably nutritious, with constant exercise, are among the best remedies.

He who looks for much aid in this stage of consumption from medicine, will generally be disappointed. So soon as consumption is confirmed, and due depletion made by the remedies pointed out above, nothing will avail but unremitting exercise on horseback, or otherwise. Should the patient take cold, and be affected with pleuretick or pneumonick symptoms, blood should be taken in small quantities, and repeated as may be necessary. In this stage a cordial and nutritious diet is indispensable: I am so fully persuaded that the excellent and great Rush carried his low diet too far, (and I judge from several cases I have seen of his prescriptions,) that I think proper most solemnly to caution every person not to carry his low diet too far.

Dr. Rush, in all his views of this disease, considers it a disease of debility: he constantly and strongly recommends exercise. Surely there is an inconsistency in expecting a vigour and strength of constitution from bread and milk given to a people raised on animal food, &c.; and, who are to be constantly on horseback. I would lay it down as a general rule, that so soon as the patient begins exercise in good earnest, either at home or on a journey, that the diet should comport in some measure with the exertion. Broth, well boiled chicken,

or other light, fresh animal food; eggs, oysters, fresh fish, and coffee, and now and then a little very good wine, will be proper, and, indeed, indispensable. If these, or now and then getting cold, should hurry the circulation, and augment the cough and pain of the breast, bleed, and repeat in small quantities, as may be necessary. If such diet disagree with the stomach or bowels, a change of condiment may be useful, as a little nutmeg, cinnamon, ginger, &c.

When the stomach becomes much disordered, a gentle emetick of ipecacuanha may be useful; but a frequent repetition of this remedy will impair the stomach, and increase the debility of the patient. I shall now pass on to the typhus stage.

When the disease arrives at its last stage, there is an increase of all the symptoms, particularly of fever, which confines the patient in good measure to bed; the expectorated matter becomes generally thin pus; the sweats increase; there is frequent severe diarrhœa, and nausea or vomiting; palpitation of the heart; faintness; cold sweats; smallness of the fingers, with curving in of the nails; respiration becomes hurried; the body wastes rapidly: thus the symptoms continue; sometimes one, then another predominating. A sudden rupture of an abscess, or blood vessel, or a sudden suffocated excitement about the trachea, leads the sufferer from a scene of distress. Death, with a feeble dart, severs the last struggling efforts, and kindly gives the patient a passport to another world.

In this last stage of consumption, a cordial and pretty full diet; cordial drinks; as wine whey, coffee, chicken, water, punch, porter, or porter and water sweetened; with the use of laudanum, two or three times in twenty-four hours. A good drink for such patients, is a pretty strong infusion of iceland moss in milk, or nice chocolate; a little bark, or pleasant bitters, may be useful; boiled onions, oysters, and even beef steak, and the liberal use of good wine, has been found useful in this low state of consumption.

But exercise must never be relinquished; if the patient cannot walk or ride, nor have access to a carriage, move him on a small carriage made for the purpose; or if no-

thing better is at command, place his bed on planks, and carry him on a wheelbarrow; if he improves, his exercise may be gradually increased. It now remains to make a few general conclusions.

If we are fully satisfied that no scrofulous taint exists, mercury may be tried at any stage of consumption; but it ought never to interfere, for any length of time, with exercise. After the inflammatory stage is pretty well over, a salivation has often removed consumption in its forming stage; but I have never been able to succeed with it after the disease might, decidedly, be said to be beyond the verge of *pneumonia;* although I have tried it with every precaution, and under circumstances apparently favourable; having gone even so far as to take some patients to my own house.

Upon the whole, very little is to be expected from mercury in this disease, or any other medicine. Exercise is the sheet-anchor and only hope in this terrible disease; it must be accommodated to the strength and stage of the disease. It may begin with riding on a smooth road or floor in a carriage, the patient sitting up, if possible; next increasing the motion by moving faster; then reasonable riding at a walk of the horse, then trotting; afterwards, more constant walking, riding, running, dancing; and lastly, constant labour.

I agree with Rush, that sea voyages have seldom been useful, unless the patient partakes of the common labour of managing the ship. But I feel compelled to observe, that I think the Doctor's views of grading exercise are erroneous, and likely to lead sometimes to mistakes. I will briefly give my own views.

I consider every kind of swinging, sailing, rocking, or exposure to dangerous precipices, sedative in their operation, until we become accustomed to these kinds of motion; and, therefore, they are only useful, or even safe, where we wish to remove an inflammatory diathesis. It follows, that where consumpted persons were benefited by those modes of exercise, (and this has often occurred,) that they were labouring under the disease in its inflammatory stage. And this kind of exercise is probably one of the most active and agreeable means of reducing inflammatory action of a chronick nature.

It may be well to bear in mind, in the diseases of children and others, that these modes of exercise will reduce the strength rapidly, before the body can be accustomed to them; and, therefore, where children are much reduced, they are certainly sometimes injured by rocking in a cradle. The rocking interrupts the functions of the lungs, and thereby increases the debility present. The evident tendency which rocking has to lull to rest, is a proof of its sedative nature.

The next thing in point of importance, is attention to diet; and it is, perhaps, safer to err on the side of a diet too low, than run the risk of living too high, especially the first few weeks. When the disease is confirmed, the patient must, in some measure, consult his own feelings; but I feel full assurance in observing, I have never seen any advantage from a very low diet, after the disease was confirmed, and somewhat advanced. Blood-letting in every stage of consumption may be practised; but such patients never can bear large evacuations, and it ought to be reserved for the increase of symptoms, which so often arise from getting colds.

Through every *stage* it will be advisable to keep a small sore over the breast-bone, by rubbing now and then with a little ointment of corrosive sublimate.

In the regulation of our diet, we must always bear in mind, that the stomach is weak, and therefore calls for small, frequent meals, of the lightest kinds of food. Where a cordial diet is necessary, a little salted meat will be proper, more especially in the summer; for there is much disposition to diarrhœa from using fresh meat at this season of the year. Through every stage of this disease, mush and milk, or iceland moss boiled in milk, will be allowable. All conserves, syrups and confections, tend to impair the appetite; therefore they should never be allowed for any length of time, unless on trial manifest advantage is derived from them; a little fruit jelly and milk will be a better desert for a weak stomach; honey, if it agrees with the bowels, may be used; but it generally disagrees; tar-water, resins and balsams, if ever they can be useful, it must be in a very low state of the typhus stage; or, in the early stage, before any considerable fever has occurred.

Persons have recovered from consumption from under every discouraging appearance; and therefore we should never wholly despair. It is our duty, while life lasts, to persevere in our efforts.

I have still to observe, that a spitting of blood, or hemorrhage, from the lungs, calls loudly for the lancet; and we should never desist till we subdue that symptom; for it is always better to bleed from the arm than from the lungs. But those discharges of blood may generally be checked by taking freely of common table salt, from one or two tea spoonfuls to ten or a dozen of dry salt, taken gradually, will have a speedy effect in stopping this discharge.

As you value your life, never be advised to tamper with *nostrums*. When you are distressed with urgent symptoms, losing a little blood, or, in the advanced stage, a little laudanum will mitigate; but no medicine will avail any thing towards a radical cure, therefore place dependance wholly on unremitting exercise, and a diet accommodated to the stage of the disease.

However much chronick debility, arising from various causes, may predispose to consumption, I am inclined to believe this disease partakes, in good measure, of the character of an epidemick. That is, I imagine some peculiar state of the air, acting on a debilitated person, will excite this disease. It never is either contagious, or hereditary. Unhealthy parents may leave a weakly constitution, or a peculiar conformation of the breast, &c. in their offspring; but all this predisposes only, and requires an unhealthy atmosphere to produce the disease. This view of the subject leads us to the hope, that by great care as to temperance, warm clothing, and active industry, we may often, perhaps generally, escape.

Dr. Rush was strongly predisposed to consumption during a long life: he had inherited from his parents a strong tendency to it; but his extraordinary industry, in every period of his life, together with temperance, and great attention to clothing, &c. carried him to a good old age, when he dropped into his grave, amid his undiminished usefulness, from another disease.

A nervous consumption is sometimes met with: it is called *atrophy*, and was described by European authors under the name of *tabes*. This is a wasting away of the body, without any considerable fever or affection of the breast; and is probably a disease originating in the stomach, and pervading gradually all the assimilating powers of the body. I suspect it is generally accompanied with *diabetes*. Indigestion, languor, inward feverishness, together with a rapid wasting of the body, are its principal symptoms.

*Treatment.* Exercise here is an essential part of the cure; tonicks, and bark, iron, the cold bath, &c. with light but nourishing diet.

Some of the chalybeate mineral waters of our country may be useful in this disease; but for consumption of the lungs, they can seldom, if ever, be safe. Where consumption proceeds from any known debilitating cause, it is obvious our first efforts must be to avoid such causes; as intemperance, giving suck, &c. and endeavour to restore tone by tonicks, &c.; but if these do not succeed in reasonable time, we may conclude that an inflammatory diathesis is established, and will only yield to abstemious diet, repeated small bleedings, exercise, &c.

Nature seems to desert us in this disease, and unkindly leaves the patient to struggle with it, while she adds an almost irresistible propensity to rest. But in vigorously opposing this fatal tendency to inaction, we do no more than in counteracting her blind, or unfriendly efforts towards sleep, when pressed severely by cold. To yield to her sluggish invitation in either case, is certain ruin. She is a kind parent, but a bad physician. She would carry those suffering with cold to a bed of snow, and to death! She would entice the suffering consumpted to beds of down, to scenes of sloth! and to mistaken views of his danger! adding to each succeeding assent, another down! down! until the yielding patient is no longer able to oppose the rushing torrent! the harassed soul on seraphick wings takes its *flight* to regions eternal.

Let me then admonish every patient in this disease, to bear in mind that a disposition to rest stands in the same relation to him, that a disposition to sleep does to

one likely to be frozen. With might and main, then, bear up against so fatal a propensity! remembering that as too violent exertion would wear down the chilled traveller, and lead to equal danger with its opposite; so in consumption, by too violent exertion we frustrate the intention in view. Exercise, must be as constant as the return of day; but carefully accommodated to the circumstances of each case.

Let all those affected with consumption, or any serious affection of the breast, bear in mind that warm clothing is of the very greatest importance; flannels should be worn next the skin; warm stockings and strong shoes, well greased, in wet weather, are also particularly necessary. Such persons are very sensible to changes of the weather, and are, in general, disposed to chilliness; and the only safe remedy against those chills is warm clothing; being much about the fire or a stove room, is generally injurious to such people, except the weather be cold.

Many patients are injured by exposing themselves too early to the morning air; no one labouring under any serious affection of the breast should go abroad before the sun is about an hour high; and, even prior to going out, this late in the morning, should breakfast; or if the appetite is too languid, so early in the morning, a little food of some kind should be taken; something solid will generally be best, as gingerbread, or a mere taste of nice dried meat, with bread and butter, &c.; or, if the patient is on a low diet, a little bread with preserve, or a little warm milk with a small quantity of pepper may be taken.

## SECTION II.

### *Of the Peripneumony.*

This disease is an inflammation of the lungs, very much resembling a pleurisy, being attended, however, with a greater difficulty of breathing, less pain or stitches. It often succeeds obstinate, or improperly treated cases of croup. It generally commences with febrile symptoms, as chills, and heat, some cough, and sometimes pretty free expectoration attends with streaks of

blood; the urine is apt to be unusually high coloured. It is sometimes complicated with pleurisy. There is also a lower grade of peripneumony, which has been called the bastard, or *peripneumonia notha.* All these diseases, or rather symptoms, are one and the same thing, differing only in grade; pleurisy being the highest, and the bastard *peripneumony*, the lowest grade of this affection, of the chest; and they are now generally all spoken of under the term *pneumonia.*

In our efforts at curing this disease we are to use the lancet, more freely, as the case approaches nearer the pleurisy, in its appearances, while in the low grade of the bastard peripneumony, we must bleed with great caution, and sometimes not at all.

In an active *peripneumony*, as manifested by general fever, chills, difficult respiration, cough, spitting of frothy matter, streaked with blood, a full or corded pulse, &c. we ought to bleed, and according to the constitution of an adult person, take from ten to sixteen ounces of blood, should this not relieve, or should it increase the symptoms, which is often the case, we must repeat the bleedings frequently, until the symptoms yield. In this stage of the case we may content ourselves with opening the bowels with mild purges, as senna and manna, salts and manna, or rochelle salts, or even injections, provided we bleed according to the symptoms. If this treatment relieves the patient, which is generally the case, we may leave the case to nature, so soon as free respiration, considerable abatement of the fever, and the disappearance of bloody streaks in the spittle, with a more regular and softer pulse has taken place. Mild warm drinks, as milk whey, weak teas, barley water, apple water, or milk and water, must constitute the only beverage. Wine, spirituous drink, or animal food, must not be touched till the convalescence is well advanced.

If the case becomes protracted, blisters will be necessary, applied over the breast; the spirits hartshorn in doses of ten to twenty drops in a glass of cool water, or a decoction of seneka snakeroot, will be necessary, repeated every two hours, or tincture cantharides may be given till it excite slight strangury.

In low cases, where the pulse is weak, and does not rise after bleeding moderately, or in very debilitated habits, without bleeding at all, we should give calomel in doses of five grains twice a day, and restrain its operation on the bowels, if necessary, with a few drops of laudanum, given with an equal quantity of spirits hartshorn. A large blister should be applied over the breast, and if the case is obstinate, it must be repeated as soon as it dries up. The tincture of cantharides should be given till it excite strangury, if the symptoms do not abate sensibly after the blister.

The decoction of seneka snakeroot may now be given with advantage. The bowels should be regular, but purging is perhaps never necessary, and often unsafe. A little wine whey may be allowed in this low grade of the disease, chicken broth, chocolate, oysters, &c. in small quantities.

When convalescent, the patient may use the bark and elixir vitriol to advantage. Great care must be taken to avoid damp weather, or damp clothes, or rash meals, for this disease is apt to return without much care.

Peripneumony of a low grade is a very dangerous disease, being apt to terminate in suffusion of tough phlegm, into the vessels of the lungs, which brings on what Dr. Rush calls suffocated excitement, and destroys the patient; the free use of blisters is a principal remedy, and in dangerous cases I would recommend the ointment of corrosive sublimate in preference to the common blisters which act much more slowly. In active cases of this disease, ipecacuanha and calomel, given so as to excite slight nausea, will be advisable.

## SECTION III.

### *Of the Pleurisy.*

The reader before he proceed to prescribe in a pleurisy, should turn to the article on *peripneumony*. A genuine pleurisy is not found in practice, except among the athletick people of healthy neighbourhoods. This disease is generally brought on by rash exposure, to cold

or night air, fatigue, too thin clothing, and especially neglecting to put on clothing, which may have been uncomfortably warm during the day. Nothing can be more improper than neglect in this respect; every labourer should put on his hat, coat, shoes, &c. as soon as he leaves off work and feels cooler.

Chills and acute pain or stitches, generally announce the attack of pleurisy; these stitches soon become intolerable, shooting towards the shoulder blades, or among the ribs, particularly on drawing breath. The breathing is confined and difficult, the pulse is full, strong and tense. A cough, often slight at the commencement, but increases as the disease advances, with some spitting, generally streaked with blood.

*Treatment.*—We must bleed largely and repeatedly to subdue a violent pleurisy, and in general, the benefit from bleeding will be greatest, from abstracting the blood suddenly; we should make a large orifice and draw in the case of a stout man, from sixteen to twenty-four ounces, or in other words, from one to three pints of blood should be taken at the first bleeding, afterwards they should be less, but always large, and repeated twice a day till the symptoms abate.

If the case is obstinate, after plentiful bleeding, we may apply a large blister over the breast; give spirits hartshorn in small doses every two hours, or the decoction of seneka, with small doses of calomel. Tartar emetick dissolved in a good deal of water, or ipecacuanha in small doses, so as to excite a slight nausea without vomiting, may be given during the inflammatory symptoms: two grains of tartar emetick, in a pint of water, will form a good febrifuge in this disease. The bowels should be kept open, but purging will not have much effect.

The lowest possible diet should be used, such as toasted bread soaked in water; a roasted apple, or a little very weak tea with bread. For drink, milk and water, thin barley water, apple water, toast and water, thin flaxseed tea with a little liquorice, or milk whey, or cremor tartar water, may be used freely.

Soon as the cough, fever and stiches abate, leave the case to nature, taking great care not to return to cordial or heating drinks, or animal food, but with the utmost caution.

Should this disease terminate in an obstinate cough, which will seldom be the case if it is properly treated, a perpetual blister should be applied to the breast; and if we are well assured no scrofulous taint exists, we should have recourse to calomel, so as to bring on a soreness of the mouth, and continue it for a period, of from one to two or three weeks, as may be necessary, avoiding a salivation, by quitting the calomel occasionally. Every person rising out of a pleurisy, must dress warmer than usual, and wear flannel next the skin.

## SECTION IV.

### *Of the Croup, or Hives.*

Children, under seven years, are most subject to croup; it sometimes attacks at a very early period of life, and becomes in some measure habitual; recurring in some children, at times, in form of a common cold; but more frequently very suddenly. Children who are put to bed apparently quite well, or, perhaps, sometimes slightly indisposed, are liable to be attacked with this disease in a violent and dangerous manner; so that it becomes the absolute duty of those present, to rise and administer some suitable remedy, which should always be at hand; for to wait till morning would often be to wait till the case is beyond all hope.

It is an unquestionable fact, that no disease is so completely under the control of medicine, if taken in its forming stage; nor is there one more mortal, when neglected or wrong treated. This disease may be known by a peculiar hoarseness, which, with the difficulty of breathing, plainly shows that there is some obstruction in the windpipe. This peculiar hoarse, suffocating sound, attends every spell of coughing, and gives a curious choking-like sound to the act of breathing. So characteristick is this hoarseness, that a person who has seen

croup but once, could scarcely mistake it afterwards. The face has always an unpleasant staring appearance: the difficulty of getting breath is so great, that such patients are extremely restless, and labour with all the efforts which they can command, over the muscles of the belly and chest.

When the disease is violent, it is called bold, or bowel hives. Sometimes it is attended with eruptions or pimples on the body; but, these have no essential connexion with the disease. When this disease is discovered at an early stage, a vomit of white vitriol, ipecacuanha, or antimonial wine, provided it operates freely, is sure to check the disease. If it does, it is only necessary to guard, a few days, against cold; not, however, denying the privilege of going abroad, if the weather is good.

A decoction of seneka, given three or four times a day, may be useful in removing the slight remains of the disease. If the case yield not to a brisk vomit, as above mentioned, calomel should be given in large doses: from five, to twenty grains, may be given, twice a day. At the same time, if the vomit has not checked the complaint, bleeding must be had recourse to, as an indispensable remedy; and should be repeated as often as suffocation seems threatening.

If the case becomes protracted, the use of the calomel must be continued; blisters may be applied, and a strong decoction of seneka given. But I have seen more benefit derived from the application of linseed meal, or bread and milk poultice, with flaxseed boiled in it: this is to be applied over the whole breast, and down to the navel, as warm as it can be reasonably borne.

Weak onion tea, or milk and water, will be proper drinks. No cordials, nor animal, or even solid food, should be given, till the patient is quite recovered. And even when well, in children who are subject to this complaint, full meals are among the most frequent exciting causes of the croup.

Croup is sometimes protracted so as to continue for several days; it will be necessary in such cases to give the calomel in smaller doses, after the second day of using it. The warm bath is sometimes useful in the

close of the disease, or after free evacuations. In very weakly, delicate children, the treatment of this disease may be most safely trusted to large doses of calomel.

I cannot conclude this article without cautioning the people of the country, in the most solemn manner, against the extremely dangerous practice recommended by Buchan, in his Domestick Medicine. How far this practice may answer in England, I will not undertake to say; but of all things it would be the most dangerous, in the middle, or northern states. I do not believe one in fifty would escape from a severe spell of croup, under such treatment.

It is even questionable whether the practice will apply to England generally, for the celebrated Darwin calls it a pleurisy of the windpipe; a name, at once expressive of his idea of the disease, and of a depleting plan of treatment. Many English authors, of the highest respectability, consider croup a disease highly inflammatory. Cullen, Thomas, Wilson, &c. are quite decided on this subject, against the opinion of Buchan.

## SECTION V.

### *Of a Common Cold.*

All those affections which go by the name of common colds, are accompanied with some feverishness, however slight; and, therefore, when we are conscious of having caught cold, as manifested by obstructed watery nose; inflamed eyes; sneezing; more or less lassitude, or want of appetite, or a slight cough: it will be sufficient in general, to avoid night, and morning, and evening air; to dress a little warmer, bathe the feet going to bed; and drinking a little warm tea, and using a reduced diet, regulated according to the violence of the case, will be advisable.

In severe colds, a total abstinence for a day or two, is a sovereign remedy with many persons. But unless some disease arises from such colds, the abstinence should never be continued long. If a cough becomes troublesome, take a little opening medicine, and if that does not afford

relief, bleeding may be necessary. If much fever or cough arise, it will be necessary to look at the sections on *peripneumony*, and on pleurisy.

Many people on taking cold have recourse to hot stews; they ought never to be used until you are well convinced no fever is lurking in the body, otherwise death may be the forfeiture, for many of our most malignant fevers, &c. commence like a common cold. A syrup of lemons, or of strong pleasant vinegar, will often be useful, and in old cases, a syrup or other preparations of horehound, or a conserve of Indian turnip, with regular exercise, and avoiding wet beds, wet feet, or exposure in damp weather, will restore the health.

## SECTION VI.

### *Of Inflammation of the Stomach, or Gastritis.*

One of the most infallible signs of inflammation of the stomach, is severe pain on taking food, or drink, together with some fulness and pain from pressure being made on the part: a constant symptom of this disease is, a small, quick, and tense pulse; nausea, or vomiting is common on taking food or drink. Faintness, cold extremities, difficult breathing, &c. are also generally present. A hiccup is an unpleasant symptom. In all the cases of this disease which I have seen, neither food, nor drink of any kind could be borne, until the disease was much abated. Indeed I think it highly probable, digestion is wholly suspended during active inflammation of the stomach, and, therefore, no advantage can arise from taking food, or even drink, except in very small quantity, for the purpose of lubricating the surface.

A spoonful of milk and water, or a thin decoction of slippery elm bark, or thin gruel, taken in quantities of a single table spoonful, and repeated frequently, is all that ought to be given by the mouth; no medicines, food, or drinks, in any considerable quantity, can be given without the utmost hazard, and no benefit can possibly arise from it. Injections of a mild opening quality should be given frequently, and when the bowels are well opened,

injections of broth, containing each a few grains of calomel, should be given. But the patient's safety depends principally on repeated bleedings, till we raise the pulse, and relieve the pain, and the soreness, which arises from pressure.

Few diseases deceive us more in the appearance of the pulse than this, and few require a more free use of the lancet. In all cases, a large blister should be applied over the stomach. After free bleeding, if the pain and other symptoms have not evidently abated, the warm bath should be used, and repeated according to circumstances. When the disease is checked, it requires great care in returning to the usual diet and drinks. No stimulants or solid harsh food ought to be ventured on for several days, nor indeed till the strength of the general system is pretty well restored by means of exercise.

## SECTION VII.

### *Of Inflammation of the Intestines, or Enteritis.*

This affection is attended with a constant severe pain of the bowels, eructations of wind, nausea, quick, tense, small pulse; obstructed bowels; and sometimes with a vomiting of the feces; great debility; anxiety. In this disease we must bleed freely, and repeat according to circumstances. A large blister should be applied; mild injections must be given frequently, or what is better, a large quantity of warm water: a gallon or two may be thrown up from a large bladder as rapidly as possible. Soon as free depletion has been made, calomel in doses of five to ten grains, should be given, combined with a little opium, and repeated every six hours, till there is an abatement; should none of these remedies succeed in the course of the second day, the warm bath should be had recourse to. The diet must be light, such as milk, light broth, well boiled meats, oysters, gruel, rice well boiled, &c. for some time after the disease is checked. During the disease the patient should avoid food and drink, except chicken water, milk and water, slippery elm bark water, or other light mucilaginous drinks.

In distinguishing this disease from colick, regard should principally be had to the circumstance of extreme debility, which always accompanies it; while in colick the patient is seldom so sensible of weakness; nor is the pulse so much disturbed in the colick. All these inflammatory affections of the viscera are highly dangerous, and, therefore, advice should always be had, where it is practicable.

## SECTION VIII.

### *Of Inflammation of the Kidneys, or Nephritis.*

An inflammation of the kidneys may arise from various causes; but its most common known causes are *calculi,* formed within *them;* the extravagant use of cantharides, or spirits turpentine; but most frequently I have met with this disease, as arising from violence done the parts, by blows, falls, &c. There is generally a severe dull pain in the loins, extending down one or both thighs. Little urine, sometimes bloody, but at other times pale. It is often attended with nausea or vomiting, and the pain, in severe cases, seems to affect the abdomen with an inflammatory diathesis; and general fever is a frequent concomitant.

In this disease we must bleed with freedom, in healthy habits; give cooling mucilaginous drinks, as slippery elm bark water, an infusion of quince seed, or water melon seed, or milk and water, taken cool. The bowels should be opened with emollient injections; and these assisted in their operation with reasonable doses of calomel: no drastick, or saline article should be used: nitre, cremor tartar, &c. must be avoided. The safest article of this class of medicine, is phosphorated soda. In severe cases, blisters to the back, produced by the application of the ointment of corrosive sublimate, will be advisable. Cantharides must not be applied on any account; it might be productive of much mischief. A very low diet is essential.

Should this treatment not remove the complaint in five or six days, we must omit bleeding, and content our-

selves with keeping the bowels open with injections of mild articles; rest, and moderate diet, and await the issue of suppuration, which will probably take place; even now, mucilaginous drinks are necessary; small quantities of laudanum may be given. Cordial and saline articles, must be avoided with care, and the patient put on the use of the uva ursi: from twenty to sixty grains may be taken three times a day, in milk, or water; and the patient should live on a milk diet. Exercise in a carriage will be most suitable.

## SECTION IX.

### *Of Inflammation of the Bladder, or Cystitis.*

Inflammation of the bladder may be known by more or less fever, pain and swelling in the lower part of the belly; frequent difficult and painful discharges of water; tenesmus or inclination to go to stool. Bleeding will be necessary, according to circumstances, and must be repeated till the severity of the symptoms abate. The bowels should be freely opened with mild injections, as linseed tea, slippery elm bark water, milk and water, or even warm water. Castor oil, magnesia, or calomel, may be given to open the bowels; but no saline, nor diuretick articles, are admissible. In obstinate cases the warm bath may be useful, after suitable bleeding.

Should the case become protracted, we must continue the mucilaginous drinks, and use the *uva ursi;* from twenty to sixty grains, three times a day, may be taken in milk or water, as may be most agreeable. It is essential in this disease to encourage a perspiration, by suitable clothing, and avoiding sudden changes of temperature; but no heating *sudorificks* can be used, without much danger.

## SECTION X.

### *Of Inflammation of the Diaphram, or Paraphrenitis.*

This disease is attended with an acute pain low down in the breast; particularly severe when we let in or pass out the breath: this induces the patient to hold in his belly, and breathe frequent and feebly. These symptoms are generally attended with, and much aggravated by, a cough and frequent sneezing. Every effort of the body augments the pain; as going to stool, taking food, &c. An unpleasant grinning of the face is often present; and in severe cases, delirium.

Blood-letting is the principal remedy in this disease; the bleedings must be pretty large, and frequently repeated. This disease will frequently require more frequent bleedings than the pleurisy; but we should never make them so large. The free use of purgative injections is indispensable. Nausea should be slightly kept up, after pretty free bleedings, by the use of very small doses of ipecacuanha.

The diet must be low and thin; and the drinks cool, and of the mildest kinds. It is particularly necessary, in this affection, to remain as quiet as possible. Purging medicines may also be used to advantage; but I must repeat, that in the height of this complaint the patient should scarcely move, and depend on the lancet. In obstinate cases, a blister should be applied over the part affected.

## SECTION XI.

### *Of Inflammation of the Peritoneum, or Peritonitis.*

This affection may be known by an acute pain through the abdomen, attended with extreme soreness when pressure is made on the part. Where this inflammation runs high, the patient can scarcely bear the bed-clothes; there is more or less fever, and short hurried breathing. This disease most commonly arises from wounds, or ruptures; and is often attended with great danger.

In all wounds of the abdomen, large anodynes of solid opium should be given, which will go far to prevent this disease. But, after inflammation has come on, opium would be highly dangerous. Repeated bleedings, the free use of mild injections, and copious evacuations from the bowels; for which purpose, castor oil, calomel, salts, rochelle salts, or senna and manna, may be used. Large quantities of warm water may be injected into the bowels, and fomentations applied outwardly.

## SECTION XII.

### *Of Inflammation of the Liver, or Hepatitis.*

Inflammation of the liver is less distinct in its symptoms, at least to an unskilful person, than that in the other viscera. It is commonly attended with dull, severe pain, in the right side of the belly; more especially when the patient moves suddenly, or when pressure is made on the part. A fulness is often discovered, particularly on feeling up under the false ribs. There is some fever, some difficulty of breathing; and often a short dry cough. A dull pain extends up about the shoulder of the right side, very often. Sometimes symptoms of jaundice are present. When the inflammation is situated on the upper edge of the liver, a pain and soreness on pressure is felt over the stomach, or just below the pit of the breast. Frequently, however, this disease is only discovered at an early stage, by pretty firm pressure on the part; or by an inability to lie on the opposite or left side of the body. The pulse is most commonly not very much affected. This organ is so essentially different in its organization, and connexion with the circulating system, that we have no cause for wonder if we find the symptoms less distinct; and the treatment materially different.

It may be remarked of the liver, that although it bears some resemblance to the lungs, in having a great many blood vessels, yet, those of the lungs, are composed of an equal number of arteries and veins, while those of the liver are almost wholly veins. The circulation through the liver is venous, slow, and I might almost say chymi-

cal, or attractive, for, its arteries are extremely small, and few, barely sufficient to give life to its substance; while the great tissue of veins carry through the venous blood, without any well marked propelling force; and as it passes along, the bile is secreted from the dark blood, collected from the other viscera, &c.

In this disease we must bleed pretty freely at the commencement. The bowels should be well opened with injections. Then, a large blister may be applied, over the part affected. After which, the cure may be principally trusted to the use of calomel and opium. Calomel may be given in doses of from two to five grains twice a day, combined with one or two grains of opium for each day. The abdomen, more especially over the right side, and stomach, should be rubbed with mercurial ointment. If the pulse remains active, with some pain, or much cough, we should repeat the bleedings. Warm fomentations which are often useful in other inflammations, are never allowable in this. They increase the risk of suppuration, a frequent consequence of imflammation of the liver.

Should the case prove obstinate, we must persevere with the mercury until a salivation is produced; and keep it up until the case yields, which will very generally be the case, in persons of temperate habits, provided the case has not been neglected, or improperly treated, in the early stage of it. Should the disease continue after a reasonable continuance of the salivation, we may view the disease as settled into scirrhus, and no longer under the control of medicine.

I have seen many cases of suppuration in the liver, which pointing outwards, were opened low down near the back; and one case, where an abscess on the upper edge of the liver pointing outwards, was opened above the navel: most of the cases I have seen, were children; and they all recovered. If we are even certain suppuration has taken place in the liver, we are by no means to apply poultices, or fomentations; their use is extremely doubtful, if not really dangerous. Fever must be kept down by the common remedies for fever: mercury can no longer be useful. The patient must be kept quiet:

and await the suppuration. A skilful practitioner must always be called; or, if it is possible such a thing is not obtainable, a very small poultice of bread and milk may be applied for a day or two, over the prominent part, and then a puncture made with a common thumb lancet. But in all cases, it must be well ascertained, by feeling with the finger, that pus is actually formed, and lodged superficially, before we make such puncture; and in all doubtful cases it is best to wait till we are certain.

Through the whole treatment of this disease, the patient must be kept on a very low bland diet; as well boiled rice, milk, buttermilk, with wheat or rye mush; or well mashed potato, a roasted apple; very weak tea, with bread, &c. For drink, mucilaginous articles alone should be taken, as milk and water, barley water, slippery elm water, &c. No saline or drastick articles should be taken, either in drink, food, or medicine; all cordials or animal food would be poison for such patients. After the disease is removed, in delicate persons, or those of intemperate habits, the nitrick acid should be used pretty freely for some time.

## SECTION XIII.

### *Of Inflammation of the Brain, or Phrenitis.*

Phrenitis is generally attended with symptoms of violent inflammatory fever; but as in inflammatory fevers we often meet with a depressed small pulse, so, in violent cases of inflammation of the brain, we often find the same kind of small tense pulse. This is supposed to arise from a more immediate affection of the substance of the brain, while the more active pulse, is considered an evidence of an affection of the membranes. They are equally dangerous, for if the inflammation of the substance of the brain destroys more suddenly, by an exhaustion or destruction of the brainular energies; inflammation of the membranes, by pouring out watery congestions, is sure ultimately to produce the same effect.

But after all, inflammation can probably never exist to any considerable amount, without affecting both the mat-

ter of the brain and its membranes. This disease is most generally known, in this country, by the name of pleurisy of the head: a name well chosen, from the strong resemblance in the proper treatment between it and a pleurisy, properly so called; in addition to symptoms of severe fever, there is violent pain in the head; intolerance to light, and loud sounds; tinkling in the ears; delirium, sometimes low and muttering, at other times outrageous; violent beatings of the temporal arteries, and those of the neck; flushings of the face; dilated pupils, or very much contracted; costiveness; inability to sleep.

In country practice, I have generally found it connected with inflammatory affections of the breast. This disease is sometimes brought on by exposure to the sun; especially when the person has undergone fatigue, or has been exposed to the cool night air: this is called a stroke of the sun.

In the treatment of this disease, we must generally bleed largely; but regard must always be had to the patient's constitution; and to the constitution of the weather; it often attends the low grade of typhoid fever, or bastard *peripneumony*, of our country: and large bleedings in such cases would be fatal. I shall first point out a suitable treatment for a genuine simple inflammation of the brain. We must bleed largely and frequently; give the most active purgatives, as jalap and calomel, or calomel and aloes—purgative injections. Constant applications of cold vinegar and water to the head; strict quietness: cooling drinks, of nitre or cremor tartar, tamarinds, &c. A total abstinence from solid, or cordial, or animal food: lay the head high; avoid strong light, or much talking, by the patient, or others. Leeches, or cupping glasses about the head, on parts first scarified: or the temporal artery should be cut, and suffered to bleed freely; this is attended with no danger, and will cease bleeding on a moderate pressure being applied.

On the other hand, should delicate weakly persons be affected with this disease; or should it succeed other diseases, which have reduced the patient much; or should we have well grounded fears, that the patient is also af-

fected with an epidemick of a low grade; we must bleed from the arm with great caution, if at all. Stimulant purging injections, as salts, or a decoction of senna, with a very little aloes, may be given; or calomel and aloes, may be given by the mouth, so as to purge pretty freely. Blisters should be applied on the neck; and sinapisms to the feet. Cupping and leeches, should be used freely, about the head; and if these rouse up a more inflammatory set of symptoms; we must bleed cautiously from the arm, or open the temporal artery. Should the symptoms not abate speedily; the head should be shaved, and a blister applied over the scalp; this should never be delayed beyond the second day; and in severe cases, it would be best to apply it at first.

In those low cases, calomel may be given in small doses; a little light vegetable food should be taken if the appetite call for it. A little coffee, or weak chocolate, given in very small quantities at a time, may be allowed; but it would always be best to wait a day or two, before we venture on any thing stronger than toast water, milk and water, &c. This is a dangerous disease, and must be promptly treated, or it will soon terminate in death, or dropsy of the brain; a disease that is wholly beyond our reach, after it is fully formed.

## SECTION XIV.

### *General Observations on Visceral Inflammation.*

A very generally received opinion of inflammation, is, that it terminates in three ways.

1st. By resolution, or scattering.

2d. By suppuration.

3d. Gangrene, or mortification. As it respects inflammation in muscular parts, this is nearly correct; and sufficiently points out its consequences. But in examining carefully into inflammation of the viscera, or internal organs, we find great variety, and each organ having a peculiar termination of its inflammation. I shall briefly enumerate the most remarkable.

Inflammation of the lungs, seldom terminates in gangrene, or mortification: but in suppuration, called a vomica; in effusion; in chronick inflammation, as consumption; and sometimes in what Dr. Rush has called suffocated excitement; in which case, he supposes the excitement of so high a grade, as to destroy life, before the common appearances of inflammation occurs. I am disposed to attribute those cases to an affection of the brainular matter itself. John Bell, has given it as his opinion, and I concur in the opinion, [See observations on the brain, in the preceding part of this book,] that a matter resembling the madullary part of the brain, accompanies the nerves throughout the whole body. I consider this kind of inflammation or excitement as operating on this nervous matter, and it is sometimes situated in the brain of the head; in the stomach; intestines; heart; and, perhaps, sometimes affecting the whole system. Cases of it are often found in the croup: many dissections of patients who have died of *cynanche trachealis*, with the most imflammatory appearances before death, exhibited no marks of inflammation after death. This kind of affection seems to differ from common inflammation attended with *error loci*, or congestions; in this, that while pain, fever, and suppuration, attend the latter; the former is occasioned by an overwhelming stimulus, which destroys the living principle at once.

I am aware, however, that we might often be mistaken, were we to judge alone from the circumstance of no marks of inflammation being found after death; for the vessels may empty themselves from congestions of blood, &c. in the very struggles of death. But the many cases which put on inflammatory appearances, and which terminate before the usual course of inflammation, plainly shows, that something like what I have hinted at, often occurs; and the liver is probably the only organ exempt from this kind of brainular inflammation.

Effusion into the lungs, when the body is very low, is a most dangerous symptom; and as it is always the consequence of inflammation, we should endeavour by prompt treatment, to arrest this fatal tendency.

Inflammation of the stomach, is most likely to terminate in mortification; sometimes in scirrhus: that of the bowels, in *introsuseption*, or one part of the gut slipping into another, and thus producing strangulation and mortification; in chronick inflammation, or in little tumours.

Inflammation of the uterus, is liable to terminate in chronick inflammation, mortification, or scirrhus: that of the liver, in suppuration, torpor, chronick inflammation, and scirrhus: that of the brain, in congestions of water or blood; producing dropsy or apoplexy, insanity, convulsions, or epilepsy. Those different consequences of visceral inflammation are pointed out to show, that notwithstanding all inflammatory affections are, in a general view, to be treated on the same principles, or in other words, although evacuations, rest, abstinence, free dilution, with mild, weak, cool, or tepid drinks, &c. are the leading articles, there still is an absolute necessity for referring to the treatment laid down for each viscus or organ. I am met here by an opinion which I heard the illustrious Rush make in one of his lectures; that in our efforts for the removal of inflammation of the chest, we could obtain little aid from purging; that the lancet alone, would arrest such affections with that promptitude which is essential; while, in inflammation of the head, severe purging seemed more especially suited; and that, although the use of the lancet was indispensable, without purging we could seldom succeed to our wishes.

Having now completed my observations on visceral inflammation, with all of which the general system sympathizes, I have one further remark to make; and then shall proceed to describe a set of diseases, principally characterized by local inflammation, but of a different kind, and accompanied also with general febrile symptoms.

In examining patients labouring under visceral obstructions, we sometimes meet with the humbling fact, that such is the force of the disease, that the organ principally affected is unable to express its suffering; while a neighbouring one, but slightly affected, shall sympathize, give pain, and thus lead us from the real seat of

the disease; this is most easily seen in the sympathetick affections of the stomach, and where the brain, kidneys, &c. are affected: other sympathies, much less known, sometimes occur in the bladder, and other organs. These should induce us to examine our patients daily; and always in visceral affections, feel over the chest and abdomen, firmly, so as to be certain our views are just.

It may not be much out of place here, to remark, that abscesses on the upper part of the liver, have often found their way into the lungs, and were thus carried upwards, and discharged by expectoration. I have known one case of long standing, and consumption has not followed.*

Lastly. In all suppurations of the viscera, where the discharge is great, we must have recourse to tonicks, as bark, the acids, bitters, light nourishing diet and drinks, or the patient's strength will fail.

## SECTION XV.

### *Of the Erysipelas, or St. Anthony's Fire.*

This disease is seldom dangerous, unless symptomatick of some other disease; but when it has once affected a person severely, they are very liable to new attacks on getting slight colds, or using cordial or stimulant articles. It most commonly attacks adults; but children are also frequently affected with it. Common precursors of fever, as chills, &c. generally usher in erysipelas. Sick stomach, or vomiting attends, with headach, backach, heat of the skin, restlessness, quick tense pulse, and some difficulty of breathing. If it is not preceded, or accompanied with a swelling and redness of the face, by the second or third day, the face swells; the eyes are closed; pimples or watery pustules

* It may not be amiss to remark that, Larrey, an eminent French army-surgeon, has recorded several cases, where, on dissection, an opening was found through the diaphragm into the lungs, of patients who died of affections of the liver.

I mention these cases because the possibility of such an occurrence has been denied by some physicians.

appear, which often extend to the breast, and even over the whole body; these are at length filled with yellow pus, or matter.

There is also another kind of erysipelas, which might properly be called the dry: it comes on suddenly. The first notice of it is an itching and heat in the skin, which rises up all over the body, even among the hair of the head, in lumps or welts. It is often attended with difficult respiration, which sometimes amounts almost to suffocation. The itching, and smarting, is sometimes so intolerable as to distract the patient, and in a few minutes continuance, is almost more than human nature can bear; yet, I have never seen it prove fatal; it generally goes off almost as suddenly as it came on. This has been called nettle rash; and, in the country, very improperly, hives, which is a very different disease.

The best remedy in this kind of erysipelas, is to rub over the body smartly with flour, and rye flour is reckoned the best. Give an emetick of antimonial wine; afterwards, a little cooling physick may be necessary.

The common erysipelas, has been also called wild fire, &c. Small repeated bleedings with cooling purgatives, and injections; cooling drinks, containing cremor tartar, or a little nitre; or very small doses of salts, as two drams twice a day, with a little ipecacuanha; and strict abstinence, will generally remove this disease. If it has not been opposed in time, gangrene will sometimes follow; in those cases the bark should be given freely, and the parts washed with a mixture of equal parts, spirits camphor and tincture tolu; or camphorated spirits and sweet oil, shook well together; and if the symptoms do not amend in a few hours, a large blister must be applied.

During the early or inflammatory stage of the eruption, we should by no means apply any repelling washes, or ointments; the first, may repel the inflammation to the brain or lungs, which is a very common occurrence; and the latter, is apt to leave ulcers; which are sure to mark the face. The only thing which should be applied outwardly, is dry flour, or finely powdered starch, or prepared chalk.

There is also another variety of erysipelas, confined to the legs, called the rose. This is apt to become chronick, and therefore ought to be promptly treated. The best remedy for this disease, in its forming stage, is blistering over the part; bleeding moderately from the arm; cooling purges, and drinks, and a low diet. All spices, spirits, and animal food, must be avoided in an erysipelas.

Should the rose become established, all the usual remedies for strengthening the constitution must be resorted to; the part affected should be frequently bathed with a strong decoction of oak bark; or cold vinegar and spirits of some kind; and an issue put into the arm. These remedies, with temperate habits, will often remove this troublesome disease.

## SECTION XVI.

### *Of the Scarlet Fever.*

This fever comes on in the usual way, with chills and heat; nausea; headach; pains in the back, &c. The skin is soon covered with a deep red eruption; in blotches sometimes, at other times all over the body. These detach the scarfskin, and it falls off in thin scales in three or four days. A genuine scarlet fever is a mild disease, and requires nothing but rest; strict low diet; the mildest tepid drinks; a little cooling physick; and in severe cases, abstracting a little blood will be necessary.

There, however, are low or malignant fevers, accompanied with the appearances of scarlet fever. These are generally referrible to malignant sore throat; or what has been called spotted fevers. This grade of fever requires an opposite treatment, to that above laid down for common scarlet fever. And it will be necessary to turn to the remarks which are to be found in this work, on malignant fevers.

This low grade of scarlet fever, however, should be treated first with an emetick, of ipecacuanha, or antimonial wine; then the bark, conjoined with snakeroot, or camphor, and the mineral acids well diluted; coffee,

bitter teas, cool; and sometimes wine whey should be given; broth may be allowed, and ripe fruits, &c. It is essential in every grade of this disease, to observe strict cleanliness; and to have the patient's room well ventilated; but sudden changes of temperature, are carefully to be avoided. This disease puts on much of the appearance of an epidemick.

## SECTION XVII.

### *Of the Chickenpox.*

This disease affects persons but once in life, and it is mostly in infancy. It generally comes on with slight febrile symptoms; these are followed the second or third day, by pimples distinctly defined, and generally but few in number. In six or seven days, from the attack, the pustules are dried up and fall off, sometimes leaving pits, which never disappear. These pustules are always filled with limpid, or a whey-coloured fluid, which distinguishes them from smallpox, which last are always filled with yellow pus.

It was once a matter of the utmost importance to distinguish between the chicken and the smallpox; but as we may now always have our children secured by vaccination from the smallpox, it cannot be of so much importance, nor can we easily err. I have once seen this disease accompanied with high fever and delirium.

The patient should be kept cool; take a little cooling physick, and live abstemiously, and by carefully avoiding heating drinks, or much animal food, the case soon terminates in health.

## SECTION XVIII.

### *Of the Quinsey, or Inflammation of the Throat.*

This like all other local inflammation, is attended with more or less fever. But is principally known by pain in the throat with swelling. This swelling and an inflammation is evident on looking into the upper part of

the throat; pain and difficulty in swallowing comes on; and soon renders it impossible to swallow solids. And when the disease runs high, breathing is painful, and difficult; and a total inability to swallow attends, so that if the patient suffers fluids to pass into his throat, a sense of suffocation is excited; and the drink is forced, with impetuosity through the nose. A constant repetition of the act of swallowing takes place; and troubles the patient excessively.

If the disease is well treated, it is seldom dangerous; but fatal errours might arise from mistaking malignant sore throat for this mild disease. By attention to the prevailing diseases, and often from the patient's being subject to quinsey, we may distinguish this more simple disease from the malignant. This disease is generally excited by cold, dampness, &c. succeeding fatigue, or overheating. It is, however, often excited by breathing in a room very much crowded. If it is attacked early, suppuration may mostly be avoided. We should bleed once or twice; purge freely; enjoin strict abstinence; the weakest tepid drinks should be used. A piece of flannel should be applied, and the outside of the throat frequently rubbed with volatile liniment. If the symptoms still advance, we must await suppuration; and, in general, it will only be necessary to keep quiet; the bowels open; and gargle the throat frequently with milk and water. If symptoms of suffocation threaten, we must bleed moderately, even during suppuration; and gargle frequently with a gargle of sage tea, containing vinegar and honey. A blister applied round the throat at an early stage of this disease, will be useful, by preventing suppuration. It sometimes will be necessary to keep up slight nausea, by the use of ipecacuanha, or antimonial wine.

If the suppuration is tardy, a poultice of onions should be applied. It will always be necessary to guard the neck well from cold; to avoid crowded rooms, and preserve the feet warm and dry, after a spell of quinsey. For, persons once severely affected with it, are liable to repeated attacks on getting cold, &c.

## SECTION XIX.

### *Of Mumps, or Angina Parotidæa.*

The mumps is a painful swelling of the *parotid glands*. It generally comes on with some fever; stiffness of the neck; then comes swellings behind the angles of the lower jaw, and severe pain on moving the jaws; severe stinging sensations through the inflamed glands, especially on tasting any article not entirely *insipid:* the swelling becomes so considerable as to affect swallowing, in many cases. In three or four days the swelling, mostly, begins to subside; and sometimes is suddenly translated to the *scrotum* in men, or *mammæ* in women.

This disease is generally mild, and unattended with danger; but sometimes the fever runs very high, and is attended with delirium, and pain of the *testes*, or of the *mammæ;* and requires much care. This disease sometimes appears in the character of an epidemick: and attacks but once in life. In most cases, it will only be necessary to enjoin rest; and to avoid cold, or wet weather; to wear flannel round the neck; rub the swelling with the marrow of salted hog's jaws; or a little weak volatile liniment. But if the symptoms run high, we must bleed according to the urgency of the case.

If the disease is translated from the neck as abovementioned, apply a blister to the throat, of considerable size: and give a dose or two of cooling physick. No local application ought to be allowed, in any case, to the testes or mammæ. The diet must be abstemious; and the drinks cooling.

## SECTION XX.

### *Of the Miliary Fever.*

This is seldom a primary disease, but often a symptom of other fevers; partaking of every grade. Being sometimes highly inflammatory, and at others, of a malignant cast. All the cases which I have seen, of this

fever, were in childbed women; and always proceeded from a too hot regimen, and close rooms, &c. There was an eruption of very small pimples, of a pretty bright red colour, attended with itching of the skin; and smarting of the eyes; high fever, with full quick pulse; chills and heat, blended, or alternating with each other; headach; and sometimes delirium; great thirst, and some difficulty of breathing: very generally accompanied with a retention of the usual discharges at this time.

Bleed, according to circumstances; but in healthy women at an early stage of the disease, we should bleed once pretty copiously. Open the bowels with castor oil, rochelle salts, or senna and manna, with a few grains of soda; enjoin a cool regimen, with the mildest tepid, or rather cool drinks. Cremor tartar, and small doses of nitre, will be useful.

In mild cases we may content ourselves with opening the bowels with cooling injections, which are always necessary for childbed women, and a cool very low regimen, and frequent changes of linen, and bed clothes, together with free ventilation by removing bed curtains, &c. taking care always to avoid a draught of cold air, immediately on the patient; as well as all heating articles of food, drink or medicine. And it will be a good rule with such patients, if able, to dress and lie on the bed during the day. This treatment will apply to all persons affected with a miliary fever of a common inflammatory grade. For the treatment in malignant fevers, taking on this kind of eruption on the skin, I must refer the reader to the various articles on malignant fevers, &c.

## SECTION XXI.

### *Of Malignant Fever, arising from Local Causes.*

This fever has usually been considered a putrid fever, but I have elsewhere said the term putrid should be banished from our medical nomenclature. This opinion is not mine, but was propagated by Dr. Rush, and others. We find it placed in Rush's theory of fever, at the head

of his scale. It is there supposed to transcend the common force of inflammatory action. I have, in a preceding article said, [See general observations on visceral inflammation] that the sudden fatal termination of those fevers, may be owing to inflammation passing by the vessels concerned in common inflammation, and attacking the brainular or sensorial system.

This, however, does not change the case as respects its treatment, it is still neither a putrid fever, which is a thing impossible; nor a nervous disease, according to the commonly received notions of nervous diseases. But a disease of the highest grade, seated in an organ most essential to life; and it is only by reducing the circulating powers that we invite the disease from the nerves, to the blood vessels, or by more slow remedies, equalise the morbid excitement. This is always a difficult thing, for in a few hours, and sometimes even before disease is perceived, the blood vessels, and whole system is invaded by this nervous inflammation, and prostrated below a power of reaction.

Malignant fever is generally known by sudden, and great prostration of strength; sick stomach, an absence of chills, and most generally of pain. A slow, depressed, or intermitting pulse takes place; and is soon followed by extreme anxiety and restlessness; disposition to faint,on moving. Sometimes with diarrhœa, but oftener with torpor of the bowels, and costiveness, vomiting, dulness and heaviness of the eyes, attended often with inflammation, soreness about the stomach, a disposition to sigh, tremours. The tongue is usually, as well as the teeth, covered with a black crust. To these symptoms, often succeed eruptions on the skin, or in the mouth. The skin is sometimes preternaturally warm, at other times cold.

This form of fever is found in jails, *dirty* hospitals; in smallpox, hydrophobia, from taking opium, and in yellow fever, &c. When it is not occasioned by an epidemical atmosphere, which is often the case, it is strictly a *fortuitous* disease, having its origin from filthiness, unwholesome diet, and exposure to great fatigue, night air, much wet, &c. If due regard is had to cleanliness, and high, open, dry grounds, chosen for camps; and healthy

situations, spacious rooms, open yards, free ventilation, strictest possible cleanliness, frequent white washing, &c. in hospitals or jails, is observed, we should hear but little of malignant fever in those places. This fever may be excited in camps, &c. from using too much animal food; and more especially from wet straw, too long used, together with neglect respecting privies, slaughtering places, and the usual offals. Where those things are not most rigidly attended to, and buried or burned, malignant fever or dysentery, will thin the ranks.

In the cure of those fevers, we are to commence with free ventilation and attention to cleanliness, gentle emeticks of ipecacuanha and calomel; and, if called early, a little blood should be taken; and, if the pulse rise, or active pains come on, we must repeat the bleeding. The bowels should be freely opened with calomel, and this medicine continued, in small doses, two or three times a day. The mildest diaphoreticks should be given, as salt tartar, or soda, mixed with lemonade, or vinegar sugar and water, or weak punch, cremor tartar water, with a very little ipecacuanha in it, and the most perfect rest enjoined.

If the patient seem to sink under this treatment, we should give ether; pretty generous punch, made of fruit, vinegar, or cremor tartar; push the calomel; blister over the stomach; apply sinapisms to the feet. Give cool coffee, or bitter infusions, for drink. If inflammation appears in the mouth or throat, a mixture of soda, or salt tartar with honey and water, should be very often used as a gargle. And in very low cases, an infusion of red pepper in water, should be used in the same way. The bark, or other stimulants, can seldom be safe, until the patient is convalescent, when the bark and acids may be given, but commenced in small doses, and gradually increased. I have generally seen good effects from the use of the camphor powders, which will be found by reference to the list of medicines in this book.

## SECTION XXII.

### *Of Typhus Fever, arising from Local Causes.*

This fever, like the malignant just spoken of, is often found in camps, jails, *dirty* hospitals, &c. It has genenerally got the name of nervous. As this is but a low grade, or chronick form of the disease, treated on in the preceding article, I shall refer the reader to that article, and proceed to describe the symptoms, and cure, of this lowest grade of fever. In general it arises from the same causes as the malignant fever, in camps, jails, &c. which operate less forcibly, and, therefore, more slowly. This less concentrated, but long continued cause, produces a set of symptoms less violent, but chronical; and, unless skilfully treated, equally mortal.

The symptoms, commonly, are a weak frequent pulse, drowsiness, languor, tremours of the hands, a dry tongue. These symptoms are soon attended by low muttering, *coma*, delirium, *diarrhœa*, or torpor of the bowels, *subsultus tendinum*, deafness, black or dark tongue, fumblings, picking about with the fingers, and constant efforts at collecting the irregular ideas which the patient is sensible of, but cannot collect. These all give way, sometimes, to constant, heavy, uneasy sleep, from which the patient can only be roused by such violence as always seems to alarm him. The mouth is generally open during sleep, which adds to the unpleasant dryness of the tongue, mouth, and throat; utterance is generally indistinct, and often lost. Even where the organs seem to possess the power, the mind is unable to arrange ideas, so as to enable the sufferer to complete even a short sentence.

The treatment of this disease should be commenced with a gentle emetick of ipecacuanha or antimonial wine, if this does not open the bowels, injections slightly purgative, should be given. Calomel, in doses of from three to five grains, should be given: and, if the mouth is not affected in three or four days, the dose should be increased rapidly, until thirty grains, or even more, are given

per day: taking care always to provide the patient with opium; or laudanum, which must be taken in such quantities as will restrain the calomel, from acting on the bowels.

If this course does not soon affect the gums, the use of mercurial ointment should be joined, with that of the calomel, and rubbed freely into the thighs, and worn on the feet in socks or stockings. During the use of the calomel, the patient should take wine in reasonable quantity, and snakeroot, or valerian tea. This treatment will sometimes raise inflammatory symptoms, fever, full pulse, pains in some part of the body, thirst, &c. If this should happen, the patient must be bled moderately, and even repeated if the symptoms indicate it. But even here, we must not cease to press on the calomel, infusions of snakeroot, &c. but wine and opium should be withheld; always, however, recollecting, it is better to give opium than to quit the calomel, or letting the patient sink under a purging. So soon as the disease seems completely settled into a typhus, blisters should be applied freely, and repeated as fast as they heal. The bark must be began with, and used along with the calomel, if the case continues many days. In short, the principal remedies in this disease, are wine, tonicks, blisters, and mild diaphoreticks, but, more especially, calomel, to any extent which may be necessary, to affect the gums. For the frequent low spells which such patients are subject to, called by country people, the *patient* of death, pretty large doses of ether, or spirits hartshorn, will be proper. In very low cases, even raw brandy should be given, in large quantity. I have given a pint of wine, and a pint of raw strong French brandy, to patients low in this disease, every twenty-four hours; so soon as the disease seems to be subdued, a nourishing, but thin light diet should be used, with bark and wine.

I cannot close this article without a declaration, as important as it is true. I have seen many cases of this disease; I never saw one recover from the use of stimulants, without mercury. I have treated many in the way above laid down: I have never lost a patient. If I had seen but a case or two, I might admit this was accidental; but

I have seen and treated more than twenty cases, and I therefore beg leave to admonish every reader, that there is no safety in any course of treatment without mercury: but when properly treated, it is seldom mortal, should it even become protracted. It may be necessary to caution the reader, that few of our fevers remain stationary, for any considerable time. They are liable to change and become blended: typhus, sometimes, become inflammatory, and *vice versa*, so do fevers often hold a grade, between those two extremes, called typhoid, &c.

## SECTION XXIII.

### *Of a Simple Inflammatory Fever.*

This is also sometimes called a continual fever. It is rarely met with distinct from local inflammation. It generally succeeds wounds, burns, &c. and accompanies smallpox, quinsey, and many other inflammatory diseases. It, however, is sometimes met with as a primary disease, and may arise from exposure to changeable weather; heating diet, or drinks; or any other causes which may excite pleurisy, &c.

It attacks suddenly with chills, more or less severe, as the cause has acted with a greater or less force. There are pains in the bones, joints, head, sides or breast, the pulse full mostly, always tense and frequent; great heat, thirst, with considerable debility, and dry skin. Where the disease is violent, delirium, and difficult respiration attend.

In this disease we must bleed, and repeat according to circumstances. Give cooling purges once a day, and accompany them with small doses of ipecacuanha, or antimonial wine, so as to keep up a slight nausea: after the bowels have been well evacuated, the pulse and pains reduced, we may in general, trust to small doses of nitre and ipecacuanha, with very free dilution, with the most cooling drinks, as cremor tartar whey, toast and water, slippery elm water, apple water, tamarind water, &c. Almost a total abstinence is necessary till the force of the disease is checked. Toasted bread

soaked in water, roasted apples; bread with very weak tea, or a few spoonfuls of panada, without wine or spirits, will afford a sufficient diet: and even when the disease is somewhat arrested, we must return to a full diet cautiously and gradually.

A fever of this kind long continued, is a frequent cause of dropsy, and therefore should be promptly treated; nor is it without danger, without the utmost care; free ventilation and cleanliness are essential: and as you value life, avoid animal food, even broth, and also all stimulant, or heating articles of drink, &c. Hard drinkers have always more or less of this kind of fever about them, which often terminates in dropsy, and very probably sometimes in the head, when it is not suspected; and producing apoplexy, causes sudden death: or madness, or convulsions, which so often destroy drunkards.

## SECTION XXIV.

### *Of the Dropsy.*

This disease is certainly less common in the United States than some years back, owing, I suspect, to a more prompt and successful treatment of acute, or febrile diseases. For although a dropsy may arise from intemperance, too low watery diet, want of exercise, &c. in nine cases of ten, I believe, it has been occasioned by congestions, which follow visceral or other inflammation, improperly treated.

By a more free use of the lancet, cool regimen, and the universal custom of free purging in febrile affections, few chronick diseases follow them; and more especially dropsy, and hystericks, seem to have lessened. Consumption, gout, and scrofula, are now the most leading maladies, arising from acute disease. I feel it my duty in making this declaration, which I am sure comports with my observations for many years, to add, that the medical faculty share no part of the blame, in giving this new direction to our diseases. The fault lies wholly in the people, who by enervating habits, carry about a chronick debility, which occasions those new disorders: and for which there is no remedy in the *Materia Medi-*

*ca.* But *industry, temperance,* &c. are remedies which would drive chronick diseases in good measure, from our country.

Dropsy has been distinguished by different names, according to the part affected by it. A general dropsy is called an *anasarca;* that confined to the belly, *ascites; hydrops pectoris* in the breast; and *hydrocephalus,* when situated in the brain: and although a dropsy generally speaking, is to be treated on general principles, it is often necessary to vary the treatment, according to the part affected. I therefore shall first hint at a few peculiarities; and then speak of dropsy in general.

An anasarca is very generally an inflammatory disease: and may be connected with *ascites;* or *encysted* dropsy of the *ovaria,* &c. In this kind of dropsy, after it is fully established, the patient should be rubbed twice a day briskly, with a flesh brush, or dry hand: the legs and abdomen should be moderately bound up, by applying rollers suited to the season, but in general very fine flannel is best; the bandaging must be began at the toes, and carried up over the abdomen; care must be taken, however, not to make it too tight. Such rollers are made by tearing the cloth into strips about three or four fingers width, and sewing them together at the ends, so as to leave no seams. The feet and legs may be scarified now and then through the skin, by this much water will be discharged, and we are assured by Dr. Rush, no danger attends this practice.

In an *ascites* the abdomen may be bandaged; and if the disease is much advanced, tapping will be necessary. In the dropsy of the breast tapping may also be performed, but only by an able practitioner. Less benefit can be obtained in this species of dropsy, than others, from purging; it is generally inflammatory, and requires the pretty free use of the lancet. If ever digitalis is useful in dropsy, it is most allowable in this, after suitable bleeding, and after depletion, we must rest the cure on the use of mercury, not omitting, however, in all cases, to keep the bowels open.

In dropsy of the brain there is little to hope for, after it is formed, a salivation should be tried. This kind of

dropsy in most cases, proceeds from inflammatory affections of the head, which are either overlooked, or mistreated. I shall therefore point out, here, the premonitory symptoms of this fatal disease.

*Hydrocephalus* most commonly affects children, but adults are also subject to it. Symptoms—Languor, drowsiness, peevishness. The appetite weak, sick stomach, or vomiting once or oftener a day; the skin generally hot and dry, especially towards evening; then sharp headach, often in the fore part, sometimes in one side; inclination to hold the head to one side, as though the neck was weak; pains in the neck, shoulders, extremities, and sometimes in the bowels. The patient dislikes the light, cries much, sleeps little, which is disturbed; grinds his teeth, and starts or screams out frequently when dozing: bowels generally obstinately costive, sometimes in an opposite state; the pupils of the eyes become larger, the eyes look dull; violent delirium comes on, accompanied with fever. After these symptoms have continued, sometimes for a few days, in other milder cases for weeks, or even months, the pupils become more dilated; the patient less sensible of pain; a squinting; heavy slumbers, or perpetual restlessness: the patient lies with one or both eyes open, which are often found insensible to light: convulsions often attend every stage of this disease. If food is presented, it is swallowed with voracity: the costiveness is now generally more obstinate.

If this disease is discovered at an early stage, copious and repeated bleedings, and the free use of calomel, given until it operates freely on the bowels, and also affects the mouth, will seldom fail to arrest it. If the case has progressed some time, a salivation should be kept up. It will be obvious that low diet, weak cool drinks, rest and quietness, must be enjoined; and laying with the head high, must not be dispensed with; and if the patient is able to go about, the hot sun must be avoided, as well as much dampness.

*Hydrocele*, or dropsy of the *scrotum*, requires also a particular treatment, which can only be safely conducted by a skilful practitioner. Some relief may, however,

often be obtained from a bandage in form of a cup, to contain the part, and tied up with strings to a handkerchief, or other bandage, about the body; by taking moderate doses of aloes and calomel daily, for some time, and by scarifications on the part: but a radical cure is only to be expected from an operation by seton, or injections.

I come now to speak of dropsy in general. This, like all other diseased action, to which the human body is subject, is of a twofold nature; being sometimes inflammatory; and at other times dependant on general debility: it is, however, highly probable, that all dropsies, or rather the diseases which precede them, are inflammatory. This inflammatory diathesis may be either general or partial. When a dropsy is really formed, we are still to examine the pulse, the patient's constitution, habits, the probable cause of the disease, &c. before we can safely attempt a cure.

If the case is found inflammatory, we must bleed according to circumstances; give active purges, as calomel and aloes, or jalap, calomel and gamboge, daily; nitre and cremor tartar should be drank freely, diluted with a great deal of water: of these drinks the patient should drink largely; or cider, or tamarind water, with a very little soda, may be used with freedom. Should this course not succeed in two, three, or four weeks at furthest, according to circumstances, we must change the treatment, and treat it as a dropsy arising from debility.

Here we find a continuance of a distressing thirst, but without fever; the other symptoms being nearly alike in tonick or atonick states of dropsy, I shall here give the symptoms which usually attend. A feverishness, great thirst, little urine, costiveness, the breathing becomes difficult, the skin dry, heaviness or weariness, and most commonly more or less cough. In an *anasarca* a swelling of the feet is often the first symptom discovered, which rising upwards gradually, invades the whole body: even here, in most cases, those swellings have been preceded by some fever: swelling of the abdomen, added to the above symptoms, characterize the *ascites:* it is always necessary to sound the belly, lest we mis-

take a *tympanites* for water: if we hold one hand on one side of the belly, or hold the ear near to it, and strike the other side of the belly gently, we may discover a splashing-like motion of fluid within. If it be wind, as in a *tympanites*, no such motion will be heard.

In *hydrops pectoris* to these general symptoms, there is usually added an alarming sense of suffocation, if attempts are made to lie down; and when the disease has advanced, this is wholly impossible: the pulse is generally tense, and hurried; and, even here, a skilful person can distinguish a fluctuation of water, on striking the side pretty smartly with one hand, while the other is applied to the opposite side. This affection of the chest may be known from an *asthma*, by its being constant; while the *asthma* intermits; from vomica, or suppuration, by there being less pain, cough, and fever generally in the dropsy, while the difficulty of breathing is more distressing. High fever, however, often attends dropsy in the onset.

After an inflammatory case of dropsy has been treated as above mentioned; or in cases accompanied with direct debility, which constitutes *atonick* dropsy, the treatment must be varied; and, in most cases, the following method will be proper.

Let the patient avoid drink as much as possible; cooling fruits, or acid juice of fruit, taken gradually, must, as much as possible, supply the place of drink. The food should be dry, as hard biscuit, a little roasted meat, dry bread &c.: animal food must be used very sparingly. The use of calomel, or the quicksilver pill, should now be advised; the blue ointment rubbed well into the part affected in partial dropsy; and in *anasarca* into the thighs, and sides. The bowels must be evacuated with jalap and cremor tartar, &c. more or less freely, as the case partakes of inflammation. With these remedies the patient should use large quantities of horseradish; and take, now and then, a little nitre, soda, or salt tartar, in a little vinegar and water, lemon juice, or other mild vegetable acid.

Should the strength rapidly decline, we must support the patient with wine, biscuit soaked in brandy; whole

mustard seed, roasted fresh meat, or a little sound salted meat, or fish.

Patients are found who increase in weight, more than the weight of the body and the food and drinks added together; this can only be accounted for on the supposition that the body absorbs moisture, (amounting to fluids) from the air through the skin, or through the lungs; and most probably in both ways. So far as the skin is concerned, benefit may probably arise from rubbing the skin daily with nice oil; sweet oil, fresh lard, or butter well washed, or melted, will answer this purpose.

Moreover, embrocations of oil have been found highly beneficial in fevers; and, on that consideration alone, they should be used in dropsy, if there is no other. Though nitre is a valuable medicine in dropsies, it must never be continued long, otherwise the stomach will suffer. It will always be advisable to wear flannel; and to leave off every thing like garters, tight waistbands, &c.

In all dropsies, exercise is indispensable, and even labour has often effected cures. When the disease is removed, the bark, acids, cold bath, &c. should be used for some time, till the constitution is restored; and, even now, it will be advisable to take freely of horseradish, mustard, garlick, and now and then a little cremor tartar and nitre. Should a purging become too alarmingly great, in a low state of dropsy, a little good coffee may be taken; should this not succeed in checking it, injections, containing a little laudanum should be given: and in extreme cases, apply a large blister over the belly; but these are things very seldom necessary. Throughout the whole course of both kinds of dropsy, exercise, frequent, and long continued rubbing, carrying the hand upwards, and moderate bandaging with flannel rollers applied, will be advisable; but, unless they are carefully applied, so as to be smooth, and equally tight in every part, it would be better to omit them altogether.

## SECTION XXV.

### *Of the Rheumatism.*

The rheumatism commonly comes on like a common inflammatory fever, which is soon attended with severe pains in the limbs, or rather in the joints; these generally seem enlarged. When the symptoms are in the most aggravated form, the joints are permanently distorted. I have seen cases where the hip joint was thrown out of place, by rheumatism. There is also cases, where, in young subjects, the first notice of the disease is a pain and swelling in one of the joints, as the knee, hip, &c.

The treatment here, must be the same as that recommended for the inflammatory fever; to which must be added blisters, to the part: and of all articles, the best is the ointment of corrosive sublimate, reduced by mixing it with a little lard, so as to excite a blister, first on one side, and next day on the other; the joint should then be lapped in heated cabbage leaves. If this does not soon relieve the patient; after the system is reduced by one or more bleedings, according to circumstances, with the low diet, purging, &c. recommended in inflammatory fever; it will be advisable to put the patient on the following course. For an adult, take salts one ounce, calomel ten grains, tartar emetick two grains, make twelve powders, after grinding the salts fine. Give one of these morning and evening; and let the patient drink largely of milk whey, or elder blossom, or ground ivy tea.

During all this time, rub the part affected two or three times a day, with equal parts spirits wine saturated with camphor, and tincture tolu. If this cannot be had, very strong volatile liniment may be used, or an infusion of red pepper, in whiskey.

If the disease does still not yield completely, give a full dose of Dover's powder; let him go to bed, and refrain from drink for about two hours, then begin and drink freely of wine or milk whey; as the case may be more or less inflammatory, we must regulate the quantity of wine.

This may be repeated, if necessary, for two or three nights. The patient is to remain within doors during this time, and when able to go out, must be carefully dressed; never omitting to have flannel next the skin.

A return to the usual diet must be made with great caution, and always gradually. So soon as a convalescence is well established, the cold bath should be used and constant exercise enjoined during good weather. If the disease does not yield, or if the patient is subject to frequent relapses, especially without a swelling of the joints affected, we may conclude the disease has taken on the chronick form, and is now in some measure habitual. For the treatment of chronick rheumatism I must refer the reader to the class of habitual diseases.

## SECTION XXVI.

### *Of the Apoplexy.*

The immediate cause of an apoplexy is a rupture of a blood vessel in the head, or a very sudden accumulation of a watery fluid, which leaves the brain no time to accommodate itself to the stimulus, &c. arising from the pressure. It is supposed, persons of short necks, and florid countenance, are most subject to this disease. Its most usual remote or predisposing cause is intemperance of every kind.

This disease is often preceded by giddiness, drowsiness, noise in the ears, night mare, &c. and sometimes loss of memory, but in general there is very little notice; persons sometimes fall down dead, or at once into dreadful stupor; the breathing becomes laborious, and loud, like a person snoring, the face sometimes flushed, at others pale. In short, a person in an apoplexy, resembles in appearance one in a very heavy sleep, but from which the apoplectick cannot be awaked; the pulse is variously affected, being sometimes full, at others depressed and corded.

In persons of full habits, we must bleed copiously: no disease, generally speaking, requires such copious bleedings, we must open a vein, and let it bleed until the pa-

tient recovers his feeling, in some measure, or as far as is consistent with life. Dr. Rush tells us, that Dr. Physick drew ninety ounces of blood from Dr. Dewees, at one bleeding, in this disease, and thereby, so completely relieved him that he was enabled to attend to his ordinary business in three days. It would also be proper to open the temporal artery and let it bleed freely. Stimulant common injections should be given, as a handful of salt, in the usual quantity of water, or a strong decoction of senna, &c.

Purges should never be given till the vessels are emptied by bleeding, for, by exciting vomiting, they may do mischief. The head should be laid high, and free circulation of air kept up about the patient, on a hard bed. Cold applications should be made to the head.

But the cure is principally to be trusted to copious, repeated bleedings, and strong purging glysters. Many persons might be saved in apoplexies, by a bold and immediate use of the lancet, who are lost by waiting on a physician. The drink must be cool, and of the weakest kinds; and when food is desired, the lightest articles should be given for a few days even after recovery.

## SECTION XXVII.

### *Of the Palsy.*

A palsy is so different from all other diseases that it cannot well be mistaken. It has been named according to the part affected: hemiplegia, when one side of the body is affected. Paraplegia, when affecting the lower part of the body. Like most other diseases, palsy is sometimes accompanied with inflammatory symptoms, and sometimes with direct debility. It seldom affects the whole body. When the pulse is full and strong, or depressed, the face flushed, the breathing difficult, we must bleed freely, and repeat frequently; apply blisters to the head in hemiplegia, or over the limbs affected in paraplegia. Strong purging injections and purgatives should be given, and repeated often: the affected limb should be rubbed with flour of mustard. And as soon as the

febrile symptoms abate, or in cases depending on evident direct debility, we must pursue an opposite course of treatment: a cordial diet, of light nutritious articles, as light well boiled meats; or, a little salted meat, in warm weather in particular; eggs, coffee, broth, milk, &c. Cordial drinks, as wine and water, bitter infusions of pleasant herbs, chocolate, &c. with the free use of mustard, horseradish, ginger, &c. The most stimulant medicines, as volatile tincture, guaiacum, ether, valerian in powder, or in tea; whole mustard seed. electricity, &c. Nor must constant dry rubbing be omitted, and now and then accompanied with the use of volatile liniments, or dry mustard powdered.

Exercise must be enjoined as soon as it is practicable, and followed up with spirit, and constancy. Cheerful company is always useful. Compound spirit of lavender, is a good medicine: vomits are sometimes useful, but they must be very gentle, and are not often necessary; but where there is a troublesome nausea, or want of appetite of some standing, they should be tried. Benefit is sometimes derived from cephalick snuff, or sternutatories: forms for these will be found in the list of medicines.

## SECTION XXVIII.

### *Of the Tetanus, or Locked Jaw.*

The tetanus has been variously named according to each particular set of muscles affected: but these distinctions are useless, for the cure must be conducted on general principles. Regard should, however, be had to its cause where it is evident. It generally arises from wounds, and most commonly from very trifling ones: a stroke with a whip, stumping the toe, tramping on a nail, &c. But sometimes it is occasioned by other diseases, as yellow fever; from *pneumonia*, and also from poisons, fear, &c. Where it arises from other diseases, the cure must principally consist of such remedies as are suitable for the diseases from which it arose: but I be-

lieve the tincture of cantharides should always be given freely, without regard to the cause of tetanus.

Dr. Rush tells us, that "tetanus, from all its causes, has nearly the same premonitory symptoms. These are a stiffness in the neck, a disposition to bend forward, in order to relieve a pain in the back, costiveness, a pain about the external region of the stomach, and a disposition to sleep. In this feeble state of the disease, an emetick, a strong dose of laudanum, the warm bath, or a few doses of bark, have often prevented its being completely formed. When it has arisen from a wound, dilating it, if small or healed, and afterwards inflaming it, by applying to it turpentine, common salt, corrosive sublimate, or Spanish flies, have, in many hundred instances, been attended with the same salutary effects."

If the disease advances, the pain about the stomach increases, the patient's head is violently bent towards his breast; or his head and heels are drawn backwards till they sometimes meet; or the jaws are immovably fixed together, so that almost no violence is sufficient to force them open. These symptoms intermit for a few minutes, but only to return with greater violence, and as they advance, approach the nature of convulsions.

All the cases of tetanus which I have seen, were males. I have seen and checked the premonitory symptoms mentioned by Dr. Rush, by applying hot turpentine to sores, as old burns, &c. I have also seen a case of tetanus succeed an inflammatory affection of the breast, in a patient in the Baltimore hospital. This case was arrested, after it was formed in great force, by the usual remedies for *pneumonia*, and the free use of the tincture cantharides until a strangury was excited.

Should a patient be affected with this disease, and no physician at hand, there should be a careful examination of the body, and if any sores are found, or if it is known that within a few days, or even several weeks before, the person tramped on a sharp body, &c. the part should be irritated by applying hot spirits turpentine, or the strongest hot ley, or salt and water hot. And if the disease has not advanced far, or in other words, if it is but a few hours since the symptoms ap-

peared, a strong vomit should be given; for this purpose thirty grains of white vitriol may be given, and repeated every ten minutes till it operates freely; or a large portion of antimonial wine given every fifteen minutes, till it operates freely: for children, the doses must be regulated according to the table for dosing medicine. Injections containing large quantities of laudanum, and a little spirits of turpentine, as two tea spoonfuls of spirits turpentine; or to the laudanum may be added, five or ten drops oil of amber: these should be repeated every three or four hours, in glysters of the usual quantity of water. If the jaws are closed, an attempt must be made to open them with a spoon-handle, a smooth stick, or a piece of ivory. Sometimes one or more teeth being out, gives us an opportunity, without any further trouble, to give large quantities of wine, which should be commenced immediately; and at the same time opium, in doses of two, three, or even six grains should be given, and repeated every three or four hours: oil of amber, in doses of from five to ten drops, should be given every two or three hours in wine; and in desperate cases, brandy should be given largely. The warm bath should be used, twice or more, every day, and continued as long as it can be borne at each time.

If the cold bath is useful in this disease, it must be at an early stage; I suspect it is always a dangerous remedy. I have seen almost instant death succeed it in one case. It should never be used without good advice. I should place my principal dependance in all cases of tetanus, on a very constant use of the warm bath, and the free use of tincture cantharides, as a tea spoonful every few hours; and the free use of wine, never forgetting, however, to apply some powerful stimulant to the wound, if it should arise from that cause.

Benefit is sometimes derived from dilating the wound with a knife; but, unless the part is very superficially situated, it must not be attempted but by the surgeon. Where it arises from an amputation, stimulants, the most powerful, must be applied to the stump, and the case treated on general principles. If it proceeds from low fevers, or if the case becomes protracted, large quantities of bark should be given.

## SECTION XXIX.

### *Of the St. Vitus's Dance.*

This disorder is known by convulsive motions of one side: the leg is generally dragged after the patient, like that of a palsied leg: the arm is full of antick gestures, and in perpetual motion; so that when the patient attempts to carry any thing to the mouth, it is done with precipitancy. It sometimes becomes so violent as to convulse the whole body, and bears a strong resemblance to tetanus. It possibly may, sometimes, arise from an affection of the brain; but in a majority of cases it is brought on by falls, or injuries done some part of the body. It was excited in a brother of mine, by a fall on the ice.

All the cases which I have seen were in patients under fourteen years, as remarked long since by the great Sydenham. I have always succeeded in curing the disease in a few days; and although it has sometimes relapsed, from fatigue, &c. still the same treatment soon checked it, and the cure became permanent.

*Treatment.*—Bleed moderately once; then give a purge; after this, put the patient on the use of valerian, and in severe cases, combine it with bark. After using this a few days, or, what will answer equally well, is a dram of iron filings, and a dram of assafœtida, made into twenty-four pills: of these, four may be used daily; drinking after them a little bitter infusion of some pleasant root or herb. After using either of the above prescriptions a few days, the cold bath should be used daily, for some time. And, after the disease is removed, a little bark, or a few of the above pills, should be taken now and then, till the health is well re-established.

## SECTION XXX.

### *Of the Hydrophobick Fever.*

I purpose under this head, first, to speak of the usual appearances of mad dogs; secondly, of the preventives: and, lastly, of the disease, when it breaks out in the dreadful form of the disease, usually called *hydrophobia*, but which I shall designate by the name of *hydrophobick fever*. It has been supposed that unwholesome food, too much heat, and excessive thirst, was the usual cause of this disease in dogs. But from the great number of wild animals which go mad, it is probable there is something in the constitution of the canine race in particular, and also in some other animals, which predisposes them to this disease, from some cause yet unknown; but, like causes which produce malignant fever, sometimes quite local, at other times diffused through considerable space. We have several instances in this country of wolves, foxes, and *cats*, going mad, and biting persons, some of which have went mad.

In many instances of this fever in dogs, the first notice we have had of their indisposition is from abroad. So sudden is the attack, that a dog who has discovered no symptoms of illness at night, has been found running at a distance from home in the morning, with all the symptoms of madness. In many cases, however, there is pretty strongly marked premonitory symptoms, which are these: he refuses food, looks dull, wishes to avoid other dogs, as well as the members of the family; he ceases to bark, seems timid, but snarlish, and ready to bite at strangers; his tail, ears, and whole appearance is drooped. His eyes become more watery; his tongue begins to hang out, and he froths at the mouth: in this situation, in general, he takes to flight, runs apparently heedless whither, and in his travels, goaded on by the most awful horrours, he bites every thing which he meets.

There are instances, however, where a set of symptoms very different accompany this disease: these are the same heavy watery eyes, loss of appetite, timidity, droop-

edness, frothing, &c.; but instead of ill temper or taking to flight, he fondles, and caresses his master, and seems to beseech pity, and relief. In either case, the miserable animal is worn down by fever, horrours, and fatigue, in two, three or four days.

There can be no doubt, but by far the greater number of dogs destroyed under a belief of their being mad, were either labouring under some other fever; or by fatigue, fear and fasting, owing sometimes to being lost they were bewildered: thus distressed, he is often pursued by persons and beat, stoned, and harassed in all quarters. No wonder he should take every one for his enemy, and attempt to bite: if he is a dog of spirit, he may now be said to be mad indeed, but in forty-nine cases in fifty, perhaps, he has no *hydrophobick* fever, which certainly is a rare disease.

Should a dog show symptoms of indisposition, he should be confined; and, has he bitten a person, or other animals, it becomes doubly necessary to confine him, and to spare his life, in order that we may judge with some precision, whether he was mad. The canine race are not the only animals liable to spontaneous *hydrophobick* fever: many cases are on record, of human subjects being affected with it from excessive thirst, from yellow fever, putrid animal food, wounds from the bite of enraged animals not mad. It would seem to follow as a fair induction, that all animals liable to this disease from the bite of hydrophobick animals, are also subject to it from the *usual* exciting causes.

I come now to speak of the preventives. Such has been the confidence reposed in various *nostrums* for this purpose, that I must avoid giving a positive opinion; I shall point out some of the most celebrated preventives, and detail some facts within my own knowledge.

Dr. Richard Mead, whose reputation stood high as a physician, says, that the following had been used a thousand times, and never failed to prevent the disease. But subsequent trials have often disappointed the *faculty*. The prescription is this: "take ash-coloured ground liverwort, cleaned, dried, and powdered, half an ounce; of black pepper powdered, a quarter of an ounce, mix these

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."

The following *nostrum* has been used with good faith: "take of native and factitiouscinnabar, of each twenty-four grains; take this at one dose, and repeat in thirty days; and if symptoms of the disease appear, take a dose immediately," this prescription is too ridiculous to require notice.

Another, "take purified nitre half an ounce, Virginian snakeroot in powder two drams, camphor one dram; rub them together in a mortar, and divide the whole into ten powders."

The following remedy has been used much, in this country, and according to the late Rev. Mr. Muhlenberg, in Germany, and Switzerland also, for a considerable length of time. Take of red chickweed, or *(anagallis phœnica,)* which has been gathered when in full bloom, or ripe and dried in the shade; reduce it to powder, and give a small table spoonful, at one dose, to a grown person in beer or water, in weight one dram and one scruple; for a child an equal dose, but give it at three doses, or it may be eaten with bread and butter, or honey, or molasses. For beasts, a large spoonful is a dose. This remedy, it is said, has succeeded several weeks after the bite of rabid dogs. The wound is to be washed with the green juice.

A majority, perhaps, of physicians, have given opinions in favour of mercury, as a remedy for this disease. There has been a remedy celebrated in some parts of this country, said to be the prescription of a Mr. Web; in this great stress is laid on nine leaves of sage. *Amulets*

have also had their confidants, and have probably saved, as many as any of the foregoing remedies.

I shall now conclude this part of my subject by stating the remedies used by myself, and also by my father: he commenced by having the part bitten well washed with salt water, then it was rubbed daily with mercurial ointment: at the same time Mead's remedy was given, and this succeeded by a course of mercury; after continuing this course a few days, it was omitted a few days, and the patient ordered to use the cold bath, as directed by Mead. In an extensive practice of upwards of forty years, not a solitary case of *hydrophobia* followed.

When I entered into practice I felt so strongly prepossessed in favour of mercury, in this disease, that I ventured to change the treatment, and used nothing internally but pills of calomel. I had the part well bathed with salt and water every day; and afterwards directed some strong mercurial ointment to be rubbed into it: after leaving a day or two for the mercury to wear off, the patient was ordered to use the cold bath for some days. I have prescribed for at least ten, or twelve persons, who were bit by dogs really mad, they all escaped.

Dr. Wilkins of Baltimore, reposes great confidence in the use of caustick, to destroy the part. Dr. Mosely, well known in the medical world, recommends a similar practice. We are told by Dr. Zinke, at JENA, that the disease has sometimes made its appearance after the use of the caustick, and even where the part had been immediately cut out.

A Dr. Stoey, in Pennsylvania, was long celebrated for the cure of the bite of rabid animals; after his death a patent was obtained by his family; I was solicited to take an agency in it: being very anxious to get information on this dark subject, I took an oath that I would not divulge the secret for fourteen years: I am not yet at liberty, but I feel it my duty to observe that the discovery made to me, was disgraceful to Dr. Stoey; nor was there any thing new in it. I therefore never acted, to give it a trial.

Now we are well assured from various sources, that *hydrophobia* has followed the use of every remedy which I have mentioned; even mercury which gained credit in

my own practice, and more especially in that of my father; has often failed according to Dr. Rush, and others. MEAD'S remedy, which had answered a thousand times, has, since failed, and I have knowledge of the chickweed failing also. In short, every method which ever has been practised has failed.

In our present knowledge of this disease, we ought certainly to try preventives, and I think none more rational has been offered, than to cut out the part when it can be safely done, or destroy the neighbouring parts reasonably around, by means of caustick: and I should prefer arsenick for this purpose; we know it may be applied outwardly with safety; and the alkaline caustick, as well as the lunar caustick, have both failed to secure the patient.

Give the chickweed or Mead's remedy; then touch the mouth a few days with mercury, let this wear off a little, and then use the cold bath, if it agrees with the patient's health, if not, tepid baths with a little salt; let this be continued for a few weeks.

But, reader! startle not if I boldly pronounce, that you are in no more danger from the bite of a rabid animal than from the bite of a healthy one. I do not wish to prevent persons from using the usual remedies, but I feel it my duty to state as my confirmed opinion, that we wrong the poor dog; and what is worse, torment ourselves with notions for which there is no foundation.

I now proceed to give my reasons for thinking the *hydrophobick* dog has no poison.

1. Because the flesh of hogs that were labouring under this disease, has been eaten with impunity.

2. The milk of cows affected with this disease has been used by whole families.

3. *Hydrophobia* has been brought on by many other causes than bites.

4. A number of rabid wild animals have been found nearly about the same time.

5. Several dogs are generally found mad in the same neighbourhood, before the disease could have passed from one animal to the other. An intelligent old lady of Adams county assured me, that a great many dogs, and

other animals went mad prior to a very mortal low fever, which prevailed in the winter. It is also a fact, that many mad foxes and dogs were seen about the year 1810, just prior to a mortal fever which has prevailed there for several years.

6. Dr. Rush tells us a case of hydrophobia followed an injury from a mad dog where the skin was not broken.

7. Because no well marked cases are on record, or at least within my reach, of the disease following the bite very speedily; on the contrary, weeks and months; and, credulity says, several years have passed between the bite and the *hydrophobick* fever.

8. Because, small wounds and other causes which produce tetanus, produce the same set of symptoms on whatever part of the body they were made.

In short, I feel the fullest conviction that we have been *all* mistaken in our views of this disease; and as I have new ideas on the subject, I beg leave now to state them, hoping the reader will carefully attend to all I have said, as to its causes, &c.

I believe, that *hydrophobick* fever arises from some unknown cause, but something like those which produce malignant fever, and that this cause is something like an endemick. I shall explain my views here by a few cases. I prescribed for Alexander Ogle, esq. of Somerset county, Pennsylvania, for a case of dog bite, which was attended with the following circumstances: this dog had been bitten by another: and a horse in Mr. Ogle's stable was bitten by his own dog, about the same time he bit his master; this horse went mad and died, as I was informed, at Shippensburgh.

Now is it not extremely probable, that this other dog which was in the habit of playing about the same yard and stable, as well as the horse being subjected to the same air, that they may all have taken this disease from the same source: if it arose spontaneously in one case, why not in all, the biting having probably nothing to do with either case.

Dr. Rush gives the case of Mr. Todd's son, of Philadelphia. In this case, the bite was on the sixth of August, and the symptoms made their appearance on the

13th of September, a period of thirty-eight days; the same dog bit a cow, a pig, a dog, and a servant. The cow and pig went mad and died; the dog became mad and was killed by his master. Now, is it not extremely probable, that this child, the two dogs, the cow, and the pig, were all exposed to the same cause. Why are we to suppose that it arose spontaneously in one dog, and accidentally in all the other cases? This is certainly deserting the common rules of reasoning, and appears to me to have its origin in this. Of all animals, the dog seems most subject to this dreadful fever, his propensities when enraged naturally lead him to bite. If it is answered, that man, too, is prone to bite when affected with *hydrophobia*, I retort, that persons mad from other causes, as well as hysterical patients, will often bite the by-standers; and after all, this propensity to bite, is not so great as some people imagine. I shall presently detail a case which I have seen; to this we may add, the circumstance, that in most cases of this disease, the mind is prepossessed with a notion of this mark of the disease, and, I believe, cases are not wanting, where the imagination has excited this disease, and led particularly to this symptom.

Upon the whole, I take the *hydrophobia* to be a most malignant fever, as suggested by Dr. Rush; and I think it but a variety of tetanus. We know that tetanus arises from the same causes, and that the symptom of dreading water, is not universal in *hydrophobick fever*. This variety of tetanus (if I dare so call it) is principally seated about the throat, while the common form invades a certain set of muscles; but both are alike attended with violent disease of the whole system.

I view the *hydrophobia* as partaking more of the common inflammatory diathesis than tetanus. This is perhaps not the proper place to discuss this subject, I therefore proceed to give what I think the most likely treatment for the disease when formed. The patient should be bled copiously, and the tincture cantharides given largely, as in tetanus, and the patient kept in a warm bath as long as it can be borne; mercurial ointment should be rubbed into the whole body, and particularly into the

throat. This disease is extremely rapid, and passes sometimes through its inflammatory symptoms in a few hours; therefore, we should place our whole dependance in one or two bleedings, as large as are consistent with life; and the constant use of the bath as long as it can be borne at each time. We must now carefully watch our patient, and as soon as the symptoms yield, tonicks should be given, particularly the acids, freely; and the most powerful vegetable tonicks, as bark, in large quantity; or some bitter sudorificks, as valerian, snakeroot, &c.

I have not had an opportunity of trying the above treatment; but, from the almost universal failure of other remedies, together with a full persuasion that it is but a variety of tetanus, I recommend the above with considerable confidence.

I have still to relate one case of this disease, which I have seen. A German, near Chambersburgh, was bitten by a mad dog (and if a dog went mad spontaneously, why not the man too, when we know to a certainty it has originated in that way?) About five or six weeks thereafter, when going to his sawmill, as usual, he felt a sudden horrour in attempting to cross the millrace; several attempts were made; but he was obliged to return to his house. This poor man probably had but little dread on his mind; for, after being bitten, he had applied to a German minister at Chambersburgh, who gave him some kind of an *amulet*, and dismissed him with full assurance that it would save him. [This great doctor is since dead.]

He was now brought, in a wagon, to my father's: I was a lad at the time, and therefore cannot give the particulars of the treatment adopted: nor have I access, at this time, to my father's minutes of the case; but the appearance and actions of the patient made a strong impression on my mind. He was perfectly rational the greater part of the time; all of a sudden he would signify that the paroxysm was coming, and in the same breath he was raging: he did make some slight efforts to bite, but the prevailing symptoms were a kind of desperate struggling, partly as though he was trying to escape, and partly struggling for breath. He was held down by four stout

men, always present; after he was completely exhausted, he seemed to swoon, and to lie feeble and calm; the breathing became easier, and he gradually recovered his mind and strength, so as to converse rationally with his friends for a considerable time.

He expressed great horrour at the sight of water, and also at red and white clothes. He lived three or four days, the last of which his disease was completely subdued, and he was enabled to drink some water, through a tube, from a covered cup, and also to swallow a good deal of bread, rolled up in the form of pills: the first efforts at swallowing were painful and difficult. His friends and his physician had now considered him out of danger; all his friends had left the room, and were at supper; he was sleeping as sweetly and comfortably as a person in health; and had discovered no derangement of ideas that day. Apparently in his sleep, his eyes and eyelids began to tremble; a tremour or slight spasm ran over his whole body; he gasped two or three times, and his soul took its flight. Before his friends could assemble, he was no more; but it having fallen to my lot, with some other young members of the family, to watch during supper, the circumstances are still strongly impressed on my mind.

I have thought this case worth relating for two reasons; the case was checked; and it is probable, had his physician been aware of the great prostration of strength present, by a suitable use of tonicks he might possibly have saved the patient; for he, to all appearance, died from mere debility: let it not be thought that I throw a shade of blame on the humane physician who attended him; he had done much for him; but the case was rare, and no precedent for his guide. The other reason is this: Dr. Physick has proposed, and Dr. Rush recommends the measure, to open the windpipe, in order to let the patient breathe, till suitable remedies could be administered; but in this case no advantage would have been gained; and I am disposed to think this enlightened man, for once, is mistaken in his views of this disease.

Should it then turn out, after sufficient observation, that this is a malignant state of fever, and originating

from other causes than biting by rabid animals; that this cause predisposes no more to it than any other small wound, allowance being made for the influence of imagination; what a mass of anxiety, &c. may be saved! And if then, we can place this on the footing of other diseases, as tetanus, which arises, generally, from small wounds, humanity may still weep over the evils arising from our mistaken views, while ignorance, in the garb of murder, shall tremble at the horrid tales of persons having been bled, or smothered to death, because they were sick!

I am aware that Dr. Zinke has related a set of experiments where he succeeded in producing *hydrophobick fever*, by inoculating animals with the saliva of a dog, which had died of this disease. But how often have we been deceived by experiments? Persons have in like manner been engaged in inoculating for the measles; they could sometimes succeed if the disease was prevalent in the neighbourhood, but not otherwise; one could succeed with the blood, another by rubbing with a piece of flannel which had been worn; others again with the tears, while all these have been most generally ineffectual; and no doubt was only succeeded by measles when the patient was exposed to an atmosphere, or other causes, which give rise to measles. So with Dr. Zinke's experiments; he may have been misled by all the animals having been exposed to the same cause which produced this fever in his dog; and if liable to it accidently, why not spontaneously? Or, after all, harsh treatment, and taking animals out of their usual habits, may produce disease, and the imagination is ready to take up any indisposition for *that* which we wish to see.*

* We are told by Cullen, that *carditis* or inflammation of the heart, has been the cause of *hydrophobia*. This is respectfully submitted to the attention of the *Faculty*. Should it turn out, by dissection, &c. that *hydrophobia* always proceeds from inflammation of the heart, which I think highly probable, some correct or settled plan of treatment might be derived from a knowledge of the real seat of the disease. If it be an inflammation of this most important organ, we might possibly recommend blistering over the whole thorax, and be governed in the use of the lancet, by the same rules which govern us in cases of malignant fever, with local inflamma-

The foregoing observations on hydrophobia have given rise to some clamour, and also to some very reasonable criticism; but, after the most mature reflection, I have thought proper to continue the article without alteration.

The opinion maintained here, respecting the origin of this disease is not mine, it has been held by others long ago. But whatever may be the fate of this opinion, I have no hesitation in saying many things which were as contrary to settled opinions as this, have sometimes burst through the clouds of dogmatism and swept pyramids of errour from their foundation. To conclude, every liberal minded reader will perceive that I have faithfully given the usual remedies with all care, and have been so far from a wish of perversion that I have acknowledged some persons went mad who were bit by mad foxes, &c. but not, as I suppose, from specifick poison. Surely, then, my expression of doubts, in the almost universally received opinions, on this subject, will not subject me to illiberal criticism; for, he who follows my advice will carefully use means, while he cherishes a fond hope that he is in little danger: where the advantage of tormenting his mind even if I am mistaken? And it will be perceived that I have written principally with a view of exciting inquiry which can do this subject no injury.

## SECTION XXXI.

### *Of the Scurvy.*

The scurvy is thus correctly described by Sydenham: "It is accompanied with spontaneous lassitude; heaviness; difficulty of breathing, especially after exercise; rottenness of the gums; fetid breath; frequent bleedings at the nose; difficulty of walking; a swelling sometimes, and sometimes a wasting of the legs, on which spots always appear, that are either lived, or of a lead, yellow, or purple colour, and a sallow complexion."

tion from other causes. From the happy effects which the tincture cantharides has sometimes had upon tetanus, and from the probable similarity of tetanus and hydrophobia, with my present views I would blister the whole thorax.

I have never seen a well marked case of scurvy in country practice. I have seen what is called land scurvy; this is an affection of the mouth and teeth, and is a habitual disease, and therefore will be found described in that class of diseases. Symptoms strongly resembling scurvy are often seen in chlorosis, which will be noticed in place. Scurvy is the sailors' scourge, but happily for mankind, such people have it in their power to banish this disease from the ocean, by taking a sufficiency of vegetables, as sourkrout, and other pickled articles; by having a supply of wholesome water, and by strict attention to cleanliness, and exercise.

In recent scurvy, provided the patient has access to vegetables, plenty of vinegar, or even mineral acids; he should be bled moderately, and take a little cooling physick, after which the cure may be trusted to the free use of vegetable food: all kinds of sallads, as also scurvy grass, horseradish, and fruits, as lemons, oranges, or sour apples, or jellies of sour fruit, and in low cases the free use of generous punch; and this may be made in case of necessity, from vinegar, cremor tartar, or even vitriolick acid, or the nitrick, or muriatick acids. In cases of long standing we must not bleed, but rest the cure principally on generous punch, with a little fresh animal food, or good wine, in form of whey. The nitrick acid should always be used in this disease, for it is a powerful tonick, as well as a corrector of scorbutick action.

## SECTION XXXII.

### *Of the Jaundice.*

A common jaundice is discovered, first, by a yellowness of the eyes; the skin becomes yellow, and the patient often sees things with a yellowish shade over them; it is attended with itching, heaviness, lassitude, bitter taste; whitish excrements, or thin bilious stools, urine yellow, and stains linen a saffron colour; hiccup, and a bilious vomiting sometimes attend. If the disease becomes obstinate, the eyes and skin put on a darkish yel-

low colour, and the disease is now called the black jaundice.

This disease is supposed to be occasioned by obstructions in the gall ducts of the liver; by concretions, or little stone-like bodies, which are often found in the liver: it may, however, arise from torpor, or slight inflammation of the liver, or from a secretion of unhealthy bile. I suspect gall stones are its most infrequent cause, and that most of the cases of jaundice are brought on by surfeits in eating or drinking: an excessive meal of meat will sometimes excite a jaundice. Where it is not attended with pain, or extreme sickness, or considerable soreness from pressing on the liver, which are symptoms attending inflammation, scirrhus, or large collections of gall stones; it yields to mild treatment.

I strongly suspect the notion of gall stones obstructing the biliary ducts, and being the cause of jaundice, is not often well founded; but that those concretions in the liver produce inflammation, which interferes with the healthy secretion of bile. See inflammation of the liver and scirrhus.

I now proceed to detail the treatment for simple jaundice: Give the patient, if an adult, one scruple of ipecacuanha combined with ten grains of calomel; if it produces vomiting, drink weak tea, or warm water, as usual. Repeat this every other day, till three doses are given, if necessary. If the jaundice is attended with fever, it will be advisable to bleed the patient moderately. On the intermediate days of taking the above medicine, take of these pills, rhubarb one dram, castile soap one dram, syrup or molasses enough to form pills; make twenty-four pills; and of these give four per day. The patient must live on a light vegetable diet, as well-boiled rice, or barley, roasted apples, sallads, &c.; light broths may be used; greasy articles are to be avoided; milk may be used; and, perhaps, the sour is best. For drink, toast and water, or apple water, or any mild herb tea, cool, or even water, provided it is not rashly used, or near the time of taking the ipecacuanha and calomel.

Moderate exercise is never to be dispensed with. The above treatment will be safe in jaundice from any cause,

but if it should not relieve, advice must be had. If there is an abatement of the symptoms, the same treatment might be continued a while longer, leaving longer intervals between the doses of ipecacuanha; and continuing the pills; should too severe purging arise from the medicine, a moderate anodyne at night, as half a grain of opium with two or three grains of ipecacuanha, will be found useful.

## SECTION XXXIII.

### *Of a Diabetes.*

The characterizing symptom in this disease is a too copious discharge of urine, mostly of a sweetish taste, and which will yield a species of imperfect sugar; but sometimes no particular difference is discoverable in the taste of the urine; it is said always to lose its urinous smell; this increased discharge is attended with thirst, feverishness, lassitude, pain in the back, heat, and uneasiness in the belly, costiveness mostly, sometimes a swelling of the hips and loins; and, when inveterate, a frothiness about the throat and mouth; to these succeed a rapid wasting of the whole body. It has been supposed that the seat of this disease is in the stomach; and from opinions respecting the functions of the liver, delivered by Dr. Rush, it has been supposed to be seated in that viscus: both opinions were founded on a belief, that the proximate cause was an imperfect assimilation of the food to the necessary animal properties. That is, the stomach or liver, was supposed to be impaired in their functions, so that the food was not duly prepared before it entered the circulation, and therefore, the various parts through which this imperfect blood was carried, could not elect particles suitable to their purposes, and that the kidneys strained or took up this crude matter, and passed it out of the body.

This disease most usually attacks great eaters and drunkards. I think most persons who feed too much are more or less affected by this disease. It has generally been reckoned an incurable disease. Astringents have

been tried; a diet of animal food has been recommended, but I believe, these things have seldom succeeded. Several cases are on record of cures being effected from the free use of the lancet, such as bleeding once a day till the symptoms are abated, or till from fifty to upwards of a hundred ounces were drawn. This was accompanied with a diet suited to the case, being light, but partaking more or less of animal food, as there was more or less fever. Other cases are on record, where the frequent repetition of vomits has succeeded.

Upon the whole, this is a dangerous disease, and requires the best advice. I would, however, advise persons deprived of medical aid, to bleed once or twice pretty largely, then take a couple of vomits, three or four days apart; live principally on light animal food; and take before every meal, two or three tea spoonfuls of beef's gall, either mixed with a little milk, or the gall dried in a pan set in water, which will prevent it from burning; of this a large tea spoonful may be mixed with a little milk, and taken as quickly as possible. If the bowels are costive, glysters should be used, and if a dangerous diarrhœa occurs, give small doses of laudanum.

## SECTION XXXIV.

### *Of Madness, or Insanity.*

There is much variety found in this deplorable condition of man, such indeed is the variety, that I shall not attempt, here, either a detail of its various forms, nor yet of its cure. My design is merely to suggest, to persons unacquainted with such maladies of the mind, that many cases arise from diseases of the body, and are often removable by medicine, or other treatment. Its causes appear to be various, as intemperance, intense study, or violent passions, and perhaps sometimes constitutional predisposition, long continued fevers, certain conditions of the uterus, affections of the mammæ: it often alternates with other diseases, as consumption. Most of the causes of madness impair digestion; and

how sensible are we all of the influence of the mind over the stomach! In vain we look for appetite while the mind is agitated with the passions, with intense thought, or strong desires. These considerations lead me to believe, not only that intense study, &c. produces madness, by operating primarily on the stomach, but that many cases of madness have their seat in the organs of digestion, as the stomach, liver, and spleen, and here, as in many other cases, the mind is only sympathetically affected.

From the vast number of diseased brains found on dissection, where no madness existed, I think it highly probable, that organ is not the most common seat of madness; and that a destructive, or ineffectual treatment has been a frequent consequence of a different opinion: and which led to severe treatment about the head, while perhaps, this faithful monitor disclosed the insidious disease of the liver, spleen, stomach, uterus, mammæ, or perhaps, in some cases, parts of which we have yet no suspicion.

Upon the whole, I suspect, that although insanity, in many cases, arises from local affections, yet, the general system is not only diseased, but partaking of a peculiar diathesis, or species of action essentially connected with the insanity; and that to effect a cure we must generally operate on the whole constitution; and not as soon as irregular ideas are discovered, attack the head with violence. What blisters! What cold clay caps! What cold affusions! What ice! What shaving, cupping, &c. have been applied to the human head; sometimes, no doubt, much to the advantage of the patient, but in a majority of cases, perhaps, for operations of the mind wholly sympathetical; and which can only be reached by remedies which operate on the whole system.

I think insanity often curable, and mostly a disease of the whole system, for the following reasons. I have known a case, where after deplorable madness of seven years standing, the mind spontaneously recovered, and performed its functions regularly for many years; this worthy old man was at length attacked by a bilious remittent, which again impaired the faculties of his mind,

but being at a good old age, he soon glided to another world. Many have been restored by *means*, and by time alone: the great Boerhaave gives a case of a person who by the long use of whey, water, and garden fruits, evacuated a great deal of black matter, and recovered. Confinement and solitude has often restored a deranged mind; and the weakness of the head, which often remains for weeks after fevers, gradually disappears as the general system gains strength. Now, if madness has been cured spontaneously, and by medicine too, even in one case, why may we not hope for it in all, and never cease our efforts while there is life.

We seem to have been misled in our views of madness from its resemblance to delirium, as respects the mind, and because the mind recovers its functions when fever goes off, we are ready to conclude that madness is essentially different, because no sensible signs of disease attend confirmed insanity. But do we not find in every department of nature, things subject to a variety of modifications which render their sensible signs invisible? Thus the matter of heat enters into a variety of combinations, and is so completely latent, or hidden, as to have eluded the observation of mankind, for several thousand years. Light enters into myriads of bodies, and loses its sensible properties, giving life and colour to all the vegetable kingdom; but leaving no distinct evidence of itself as light. Diseases often invade the body so slowly, that we have no notice of them till far advanced, as *ossifications*, and *aneurism* of the great arteries, yet doubtless, even these are often the consequence of general debility, or of general disease. A slight wound which was scarcely recognized by the general system, nevertheless, will sometimes invade slowly and imperceptibly, and no matter what part of the body was touched, a certain set of muscles are violently attacked, and tetanus follows; if a slight wound in a remote part of the body always affects a certain set of muscles, when tetanus arises, why should we doubt, but, that, causes which elude our observation may produce this chronical delirium, or derangement of the mind? Why are we not, then, in both

cases, to apply remedies which operate, generally, on the body.

Again, we know that many diseases do lurk in the body, and are only known by some local affections, as cancer, asthma, and palsy; the last disease often leaves all the natural and vital functions perfectly sound, so far as we can see, for many years, yet in all those cases and many others, disease lurks in the whole system. In short, a great many diseases are sometimes hidden or imperfectly expressed; fevers often assume this insidious character. Persons have often been seen walking in the last stage of yellow fever, and sometimes conscious too of their situation, but free from sensible signs of disease: a case is on record, of a lady in Baltimore, who rose a very short time prior to her death, and made preparations for her funeral. Surely all those things go to establish the fact, that there is a lurking disease in mania, and there is strong grounds for believing the brain, or any part of the head, is but secondarily affected: and if so, while we direct all our efforts towards the head, we will often be disappointed, in our efforts for relief. There are many cases on record, where transient lucid intervals followed bodily pain, as whipping, and other severe treatment. Such people, too, are less sensible to cold and hunger; all which shows the body to be out of its natural state.

Upon the whole, then, I think there is strong grounds for believing, that when the nature of this dreadful malady is better understood, or, perhaps, with prevailing notions of it, the day may arrive, when man shall not be abandoned, because he is unable to help himself. Let us then view every maniack as labouring under some disease and never abandon them. Persons have been cured of all other chronick diseases; and if madness has sometimes cured itself, spontaneously, after several years continuance, why should we ever relinquish our efforts? We know that other inveterate diseases, after resisting every effort for years, have afterwards yielded to the most trifling things; and why may not this be expected in madness? If our efforts prove abortive, let us desist for weeks, months, or even years, as circumstances may seem

to direct, and then try again and again. While there is life there is hope, is the language in other diseases; and shall the poor maniack remain without hope, without effort?

It is a truth that, many of the affairs of mankind that are supposed most settled, and thought even self-evident, are the greatest errours upon earth; and when found to be such, we are astonished at our ignorance. How long was the whole philosophick world misled by the notion of four elements? The mind now beholds with wonder, that ages of mankind should have viewed water as an *element*, when it was decomposing every hour in the day, as in evaporation, in giving substance to plants, &c.

Let not envy tax me with arrogance or vanity: if I am mistaken, I err on the safest side, and humanity guides my pen—she hangs upon my elbow, while suffering maniacks arrange themselves around my chair—their gestures swell my bosom with anguish—and I can ease my heart but with tears which I shed over this my feeble effort, to excite attention to the pitiable maniack. Who can behold the giddy, the wicked sport of boys, pointed at the travelling maniack, and withhold the tear of pity? If angels weep, it must be at such a sight. And shall cold, languid pity, ease thy heart at his suffering, without an effort to relieve him? What, though the mind, clouded by a diseased body, cannot repel the offence, the great Giver of mind will in due time remove the cloud, when the distorted features shall change, and shine brighter than the sun, more placid than the moon, and put to shame and derision the silly mocker. But ah! again my heart doth swell, and the big tear rolls down my cheek; for with all its horrours stands before my imagination thousands of human creatures immersed in the gloomy cells of hospitals—unpitied, unnoticed, and untried—their bodies chained or confined to a cell—while the soul, perhaps unspotted, is tortured by bodily disease, against which no efforts are made.

Let me admonish every keeper of an hospital, every physician, and every relative, that it is a duty which they owe their Maker, a suffering fellow-creature, and themselves, to leave no means untried: if we fail in our efforts,

give the system time to recover, and try again and again: bear in mind the great precept of our SAVIOUR, that you are not only to forgive your brother seven times, but seventy times seven. And if we find extreme difficulty, from the strange perversity of such persons, let us not neglect him on that account; it would seem as though nature rendered him thus perverse that we should be prompted to relieve him, and thus get rid of his vexatious conduct to ourselves.

With justice may the anxious physician exult, that heaven has given him the victory in cases where he has apparently rescued a fellow creature from the grave, by the suitable means; but how doubly thankful, how exalted, and how blessed will be the lot of the physician who shall conquer this horrible disease. Already, methinks, I see the humane physician bringing from the long-forgotten cell a trophy of his skill—leading the newborn fellow-creature to his former connexions with the world.—Prayers! thanks! and rejoicings! shall ascend on high; and while I contemplate the scene but in imagination, I seal this humble effort for the insane with tears of joy.

The learned Dr. Mead gives an affecting account of the case of *Nebuchadnezzar*, who, losing his reason, roved about seven years with the beasts of the fields; and then recovered to acknowledge his dependance on a kind Providence, and also to understand the relation in which he stood with the world.

As this book may possibly fall into the hands of physicians, and especially as this is a disease much neglected, because often considered incurable, I shall conclude this article, by offering a few queries.

What would be the effect of slight, long continued nausea, brought on by safe articles, as ipecacuanha?

What would be the effect of long confinement to one simple article of diet?

What would be the effect of long continued, but slight pain, from setons, blisters, &c.?

What would be the effect of abstinence bordering on starvation? This cruel remedy should not be continued too long.

What would be the effect of using vegetable tonicks, given to a greater extent than has been practised heretofore?

The following course has often succeeded in the practice of a brother of mine. Reduce the patient, according to circumstances, by bleeding, purges, and vomits, and very strict diet; then put the patient into the warm bath as long as it can be borne; take him out speedily, and throw a bucketful of cold water over the head; this gives a terrible shock: it is, however, not only safe, but has often proved effectual.

What might be the effect of obliging such patients to be sickened daily by whirling round?

What the effect of obliging them to walk on the highest possible places, apparently dangerous, but having them sufficiently secured from danger?

What effect from the greatest possible frights, from varied means! Lastly, all severe means should be used but for short periods of time, and under the direction of persons of skill, lest our efforts turn to cruelty operating without hope.

## SECTION XXXV.

### *Of the Cholera Morbus.*

This appears to be a colick of a high grade, so that the force of the disease prostrates the stomach and bowels at once below that state of sensibility, which gives pain, as in common colick. *Cholera* is often a symptom of malignant fever, and therefore requires great caution, more especially as it is a disease of great danger, and speedy of termination. It is known by a violent purging, and vomiting, sometimes bilious, at other times acid vomitings with very loose stools, accompanied with extreme debility, in a short time after the attack; it most frequently, according to my observations, occurs in warm weather, and at night.

It is always dangerous for the unskilful to use evacuations in a *cholera*, and where it is the only disease they are seldom if ever necessary. Chamomile tea

should be drank freely, and it may also be given in glysters; soon as there has been a reasonable number of motions, or evacuations upwards and downwards, we may suppose the stomach sufficiently cleansed, and commence the following: take a table spoonful every fifteen or twenty minutes, till the disease is abated, or till the whole quantity is taken. If the third or fourth dose does not check the vomiting, ten or twenty drops of laudanum must be given with each dose: take soda two scruples, rub it fine and add eight table spoonfuls of cold mint water, or three or four drops of essence of peppermint may be rubbed with the soda before it is mixed with the water. If chamomile is not at hand, centaury, carduus, or mint tea will often answer. Soda water highly charged with fixed air may be taken freely. If the disease still progress, apply a blister over the stomach; *sinapisms* to the feet; and if the physician is not to be had, take a little strong well made coffee, a little good wine, or even strong brandy, but be cautious how you use stimulants, unless you are well satisfied no fever is lurking in the body. If the case is lingering, but not very violent, small doses of calomel should be used. Toast and water, weak cool bitter teas, or good porter and water, will make the most suitable drinks, and the patient must return to his former diets with great caution, beginning with light broth, or good coffee or tea, with a little relish of nice salted meat or fish, and water biscuit, or good bread. Should soda not be at hand, half a dram of salt tartar may be used in its stead.

SECTION XXXVI.—SUBSECTION I.

## *Of the Colick.*

Colicks, usually so called, are the *bilious, lead, flatulent, hysterick*, and the *iliac passion*. I shall treat of them briefly in the order in which they have been named. *Bilious colick* differs in nothing from a common colick, but that it occurs in bilious habits. Its usual exciting causes are surfeits, from eating or drinking, from neglected costiveness, or from rash exposure to cold

moist air, and damp or wet feet. The symptoms are some fever; pain in the bowels, which seem drawn together: if the pain abates, now and then, it returns with a sharp pain as though something was piercing through the parts; severe vomiting of bile, bowels generally obstinately costive, sometimes loose bilious stools.

Bleed once or twice, according to circumstances, give opening injections freely, open the bowels with rochelle salts, salts and manna, and if the case is obstinate, give calomel in large doses. If costipation withstand all those remedies, throw up large quantities of warm water, by means of a large bladder, two or more gallons may be injected; if this does not succeed, give an injection, containing a little tobacco juice, got by boiling a little tobacco in water. Or, if possible, by means of a large bladder, throw up tobacco smoke, till the patient becomes sickened with it. In obstinate cases, very large doses of opium will sometimes succeed, as two or three grains, repeated at short intervals, till the pain entirely abates; but those violent articles ought not to be used without good advice, if it is to be had.

Where advice cannot be had, provided due caution has been observed in not jumbling too many things together, and always allowing a reasonable time for remedies to act, it will be safer to proceed than to wait too long on a physician, for skill cannot avail if the disease is too far advanced. Bilious colicks sometimes arise from vitiated bile which excoriates the *rectum*, and tinges the skin of a yellowish hue: here we must use gentle vomits, and small doses of calomel; and also mucilaginous liquids by way of glysters, and for drinks.

### SUBSECTION II.

## *Of the Lead Colick.*

Lead colick, or such as arise from working among lead. To the usual symptoms of colick, are added here, spasms of the whole body; these soon terminate in palsy. In this colick it should always be remembered, that lead is only injurious so far as it is acted on, and divided by

acids, therefore, every thing acid must be avoided, and this caution applies not only to such persons as work in lead, when diseased, but at all times, they should as much as may be consistent with circumstances, avoid vegetables, more especially acids: potatoes, onions, old well-made wheat bread, with rich broth, in small quantity, and animal food, with oily articles: always remembering, that much smaller meals of such articles are allowable than of vegetables. Taking a little good sweet oil before going into lead works, is always advisable.

When this colick comes on, large quantities of warm mucilage should be thrown up the bowels, and also drank, for this purpose, slippery elm bark, flaxseed, or water melon seed may be used; or considerable quantities of nice oil, or nicest fresh butter melted, should be taken and succeeded by large quantities of warm water, by way of glysters. The patient should be put into a warm bath, and this must be repeated according to circumstances. One part balsam copaiba, and three parts castor oil should be given in doses of a large spoonful; or a spoonful of castor oil, with thirty drops of balsam peru, every two hours, till the bowels are open: if the stomach rejects this medicine, it may be given in glysters. If the pain is violent, and does not yield to the above treatment, opium may be given in full doses till the disease abates. Toast and water, or onion tea will be the best drinks; or a very weak infusion of peruvian bark. Where this disease comes on persons not long subject to lead fumes, and of good habit of body, bleeding may be useful; but we should not repeat it often.

### SUBSECTION III.

## *Of the Flatulent Colick.*

This is a mere collection of sharp air in the bowels, arising from indigestion, surfeits, too much acid food, or malt liquors. It is known by severe pain in the bowels with rumbling of wind, or discharges of wind upwards. If it is taken early, a few drops of essence peppermint,

or spearmint, or a little strong tea of either of those herbs; or a little ginger tea, or a little soda or salt tartar, dissolved in water, and taken in small doses, with bathing the feet in warm water, will generally relieve.

These things will be found to answer the purpose much better than spirits of any kind, which may do a great deal of mischief if inflammation or fever exists. Calamus tea has often been used with advantage. Or a few drops of laudanum, with an equal quantity of sweet spirits of nitre, will generally succeed. The patient should eat sparingly for a few days; and take a little salts and manna, or rochelle salts: vegetables should be used but sparingly: for drink, toast water, or cold weak infusions of pleasant bitters.

SUBSECTION IV.

## *Of the Hysterick Colick.*

This disorder has, added to the symptoms of flatulent colick, agitations of the mind, and a sense of suffocation, from a sensation as though a ball was rising up into the throat, and generally attended with a vomiting of greenish matter. A gentle vomit of white vitriol, or ipecacuanha should be given, and as soon as it operates, large quantities of very weak tea should be drank; and when the stomach is composed again, ten or fifteen drops of laudanum should be given in weak ginger tea, or any other pleasant tea: and repeated frequently till the colick abates; the bowels should be opened by mild glysters. If attended with fever, it may sometimes be necessary to bleed moderately. A few drops of ether, or equal parts sweet spirits nitre and spirits hartshorn, in doses of twenty to thirty drops will often succeed. These palliatives should be followed up with pills of iron filings and assafœtida: where assafœtida is particularly offensive, a few grains of saffron, or camphor may be added, and the bowels in all cases must be kept open, with mild articles, as magnesia, or rhubarb. A little decoction of bark, or infusion of gentian may be used occasionally: all spirituous drinks or strong teas are carefully to be

avoided. The diet should be light but nourishing, as good coffee, with a little relisher of salted dried beef, nice ham, venison, or good salted fish; plain broth without much vegetables, light meats, poached eggs, a little nice butter, good wheat bread: a little garlick, and potatoes may be used. The drink should in general be water, or sometimes a little good wine; weak cold infusions will be the best drink, where there is objection to water, and chamomile, bark, centaury, or carduus, will answer for this purpose.

Women disposed to hysterical affections should encourage cheerful company; reasonable amusement with constant but moderate exercise, must not be neglected. Going abroad frequently to the house of an agreeable neighbour, and encouraging them to exchange visits, will always be found useful.

### SUBSECTION V.

## *Of the Iliac Passion.*

This is a violent disease of the bowels, wherein the whole order, or action of the bowels seem to be changed, so that they, instead of carrying the feces downwards, turn it upwards into the stomach; and from thence it is vomited with all the disagreeable qualities of common feces. There is generally severe pain at first; and great prostration of strength, and obstinate costiveness attend. This disease mostly arises from ruptures, from wounds or bruises on the abdomen, or from common colick terminating in *introsusception*, or one gut running into another till they become confined, strangulated, and inflamed.

If it arises from a strangulated rupture, the first thing must be to reduce, or return the part which has escaped from the abdomen. In general, if taken early, it will be proper to bleed pretty freely; then apply gentle pressure to the tumour; if this will not succeed, inject as much warm water as possible into the bowels; apply cold water to the ruptured part for a few minutes, then try to reduce again, always guarding against rough handling of

the parts: if this does not succeed, force tobacco smoke up the bowels; raise the patient's thighs high and dash cold water over his feet, or over the tumour.

If this disease proceeds from injuries of the abdomen, we must place much of our dependance on frequent bleedings, warm mild injections; and if the case is early attended to, opium may be used freely to compose the stomach, even while we use the lancet. No nourishment should be taken; the patient may drink freely of mucilaginous drinks, as milk and water, slippery elm water, barley water: or toast and water will sometimes be suitable; a single mouthful of bread, or other solid food in such a case, may occasion death.

If it arise from common colick, bleed moderately, and use the treatment recommended for bilious colick. See also the article on *enteritis*, or inflammation of the intestines.

## SUBSECTION VI.

### *Of an Epidemick Colick.*

I have seen colick prevail in three successive years, as an endemick, during the whole of the winter and spring months. This constitution of the weather, had been preceded with unusual prevalence of remitting and intermitting fevers; these were succeeded by two summers of dysentery, somewhat inflammatory. And the colicky constitution was succeeded by insidious *typhoid* fevers, accompanied with *catarrhal* affections of the breast. This colick was a painful obstinate disease, much disposed to return on those who had been once affected. I had tried various methods of cure, but am inclined to believe, the following was the most successful: Frequently repeated mild injections, mild purges attended with anodynes; a mixture of castor oil, and Godfrey's cordial, or rochelle, or epsom salts, generally were the best purgatives: if the pulse was active bleeding once or twice was useful. A thin light but nourishing diet was best: drinks were given of toast and water, chicken water, weak teas. Out of a vast number of patients thus treat-

ed, I never lost a single one. In one obstinate case, benefit was derived from the use of large quantities of warm water thrown up the bowels, by means of a tube connected in the usual way, to a large bladder, but about twice the length of the common tubes. In one case relief could only be obtained by means of the tobacco smoke. If no better means are at hand, for using tobacco, it will be advisable to cause the patients to breathe air containing tobacco smoke, till they become sick at stomach.

Upon the whole, no disease will bear a more free use of opium, than all kinds of colick; all violent cases are attended with spasm, and this is often increased by purgatives, if they are not accompanied with opium. Purges are very liable too, to irritate the stomach, and produce vomiting. Stimulant injections, as a handful of salt added to the usual quantity of water, or a strong decoction of senna, should be given now and then, and in the intervals very frequent repetitions of the mildest glysters. If pain does not yield kindly to opium, bleed; and blister over the abdomen.

I recommend this treatment from extensive experience in those affections. But I must admonish the reader, that colick is sometimes but a symptom of violent diseases, either manifest throughout the whole body; or the disease is locked up or misplaced, so as not to be discernable, but from the circumstance of some malignant epidemick being prevalent; or by the skill of an experienced physician.

## SECTION XXXVII.

## *Of an Hæmoptoe, or Spitting of Blood.*

### SUBSECTION I.

### *Spitting of Blood from the Lungs.*

This disease is most commonly a vicarious one, and arises from obstructed menses, or habitual bleeding piles, bleeding at the nose, &c. It is, however, often a prima-

ry disease, and also sometimes merely symptomatick, as in consumption. It is particularly dangerous in persons predisposed to consumption. It may be excited by violent exertions of the lungs; by obstructed perspiration; cough, and other causes. It is a thing never to be desired; inflammation of the lungs, or any other disease can be much more safely relieved by bleeding at the arm, by setons, and other evacuations from the body. Therefore, as soon as this hemorrhage occurs, from whatever cause, we should take common salt in its dry state, freely, till it is checked; and if symptoms of fever, plethora, or pain in any part of the body attends, we must bleed in small quantities, and repeat it frequently till the bleeding from the lungs ceases. The body may be reduced a little by mild diet and gentle purges; and in full habits, a slight nausea should be kept up for a few days. Where it is evidently the translation of some other disease, we must refer to the respective maladies from which it arises, and treat it on general principles.

It may be distinguished from a spitting of blood from the stomach, by these symptoms: some warmth, or a languid or feeble like sensation is felt in the breast; the heart immediately sensible of the breach, in the lungs, palpitates, and if fear attends, this is augmented; a languid loose cough comes on, and florid thin blood is spit up. There is generally considerable tightness felt through the breast, and a flash of heat runs over the body: if the case is severe, chills are also present. Where a simple *hæmoptoe*, occurs in delicate habits, depletion or low diet must by no means be continued more than a few days; and if it is even found necessary to bleed, which we must never omit while the lungs bleed, we should at the same time advise a light but nourishing diet in small quantities: give tonicks as nitrick acid, or elixir vitriol; or decoctions of bark, or cherry tree bark. The pâtient should use constant, but gentle exercise in the open air when the weather is good; dress warm, avoid stooping, laughter, loud singing, or reading; or sudden gusts of passion, or sudden motion. But the lungs should be reasonably exercised by speaking or very gentle swinging.

### SUBSECTION II.

### *A Spitting of Blood from the Stomach.*

This is generally owing to a rupture of a vessel in the stomach; and the *hemorrhage* is known by the blood being dark coloured, and attended with heat or pain in the stomach, mostly accompanied by considerable chills and heat: if the discharge is great, it becomes of a brighter red, but still there is no particular affection of the breast. This is almost always but a symptom of some other disease, to which we must turn our attention. Malignant fevers often lead to *hemorrhage* from the stomach. All stimulants must be avoided; mild mucilaginous drinks must be given; the patient bled, if there are no *contraindications;* give small doses of rochelle salts, or epsom salts, or cremor tartar with mucilage of gum arabick; and when the bowels are opened with these, assisted by injections, give a few doses of nitre. But, in general, we may rest the treatment principally on repeated bleedings, cooling mucilaginous drinks, with a little rochelle salts. The patient ought to take but little food, and this should consist of milk, or mild vegetables, for some days after recovery. In alarming cases of this kind, I would give common salt, as recommended for spitting of blood from the lungs; or three, four, or five grains of sugar of lead.

## SECTION XXXVIII.

## *Of Bloody Urine.*

This disorder, perhaps, never exists as a primary affection of the whole body, but is accidental, arising from stones lodged in the kidneys, or bladder, or from inflammation in the kidneys, as in smallpox. In our efforts for its removal, we must act on general principles, governed by the disease, or prominent symptoms. But in general, the very liberal use of mucilage, as that of gum arabick, slippery elm, or flaxseed, or even milk and wa-

ter, with emollient glysters; and if much pain attends, the warm bath, or opium, or bleeding, according to circumstances, will be proper, provided no general disease is present to *contraindicate* their use; all stimulants are to be avoided, but especially, regard must be had to the disease from which it proceeds.

## SECTION XXXIX.

### *Of a Bleeding at the Nose.*

A bleeding at the nose is often a symptom of other diseases, as scurvy and other disorders; whatever materially depraves the fluids, or hurries the circulation, will occasion a bleeding at the nose, in persons predisposed to this *hemorrhage*. Where this occurs in healthy habits, there is no danger to be apprehended; it may sometimes be useful to suffer it to bleed a little.

To check it, the face may be washed in cold water, and water snuffed up the nose. If this does not succeed, pour cold water on the neck: and immerse the genitals in cold water; and if the case has not progressed too far, bleed from the arm. The nostrils may be stopped with lint soaked in strong vinegar, or a cord passed from the mouth into each nostril; but this last is seldom necessary. Should the case resist all those remedies, put lint up the nose, rolled in powdered blue-stone, and give a small dose of ipecacuanha, till nausea is excited. If clots form in the nose, they ought not to be removed for two or three days. Frequent small doses of nitre and cremor tartar should be given; cool drinks, with vinegar or fruit jelly; the bowels opened by glysters, if necessary. If the patient is diseased, reference must be had to the remedies proper for the disease from which the bleeding at the nose may arise.

*Bleeding piles* will be found under the head of habitual diseases; and of bloody flux, I have treated already. It remains here, to give some general observations on *hemorrhage*.

## SECTION XL.

### *General Observations on Hemorrhage.*

I beg leave, in the most pointed manner, to differ from Buchan in his opinions respecting *hemorrhage* being most generally salutary, and therefore not to be opposed. This has been a prevalent notion, and is founded on the belief that, being the work of nature, it must be salutary. But is not almost all our prescriptions and remedies for dieases at open war with nature? In the case before us, the examination has been but superficial. Thus a disease lurks through the whole system, depraving the fluids, or disease is situated in the uterus, or about the rectum, as in *bleeding piles:* owing to circumstances of some kind, these may be checked; the blood vessels receive a new stimulus; they make an effort to throw off this offending stimulus, now operating on the whole body; but disease is excited, and the blood, in its rounds through the body, tries every part till a weak part is discovered, and there pours out blood at random. But does she always, or even in a majority of cases, choose parts that are safe? Does she not frequently pour out the blood into the lungs, stomach, and even the brain? And is it not safer, then, to assist her irregular efforts, and draw blood from the arm or foot? Do we not know that *hemorrhage* is often accidental, and having once, by a few repetitions, become habitual, that it is ever liable to be checked, and thrown on some part immediately essential to life? Why, then, suffer so dangerous and fickle a habit to be formed, which no prudence can confine, with any certainty, to any one part of the system?

I am well convinced, after this habit is once formed, it would be dangerous to check *hemorrhages* too suddenly; but in no case can they be critical at their commencement, and therefore they ought to be attacked with spirit. I feel fully justified in saying, that spontaneous *hemorrhage* is ever an enemy to the human constitution, if let alone. Besides, in this case, we may, without perversion of language, say, we follow up the hint given by na-

ture, when we boldly attack *hemorrhage*. If nature shows you blood as an evidence of plethora, or disease, why leave her to repeat those struggles? Why not rather take the hint, and abstract blood, or otherwise reduce the system, and thus do more, in half an hour, than the natural operations in a month, or perhaps in a lifetime?

Moreover, such is often the violence which nature has to exert in translating *hemorrhage* from one part of the body to another, that fever, pain, and sickness, are the consequence; while one or two bleedings at such a time gives not only present relief from pain, but in a few days infuses new life and vigour into the whole system. These observations apply to active *hemorrhages*, or such as arise from a plethora, or inflammatory *diathesis*.

It now remains to say a few words on passive *hemorrhages*, or such as arise from direct debility: these are the consequence of depraved fluids, or languid solids, of the living system. Here nature, forsaking every friendly relation of the various parts of the body, would pour out the *purple fluid of life;* not only without reason or apparent design, but really prejudicially throw it away. True, it may be urged, she shows the danger lurking in the body, by presenting specimens of the blood; but, alas! where a tea spoonful would answer, she would waste quarts, and bring the sufferer speedily to his end.

Upon the whole, I would advise those long subject to *hemorrhages*, to go on in the old way; but those who are threatened in that way, I would most seriously admonish them to attack every considerable *hemorrhage* with spirit, and never let prejudice induce them to believe, nature ever designed that man should bleed from the *anus*, nose, lungs, stomach, &c. This ridiculous notion comes from the well known habits of the female, whose constitution was originally thus formed, but after all the *menses* are no *hemorrhage*, but a peculiar secretion, as taught by professor Davidge, and hinted at by others.

To conclude, although *hemorrhages* are to be treated in some measure according to the part affected, they should nevertheless, be considered and treated on general principles.

All *hemorrhages* are either *active* or *passive;* active when proceeding from plethora, or an inflammatory *diathesis;* and perhaps all simple cases arise from plethora or fulness of the vessels, while the more active ones proceed from some disease. The indications in all those cases are the same, differing only in force; they are depletion brought about by abstracting blood; by increasing all the secretions, by means of purges; cooling medicines, and diluting drinks; and by lessening the force of the heart and arteries by exciting nausea; and in the *intervals,* especially, by withholding the stimulus arising from full diet, which may stimulate either by its *bulk,* or too *cordial* or stimulating qualities. So that we must use mild vegetable or milk diet; and not stimulate unduly, even with those articles.

On the other hand, passive *hemorrhage* is perhaps always the consequence of some disease, and few of these are to be removed or relieved by a sudden stimulus given to the blood or system, by cordials or stimulating articles of diet. We must in general proceed slowly and cautiously, with light nourishing diet; never full nor gross; with mild tonicks, as the mineral acids; and vegetable tonicks, as bark, and all pleasant bitters.

After all, there is unquestionable evidence of the mineral tonicks having arrested *hemorrhages,* both active and passive, until remedies more permanent, because operating more generally, were used. Among these are sugar lead, in doses of two to five grains, with a little opium: white vitriol and opium. I beg leave to observe lastly, that every person subject habitually to *hemorrhage,* is in some measure an invalid; and therefore, every one threatened with this *crippling* of the constitution, should get the best advice; and boldly resist this unfriendly guest. And where the *habit* is in good measure formed, by pursuing a proper regimen, and wearing a seton, or issue for a length of time, this bad habit may be removed.

SECTION XLI.

## *Of Vomiting.*

Vomiting proceeds from a great variety of causes; it is a symptom of most diseases, as fevers, colicks, obstructed secretions from sudden debility brought on by blows, on the elbow, on the head, or from the sudden abstraction of blood. It is, however, often brought on by mere surfeits in eating, or drink, by sailing, whirling round, and many other causes. In every case of vomiting we must, if possible, discover the cause and regulate the treatment accordingly. There is a vomiting in some measure habitual to some persons, who, notwithstanding, in general, enjoy good health; but in all cases, if long continued, the constitution is much injured by frequent vomiting. For a vomiting brought on by disease, as gout, hysterícks, colicks, injuries done the brain, inflammation of the kidneys, intestines, liver; by *ruptures;* inflammation of the stomach, or of the brain; from malignant fever, or *cholera morbus;* or from *hemorrhage,* we can only prescribe with the greatest circumspection, and never till we have carefully considered the disease from which it arose; and then prescribe on general principles, bearing in mind, however, that even where it is but symptomatick, it must be appeased by suitable drinks, glysters, warm stimulants applied outwardly; by laudanum in small doses; ether, gentle emeticks, wine, brandy, aromatick teas; or cold infusions of aromaticks, as cinnamon, mint; lime water and milk, a little strong coffee, weak solutions of soda, or salt tartar, more especially impregnated with fixed air or *carbonick acid.* It must be evident, that much skill is necessary to apply such a variety of articles, differing so widely in their qualities, even with safety. But if we bear in mind, that we are always to *stimulate,* or *lessen* the excitement of the stomach, we can proceed with considerable certainty: thus in gouty habits, in hysterical cases; and in intemperate persons, we must stimulate according to circumstances. In high excitement, or indirect debility of the stomach, known by the disease

present, by the constitution, and habits of the patient; we must pursue an opposite course, and by bleeding, injections, cool pleasant saline articles, with mild aromaticks lessen the force of the general circulation, and more especially lessen the excitement of the stomach.

Where the cause of vomiting is unknown, soda water, prepared chalk, lime water and milk, a few drops of laudanum, or ether, with glysters, and outward applications, will be the safest articles; toast and water, carefully made, is also a valuable article in all cases. A vomiting brought on by surfeits in persons not otherwise diseased, is most speedily removed by gentle emeticks, provided they are taken early; but if a *cholera* has come on it would be dangerous. Vomiting from injuries of the head generally yields to purging injections: that from *hemorrhage* to rest, opium and cooling drinks: that from gout to laudanum, warm wine with aromaticks, or brandy, ether, tincture guaiacum, &c.: that from hystericks to a gentle vomit, followed by small doses of laudanum with hartshorn, or ether: that from inflammation in the kidneys, to bleeding and mucilaginous drinks, with emŏllient glysters: that from a *rupture*, to its reduction. But for the treatment in all these cases, I must refer the reader to the respective diseases from which vomiting may arise.

Vomiting from sailing, called *sea sickness*, seems to proceed from a disturbance excited in the brain, by the peculiar motion of the vessel, and the operation on the stomach is probably, a sudden loss of excitement and of its excitability, and this most likely extends to the whole system. It appears somewhat strange how a cause apparently so trifling, should so speedily prostrate the stomach, and whole system. That it proceeds from reduction of excitement, I infer from the circumstances that no pain or inflammation, or local disease of any kind, ever follows *sea sickness*, and further, that depletion is neither useful, nor safe. It would appear as though the healthy connexion or affinities, between the excitability, and stimuli, was suddenly disturbed, and probably more particularly in the article oxygen. Thus if we turn round suddenly, or swing suddenly through the atmosphere; or

if we stand on a dangerous precipice, we will find, by attending to the circumstances, that respiration is especially interrupted, not by *dispnœa*, but by mere neglect of exercising the muscles of respiration; the lungs lie in some measure idle; and the energies of the body languish for lack of the usual stimulus from *oxygen*. If these premises are correct, the following inferences may reasonably be deduced from them:

1. That free exposure to open air, with so much exercise as will rouse this torpor of the lungs, without inducing fatigue, is one of the principal remedies for this disease.

2. However much the stomach suffers, it is the third point assailed by this distressing affection, first, the lungs, secondly the brain, and thirdly the stomach. And hence probably comes the inefficacy of all remedies applied to the stomach; to remove all irritating substances from the stomach, by drinking warm water or chamomile tea, and afterwards taking small doses of laudanum, or very small doses, as two or three table spoonfuls of highly charged soda water will probably give some relief. But what would be the effect of inhaling vital air? Or who knows but stimulating the muscles of respiration might have a good effect? This might be done by means of electricity, or *galvanism*, or rubbing the spine, the sides, and abdomen, with spirits hartshorn, or washing those parts with a strong solution of salt amoniacum in good vinegar. I have already observed, in my treatise on consumption, that sailing was adapted to its inflammatory stage: it would seem to follow, upon the whole, that turning round, and swinging of every kind, has an effect opposite to exercise in general, and therefore much mischief may arise from swinging consumpted patients, or those otherwise debilitated, except the debility be of the indirect kind, and we wish to reduce an inflammatory *diathesis*. It is true, in forcibly swinging the oxygen is forced powerfully upon the lungs, but this excess of force on lungs debilitated, may be as little suited to a proper decomposition of the air, as the torpor, or inactivity of them, occasioned by sailing, and other causes. What might be the effect of frequent cold bathing (by

pouring cold water over the body, or applying cold cloths to the thorax) in sea sickness?

## SECTION XLII.

### *Of a Diarrhœa, and of a Lientery.*

A looseness, or *diarrhœa*, may arise from a great variety of causes, often from diseases, as acrid secretions of the liver, from debility in the stomach and bowels. But most commonly it is occasioned by catching cold, whereby the secretions are obstructed; or from eating or drinking articles which disagree with the first passages; and from irritation applied to various parts of the body, as teething in children, or worms irritating the bowels.

It is wondrous strange it should ever have entered into the head of any man, that these discharges are salutary, and therefore to be borne, and rather viewed as friendly companions. I admit, that to a person who has no knowledge of a suitable remedy for this complaint, it would be best to let nature alone. But this is no more the case in *diarrhœa*, than any other disease to which we are subject. The truth is, that in many cases nature makes an unavailing effort to carry off some offending matter within the body, but this is seldom proportioned to the case, being sometimes too sparing, and often too great. How are we to expect wonders from nature in curing our diseases, when we never pursue her most obvious tracts, when in health? A pretty specimen of following nature indeed, search the globe for luxuries, gorge ourselves with trash, in food, in drink, and pour down hot, and then cold, &c. &c. and when nature would endeavour to throw off those dregs of imprudence or inattention, we are to call out, let nature alone and she will cure you, all your efforts in bringing on disease, to the contrary notwithstanding. And what a pretty companion she gives you, in sending you every half hour, perhaps, to enjoy the perfumes of your *cloatick* vault. She acts here as the spoiled child, and the more you humour her, the oftener will she send you on this disagreeable errand.

Let it not be imagined that I hold nature's efforts in contempt; on the contrary, I would woo her ever as my guide, but not view her things without a scrutinizing, eye, in order to comprehend her real designs. Thus, if nature shows you by a *diarrhœa*, that there is lurking disease, why not take the hint she gives you, and carry off the offending matter by increasing the secretions from the use of purges, emeticks, sudorificks, and temperance? Or, if nature is overpowered, as is often the case in all diseases, why not support, and aid her, by means of such articles as give tone or strength, and thus arrest wasting disease? Therefore, never let a *diarrhœa* run on; if you know the cause, remove it, if in your power; this you can always do in part. Then, if nothing forbid, take purgative injections, or emeticks; live temperately: when this is done, try mild tonicks, as the mineral acids, bitter infusions, a little laudanum, &c.

A purging is sometimes attended with pain in the bowels, some fever, and considerable thirst: in habits not subject to such complaints, or no particular debility to forbid, we should bleed moderately, give castor oil, rochelle salts, or other purges, once a day, or every other day. To conclude, mild glysters, gentle purges, temperate living, and dressing reasonably warm, will generally do more in a few days, than the natural efforts in a month, or perhaps in a life time.

A *diarrhœa* that is in some measure habitual, will require very little purging; mild glysters will generally remove the foulness of the intestines; then we are to endeavour to give tone, by means of a suitable diet, and mild astringents, as bark, lime water, tar water, elixir vitriol, or pleasant bitter infusions; in these cases a reasonable use of old spirituous liquors, best wines, a little salted animal food, reasonable exercise, warm dry feet, will be found useful; so may a reasonable use of the bath, either cold, tepid, or warm. Lastly, it will generally be necessary to avoid a free use of vegetables, of malt liquors, large meals, wet or cold feet, damp beds, close rooms, &c.

A *lientery* is a *diarrhœa* wherein the food passes off undigested; the food appearing whole, and in some cases

running through the bowels in a few minutes. In these cases very gentle emeticks, weak solutions of soda, or tincture of rhubarb, may be given, and followed by the use of elixir vitriol, decoction of bark with magnesia; bitter infusions of carduus, centaury, or chamomile. The diet must be thin, light, and well boiled; an excellent diet in those cases is milk boiled with a little crumb of bread rubbed fine, and a little horseradish grated into it: ginger, mustard, and cinnamon, should be used moderately.

It must be obvious, that in all cases of looseness, solid or harsh diet must be avoided, as well as full meals, and also the free use of spirituous drinks. I have said, cordial drinks are sometimes necessary; but to be useful, they must be used sparingly, or much injury will arise from them; they give a present stimulus, but debility will always follow if they are taken in large quantities.

## SECTION XLIII.

### *Of a Gonorrhœa, or Clap.*

The cause of this disease is well known, and too often encountered. Its symptoms are smarting in making water; a discharge of whitish, yellow, or even greenish, mucous matter, from the *urethra*. There is considerable difficulty in distinguishing this disease from its *eldest brother*, the pox, or *lues venerea*, and therefore it would always be best to apply speedily to an experienced physician. If circumstances render that impracticable, these circumstances may be remembered, that *chancre* or ulcer on the *glans penis*, is a strong symptom of *lues;* so is any very considerable inflammation, swelling, and pain of the glands of the groins. A running, swelled testicles, inflamed groins, pain in making water, and fever, all arise, sometimes, from a *clap:* these symptoms, however, yield speedily to bleeding, oily purges, mucilaginous drinks, &c. while venereal *buboes* resist for some time every effort.

Unless a *clap* is very mild, it is always safest to take, in conjunction with the remedies for this disease, a

little calomel and opium, for a few days. The inflammation in the *urethra* should be treated with mild injections, for a few days, as milk and water, mucilage of best gum arabick, or very clean mucilage of slippery elm; then take one scruple of calomel, a tea spoonful of honey, and three or four ounces of water; shake this well together, and inject a syringeful of it three or four times a day. If *priapisms* are distressing, take laudanum every night. If a *gleet* remains, take balsam copaiba; and inject a weak solution of lead, as half a dram of sugar lead, in half a pint of water. These things, particularly, are to be attended to in *clap;* use a low diet, keep the bowels open with oil, or salts, or rhubarb; take one full dose of jalap and calomel, bleed once; use mucilage plentifully; avoid venery and heating drinks. And if there is any doubt of the nature of the disease, take calomel and opium, and use the calomel injection.

## SECTION XLIV.

### *Of a Hernia Humoralis, or Inflammation and Swelling of the Testes.*

This is a painful swelling of the *testes*, accompanied generally with considerable fever. It arises from various causes, as a translation of inflammation from *clap;* from astringent injections in such cases; from *mumps;* very hard labour, &c. Where the symptoms run high from whatever cause it may arise, we must bleed largely and repeatedly; give mild opening glysters; cooling physick and drinks; enjoin rest, cold applications to the *scrotum*, as a cold poultice of bread with lead water, or slippery elm bark moistened.

If the patient is able to go about, the parts must be suspended in a bandage in form of a cup, and tied with strings to a bandage round the body. In this disease we must never cease to bleed till the pain is entirely removed, unless constitutional debility, or constitution of weather prevails, which predisposes strongly to diseases

of a low grade; here, after reasonable bleeding, we must trust the cure to rest, cold applications, and opium, given according to circumstances.

## SECTION XLV.

### *Of a Gleet.*

A gleet, or thin discharge from the *urethra*, may proceed from general debility, gout, or other diseases, but is more frequently the consequence of *gonorrhœa* or *onanism*. In our efforts at cure, the principal indications are the same. Light but nourishing diet; the cold bath; riding on horseback and the use of tonicks; and the following will generally answer: take iron filings, assafœtida and myrrh, each one dram; make this into pills of the usual size, and take three or four daily; drinking after each some pleasant bitter infusion. Along with these, as constant remedies, the occasional use of balsam copaiba, or small doses of tincture cantharides, will be proper. A hard bed, and moderate anodynes at night, will be advisable; and the bowels should always be kept reasonably open. Anodynes should, however, never be given for any length of time; a little bark, or powdered colombo root, taken in cool water going to bed, would answer to alternate with anodynes. It must be obvious that where the cause is known, it must be avoided. *Gleets* are sometimes accompanied with a smarting in the *urethra;* in those cases mucilaginous drinks should be taken, and very nice oil, or milk and water, injected into the *urethra*.

## SECTION XLVI.

### *Of Onanism.*

This disease has been known for many ages, as we may read in Scripture of the case of Onan. Excess of venery is a dreadful and common cause of dangerous diseases, but self-pollution is tenfold more destructive. The excessive irritation which accompanies this act, ex-

hausts or racks every energy of the brain, which is concerned in the animal, vital, and natural functions, and the mind itself scarcely escapes. The first consequences, in general, are *parapisms, nocturnal emissions, gleet;* these are followed by general debility, indigestion, hypocondriasis, and sometimes by *paraplegia,* or palsy of the lower limbs, and according to TISSOT, and others, even instant death.

No remedies will succeed in removing this disease while the cause continues, and the best cure in general, if it has not been suffered to progress too far, is matrimony. If circumstances forbid this, by avoiding the practice which leads to this disease, and pursuing the plan laid down for *gleets,* we will generally succeed in making the patient tolerably comfortable. It is said both sexes suffer from this vicious practice.

## SECTION XLVII.

### *Of Phymosis, and Paraphymosis.*

A phymosis is a painful contraction of the *prepuce,* or foreskin of the penis. *Paraphymosis* is a painful stricture on the *glans penis,* occasioned by a contraction, swelling and inflammation of the *prepuce,* which has been drawn back over the head of the penis. In children, those affections arise from a variety of causes, as uncleanness of the parts, irritation from handling with dirty fingers, from venereal taints: and *paraphymosis,* from imprudence in drawing back the prepuce before the parts are sufficiently grown. But in the adult, it, perhaps, is almost in every case, the effect of venereal disease.

The treatment is pretty generally the same, as respects this local affection. If the symptoms run high we must bleed, apply leeches to the part, warm fomentations; give cooling purges, low diet, mildest drinks: and in *phymosis,* inject milk and water, frequently, into the space between the *glans penis* and *prepuce.* If the disease does not yield to this treatment, the stricture must be cut, by slitting it so far as will give freedom to

the parts. Nor must this operation be delayed too long, or mortification may follow; but this must be left to the surgeon if one is to be had; if not, it would be the safest after a trial of several hours, or a day or two, of the above remedies, to venture to do it with a very sharp penknife; this must be entered with its back next the *glans penis*, and the part slit with an outward cut. The emollients, &c. must still be continued, till the inflammation is removed.

In cases arising from *syphilis*, it will generally yield to a free use of emollients, and the liberal use of mercurial ointment, but the ointment used for this purpose, ought neither to be old nor contain any stimulant article, as balsam, honey, turpentine, &c. which are generally added to this ointment. Quicksilver and nicest fresh lard, should alone compose this ointment.

## SECTION XLVIII.

### *Of Drunkenness, or Self-Debasement.*

This is a disease known in every age, and perhaps, in every country. It is one of the evils which mankind choose to bring upon themselves; and its most usual causes are supposed to be the love of cheerful company; distress of mind; want of sense in children, and idiots; languor of spirits, or of the corporeal feelings, and necessity from habits thoughtlessly contracted, which ever after render this stimulus necessary. Many circumstances may lead to a man's getting drunk once in his life, and for which he may be excused, but drunkenness as a habit, is ever bottomed on infidelity. In common language we talk of being as drunk as a brute. This is a strange abuse of language, and of the brute tribe, who in this particular is always man's superiour. I have never heard of but one animal being intoxicated, and this was a goat who wholly disdained a repetition of it.

Man alone is capable of transgressing every law, natural or divine, by boldly turning himself upside down to lick up the dust of every vice. He who becomes a drunkard, erects a temple to vice, and all the horrid su-

perstructure rests on infidelity. We are commanded to break no law; but he who wallows in the temple of Bacchus, built by himself, can *keep no law*. Bacchus acknowledges no worshippers who do not renounce all other gods: at least, while in his presence. Besides, no man can worship two masters; he will love one and hate the other; and it is especially true with those who love the bottle. This is the most unhallowed ground upon which man can walk; and the deity has marked every step through it with vice in all its most heinous forms: so that this crime is seldom found alone; and instead of being a cloak or excuse for other offences, it is the cause of them; and, therefore, always doubles offence, instead of lessening it. But, I forbear: it belongs to another profession to point out its heinous consequences, in this world, and more especially in that to come; while to punish the offender belongs to the civil law. It is the business of the physician, in his usual garb of humanity, to overlook the fault, and apply a remedy for the relief of suffering man, under all circumstances.

If you find a man who has been wicked enough, or fool enough, to get drunk, or a child unwittingly made so, a first consideration in such cases is a free current of fresh air; if it is discovered at an early stage, a gentle vomit of white vitriol or ipecacuanha may be given; if it is far advanced, it will be best to turn the patient on his side, or on his belly, that he may be enabled to vomit; and the stomach may be left to empty itself; all garters, handkerchiefs, and tight clothes, must be loosened; and if the patient is very far gone, stimulant injections of salt and water should be given. We must never bleed till the patient has in good measure recovered, when it may possibly be useful in preventing congestions, particularly in bad habits. It is never necessary, however, to bleed largely; on the contrary, such a practice would be dangerous. But perhaps the only remedy generally necessary, is throwing cold water on the patient's head until he is sobered. I have used this in many cases, and in some where the patients were entirely senseless, and it has always given speedy relief. I have also seen quarrelsome persons when drunk, and about to fight, to get

to a pump, and by letting a good deal of cold water pass over the head become much sobered.

I am much at a loss to account for the manner in which cold water acts in these cases. The following seems the most satifactory to my mind: it operates by rousing the lungs from a state of torpor, and thus infuses new vigour into the system by means of *oxygen*. I also imagine, that the prostration from drinking ardent spirits is always occasioned by its operating primarily on the lungs, impairing their functions; and the brain is thereby suddenly subjected to a reduction of stimulus, for want of oxygen. Hence it would seem to follow, that the indication of cure is to restore completely the process of respiration, and strength and regularity of action returns, notwithstanding there may be a considerable quantity of spirit upon the stomach; and all this corresponds with the circumstances and facts in the case.

It has been a prevalent opinion, that persons once in this habit cannot leave it off without danger. This is an errour; and let no man, surrounded by weeping, or perhaps needy friends, weeping over his baseness, console himself with the notion that however much he may repent having formed such a habit, that he no longer has it in his power to retract. He should, he must, and may safely retract, or else, wo be to the wretch, who, in spite of every endearing entreaty, and every caressing invitation to the contrary, dabbles along until he becomes the torment of his friends, the indignant scorn of strangers, the crucifier of his own body; until his conscience and every faculty of the mind is seared as with a hot iron; nor stops the devouring foe till he has destroyed even a moral faculty, and leaves the filthy body goaded with resolve upon resolves; but fortitude has fled, never to return till tea, coffee, bitter infusions, cordial diet, mild drinks of small beer, buttermilk, milk and water, and active industry, shall wholly change the constitution; and this is generally but the work of a few weeks or months.

Let it not be said I colour the picture too high. If you, reader, feel in reading as I do in writing, you would

agree with me, that, were it possible to banish drunkenness from the world, it would be worthy martyrdom at the stake. If it is not impious thus to speak, what praise, what glory would follow the man who would die at the stake, to save such a host of sinners! But, thou Mightiest, such is not thy righteous providence: thou hast infused light into each one, by which he shall walk in the light of day, but stumble in the gloomy shades of night, and answer, at the mighty day, each one, for the dark deeds done in the dark hours of the conscience.

Let me admonish every one, then, to choose the light, burnish bright the conscience—like the brass of the helmet, it rusteth, and passeth away—the steady practice of virtue shall burnish this faculty of the mind, brighter than brass, more durable than gold—and when the bells of death shall ring in your ears—its knocker strike at your bursting heart, this light shall not be extinguished; for the science of alchymy applies alone to the mind of man; here lies the philosopher's stone, handled skilfully, the conscience, more base than iron, shall wax vastly more precious than gold.

## SECTION XLIX.

### *Of Headach.*

Headach is generally but a symptom of disease. Where it is habitual, which is often the case, it mostly arises from gout, or from chronick affections of the stomach. It would be entirely useless to speak in this place of headach, as arising from the various diseases with which we are afflicted; for in such cases regard must be had to the primary symptoms. Headach, however, sometimes arises from debauch; from eating too much; or from an article happening to disagree with the stomach, or from sudden diminution of the secretions. In all those cases it will be sufficient to take a little physick, a gentle emetick, or cleanse the stomach by drinking plentifully of chamomile tea; and in healthy, or full habits, to lose a little blood. I have been subject to severe headach; I discovered it arose generally from eat-

ing fresh pork, with turnips or cabbage; by avoiding those articles, I have not had it for many months. The only speedy remedy which I found for this disorder, was a pretty full bleeding. The application of cold water or vinegar to the head will sometimes be useful, and also bathing the feet in warm water.

Upon the whole, headach is generally a consequence of intemperance, or neglect to observe how each article of diet agrees with us; or costiveness; and all those things may generally be avoided, and we thereby escape this severe pain of the head.

In nervous headach, which is generally excited by something disagreeing with the stomach, an opening injection, and afterwards taking a few drops of ether, spirit hartshorn, compound spirit lavender, or a little elixir vitriol, in a small glass of cold water, will answer: smelling at hartshorn, or lavender, will sometimes be useful. But even here, if the symptoms run high, a very mild emetick, or a small bleeding will answer. In obstinate cases, irritation applied to the neck by scratching smartly, or applying a blister will be advisable.

*Vertigo* or giddiness, and *megrim* or a pain over one eye, generally accompanied with giddiness, are but varieties of this disorder, and are excited by the same causes as headach, and require a similar treatment: these affections are most commonly the consequence of irregularity of the bowels, in the decline of life, and yield best to warm purgatives, as tincture rhubarb; heira picra in spirits; or a little castor oil taken in wine, or a little strong toddy; if these do not relieve, we should in all cases, take a little blood, and it is a fact that the aged bear small bleedings well, and often derive great benefit from this remedy in their diseases. In young persons troubled with giddiness, purging or bleeding moderately, or a gentle emetick, will generally relieve them. They should never touch spirituous purgatives. At all periods of life giddiness sometimes arises from fasting; for such cases a very little food should be taken, and a little interval left before we make a meal, for the stomach being generally debilitated, may easily be injured by taking much food

before its action is in some measure restored, by means of a little mild food; this is infinitely better than a dram, which is too often taken for this purpose.

## SECTION L.

### *Of the Toothach.*

Toothach is very often connected with a rheumatick *diathesis*, but it also arises from *caries* or rottenness of the teeth, and this is probably oftener the consequence of some defect in the constitution, than of sweets or the rash exposure of the teeth to hot, and cold, articles of drink and food. I am inclined to believe, that except from actual violence, we seldom injure the enamel of the teeth, until the constitution is impaired, by the manifold irregularities which we practise. Or what is now, perhaps, equally common, constitutional debility, which is inherited.

It is true that toothach in general, although dependant on general disorders, is so locally fixed on the teeth, that it is to them alone we can apply a remedy. I have seldom seen any benefit arise from bleeding, purging, abstinence, &c.: toothach sometimes is accompanied with fever, catarrh, headach, &c.; in such cases bleeding, abstinence, and other remedies, which operate generally on the system, may be useful. But where we are not sensible of other symptoms of disease, we should always confine ourselves to local remedies. If the tooth is hollow, a pill of camphor and opium, a little lint moistened with oil cinnamon, oil cloves, of peppermint, or a strong tincture of the pricklyash berries, will often succeed. If it does not, or if the tooth is not *carious*, a pretty large blister applied from behind the ear to a considerable way on the under jaw, will seldom fail to remove this painful affection.

The tooth ought now to be plugged with metal, or for want of an artist, gum mastick, white wax, or gum elastick will answer. Articles applied outwardly as hot as they can be borne, are often useful, as scorched tow, or a cotton cloth rolled up and held to the cheek; but moist

warm applications ought to be avoided; they certainly predispose much to catching cold; in very obstinate cases a poultice of mashed potatoes, or a poultice of bread and milk, with a little camphor, will give effectual relief, if we are careful to avoid catching cold.

Should all those things fail, the tooth should be drawn, for the constant irritation of an aching tooth on some constitutions, may be productive of much mischief; nor is it apt to leave the temper unruffled. Aqua fortis, or oil vitriol, or spirits sea salt, should never be applied to the teeth; if a caustick is necessary, burning the part with a hot wire, through a quill to avoid burning the lips, will be much safer than those acids, and equally effectual. I shall conclude this article by admonishing the reader to avoid much scouring of the teeth with tooth powders, or filing them. Strict cleanliness is at all times essential, and frequent brushing with a soft brush and cold water, may be useful. But I have no hesitation in saying, that attention to such things as improve the general health, as exercise, temperance, &c. are more effectual in giving health and soundness to the teeth, than all the dentists, and *dentrifices* in the world. Let it not be supposed that I wish to throw the least shade of censure or disrespect on the useful profession here mentioned. I only mean that by proper attention to such means as promote health, we should have less need of the dentist. But with respect to *dentrifices*, I am clearly of opinion, that much injury has been done by an abuse of them, as well as by using such as are pernicious in themselves. Those who are prejudiced in favour of *dentrifices* will find a good one in the list of medicines. For gum biles, the best application is a roasted fig kept on the part, till the suppuration is perfected, when it must be opened if it does not burst; frequent rinsing of the mouth with very weak soda water, or some weak bitter infusion will be necessary, and soon restore soundness of the part.

SECTION LI.

## *Of Earach.*

Earach often arises from inflammation, from the sudden obstruction of some of the excretions, and sometimes from insects getting into the ear. Where there is evidence of inflammation we should bleed, purge, and enjoin abstinence, and apply blisters behind the ears; if the symptoms progress notwithstanding these remedies, we may expect a suppuration, and should apply poultices of bread and milk over the ear, and syringe the part well two or three times a day, with a little warm milk and water; and when the abscess breaks, the ear should be tied up with a pleget of cotton or tow, and frequently syringed with warm soapsuds for a few days; afterwards, with chamomile, or sage tea.

When it arises from taking cold, by which some of the excretions are obstructed, a little cooling physick, with bathing the feet, and drinking a little warm tea going to bed, and stopping the ears with a little wool, or cotton, will generally succeed. When it arises from insects, which I have seen, we will generally dislodge them, if alive, by injecting warm oil, or weak camphorated spirits, into the ear. In all cases of violent pain in the ear, we ought carefully to examine the ear in a strong light, and always pour oil into the ear. I was once applied to for a distracting pain in the ear, in which the patient described his distress to be extreme. On inspecting the ear, I discovered some fine threads therein, this induced me to introduce a probe, and I soon entangled a large quantity of spider's web. I now threw in an injection, and a pretty large spider came rushing out in full vigour; it had been there upwards of twenty hours, and was so far entered that I could not see it, though I examined in a strong light.

Another case occurred, in my practice, where one of those large black beetles, commonly called clocks, which fly about in the evening, darted suddenly into the ear of a gentleman. He described his sufferings as be-

ing extreme; the noise he likened to loud thunder, and an indescribable restlessness and horrour, which existed, rendered his agony peculiarly great. I drew the insect from his ear by means of a flat probe bent at the end. Had the accident occurred in his sleep he would not have had the least idea of the cause of his distress. Let this case be remembered; for, even in this case the persons in company could not believe him, until they saw the insect actually brought forth.

## SECTION LII.

### *Of Inflammation of the Eyes.*

This inflammation may arise from a variety of causes, as dust, or small particles of stone, wood, &c. getting into one or both of them, from the eye lashes turning inwards, from the hair pushing their roots too far inwards; the down from the expanding leaf-buds in spring, and riding through the woods where we come in contact with spider webs, is a very frequent cause of inflammation of the eyes. Acrid fumes of aqua fortis, spirits hartshorn, &c. will sometimes inflame the eyes. It is sometimes epidemical, and often passes through a whole family; most inflammatory diseases inflame the eyes. *Lues venerea* sometimes brings it on in the most aggravated form: it is also obvious that it may often be the consequence of accidents, as the sting of insects, a stroke, &c.; much straining, or stooping; or improper straining of the eyes in viewing the sun, or other luminous bodies, or too close looking at candle light, in fine sewing, reading, &c.

In all cases of this affection, it is particularly necessary to discover its cause, and if possible avoid it, and then the disease must in common be treated on general principles. Low diet, cooling drinks, avoidance of light and dust, or the heat of a fire; and using cooling physick, and frequently washing the parts in cold rose water, or a weak cold infusion of chamomile, will generally succeed. If the case is violent, and does not seem to yield speedily to the above treatment, pieces of bread

soaked in cool weak lead water; or the pith of sassafras; or slippery elm bark, soaked in cool water, may be tried for a few days; and blisters applied to the neck, and behind the ears. Leeches should always be applied freely about the eyes when much inflamed. Should all the above remedies fail, we may now consider the inflammation of a chronick nature, and a change must be made in the treatment.

I have found in all cases of inflammation of the eyes, where there seemed to be a vibration between acute and chronick inflammation, that washes of every kind are either useless or hurtful. The best remedies here, are the free use of liniment of best oil of almonds and nice clear fresh lime water; or the same oil with a very little sugar lead in it. In the more inveterate cases, warm poultices of bread and milk; or a blister applied immediately over the eye lids, in conjunction with the liniment, should be advised. Blisters should never be applied over the eye, in recent inflammation: at any rate, not till we reduce the patient by bleeding, purging, abstinence, &c.

I am well convinced that much mischief is done to the eyes, not only by applying eye waters too strong, and with saline matters in them that chrystalize, or dry into salts; but also by continuing watery moisture of any kind too long. Thus, for instance, we make a strong wash of sugar lead, of white vitriol, &c. we apply this freely to the eyes, the heat dries up or rather evaporates the fluids, and leaves the saline matter on the eye, and thereby produces much irritation instead of lessening inflammation. I am convinced from experience that whether the above explanation be correct or not, vast injury is done by washes of sugar lead, and white vitriol, in active inflammation of the eyes: and I am certain, the practice would be improved if we were to reject those things altogether, and substitute in their place, the cold mucilage of elm, and sassafras pith, cold milk and water, rose water, or cold infusions of chamomile flowers. And in cases somewhat advanced, mild liniments: those cases still more chronick, sugar lead, white vitriol, or laudanum and water, may be used with good effect. But

even here, it is highly probable, brandy, or laudanum diluted according to circumstances, with water, will supercede the necessity of all saline articles, and I most seriously recommend to every person, to try those remedies first; and I hope on trial, it will be found a great improvement in *ophthalmick* inflammation. It remains to remind the reader, that in all cases of recent inflammation of the eyes, the lowest possible diet; cooling drinks, pretty free bleeding; and cooling purges, and careful avoidance of light, are especially requisite, to secure the sight.

## SECTION LIII.

### *Of want of Appetite.*

Want of appetite is occasioned by many causes, as intemperance in eating and drinking, want of exercise, grief, or the pressure of any of the passions on the mind, too gross a diet, the immoderate use of tea, coffee, tobacco, or opium, and from constitutional debility. Want of appetite attends all febrile diseases, and most others; in this condition of the body, appetite is by no means to be desired, and therefore what I say respecting appetite, is to be understood as relating to persons who are labouring under no particular disease, and able to attend to their business.

In general, the first and principal means for its removal, are sufficient exercise, and strict temperance in diet, as well as drink; then a close examination of the respective articles of our food, and we will often find it owing to the use of some article of diet, which disagrees with the stomach. We must, in general, avoid greasy, or sweet articles, warm bread, or cakes containing fat, or butter. A spare diet should be used for a few days, and if this, with a little cooling physick, does not relieve, the elixir vitriol in water will often succeed. If the case is obstinate, a gentle vomit will be necessary. In languid constitutions, the tincture of bark, with a little ether, will succeed admirably. Pleasant bitter infusions are mostly useful. Where it proceeds from

the passions, we must try by all means to avoid their influence, by travelling, keeping company, or application to business.

Upon the whole, they who live temperately, and exercise reasonably, will seldom suffer from want of appetite; and if nature should languish a little in this respect, we need not be over anxious, but leave a little to time and abstinence. But there are cases where the stomach becomes weak from the use of too poor, or scanty diet; of this, persons of common sense can judge best themselves, and they will seldom find any thing necessary but a gradual improvement in their diet; making it reasonably stimulant, by increasing the quantity of animal food, and condiments, as pepper, mustard, &c.; and sometimes by taking a little good wine, or even brandy. But those stimulant articles can never be useful to young persons, except for a few days, as medicine, on a debilitated stomach: their constant use will impair the digestion of such people.

## SECTION LIV.

### *Of the Heartburn, and Waterbrash.*

The heartburn is a disease of the stomach, notwithstanding the absurdity of its name; and it is generally accompanied with waterbrash; which last, is a fluid collection upon the stomach somewhat acrid, generally acid, sometimes mixed with bile. Heartburn may proceed from any thing which impairs the tone of the stomach; it is sometimes attended with nausea, or vomiting, or a considerable flow of watery fluids from the mouth. It often attends pregnant women; distress of mind, or any thing which debilitates the stomach, or the general system, may excite it. In severe cases it will be necessary to open the bowels with rhubarb and magnesia; then the use of a little magnesia, or calcined magnesia, a little milk, or milk and lime water, chewing a few kernels of peach stones, a little sweet spirit nitre in cool water, a few drops of elixir vitriol in water, or a little soda dissolved in water, will generally succeed:

but permanent relief is only to be expected from exercise, and close attention to that kind of food, and drinks, which agree best with the patient.

This disorder is mostly habitual, and a symptom of *dyspepsia*, or chronick debility of the stomach, to which I must refer the reader for further instruction. I beg leave to admonish every person who values his health, or prospects in life, to abstain from spirituous medicines, or drams, for this affection of the stomach; they, in general, will eventually do more mischief than the disease. It is true, a dram of rum or brandy will for a time, force the stomach into action, but at each repetition, it loses more and more this effect, till a man may drown his stomach in spirits, and obtain no benefit, but increasing harm. To persons in the decline of life, they are often useful, and mostly safe.

## SECTION LV.

### *Of the Hickup.*

Hickup is mostly a symptom of a disease, and seems to be a spasmodick affection of the stomach and *diaphram.* It arises from various causes, as diseases of the stomach, brought on by malignant, or low fevers; from poisons; *scirrhus;* or injuries done some of the viscera; it also frequently arises from indigestion, or from swallowing much dry food, as crust of bread. We should always, if possible, discover the cause, and adapt the treatment to the circumstances. Where it proceeds from violent disease, in its last stage, it is always a dangerous symptom; a little milk and lime water; magnesia rubbed in cold water, and a very little cinnamon water or oil anise; or a few grains of soda, with a little mint, nutmeg, cinnamon; or a little cardamum seed powdered fine and mixed with cool water. Brandy, or laudanum, should be rubbed over the region of the stomach; or mint pounded and laid on. A spoonful of milk will sometimes succeed, sweet spirit nitre; or ether, in small doses, or a few drops of laudanum, or sometimes a glass of very good wine, or wine whey, will succeed;

we should apply a blister over the stomach in severe cases. Where it arises from overloading the stomach, an opening glyster; a few drops of elixir vitriol in water, or drinking a glass of cold water, very leisurely, or a glass of soda water, will generally succeed. If they do not, a gentle vomit, or cathartick, should be taken.

Where it arises from poisons, or wounds, mild mucilaginous drinks should be taken, and such remedies used as are suited to expel, or destroy the poison. To the mucilaginous drinks in cases of wounds, we should add the use of opium or laudanum, and keep down inflammatory symptoms, by bleeding and cooling injections. For hickup arising in a healthy stomach, from eating dry food, or a little too much common food, a sudden call, or drinking a little cool water very leisurely, will generally be sufficient; if not, a pretty full dose of magnesia should be taken. I conclude by most solemnly admonishing every person, to refrain from drams in such cases. Unless it be in the decline of life, it will invariably lead to mischief.

## SECTION LVI.

### *Of Cramp of the Stomach.*

This affection is occasioned by gout, and is apt to come on suddenly, attended with much danger: and it may arise from irregular gout under appearances of hypochondriasis, or hystericks; from strong vomits; and a slighter kind of it, sometimes attends pregnant women; and, it is, also, in some measure habitual in aged persons, who have been long affected with *dyspepsia*, or irregular gout. In all severe cases of cramp in the stomach, we should give laudanum largely; open the bowels by mild injections; get the patient, as soon as possible, into the warm bath.

If it be from gout of long standing, and more especially, if in the decline of life, and in persons accustomed to the use of ardent spirits, brandy must be given with freedom; the feet should be bathed in warm water. In females who have not been accustomed to ardent spirits,

ether in pretty full doses, will be a safer remedy. If it arise from pregnancy, the bowels should be opened with injections, and a little blood taken; or if the habit is reduced, a few drops of laudanum may be taken; afterwards magnesia, or rhubarb, must be used to keep the bowels open.

In persons predisposed to this disease, the occasional use of whole mustard seed, will answer a good purpose, and if taken going to bed, will lessen the liability to attacks in the night, its most usual time of attack. Where it arises from a strong vomit, at its commencement, it may generally be removed by drinking plentifully of warm water, and applying hot wet cloths to the stomach, bathing the feet, and giving glysters. But if it has progressed till the patient is much prostrated, these remedies would be dangerous; laudanum alone should be trusted, and it should be repeated every five or ten minutes, till it answers the purpose. If it is not to be had, wine whey, or toddy, should be given, and efforts made by purging glysters, to open the bowels, as soon as possible; or a few drops of sweet spirit nitre, or compound spirit lavender, may be given for want of laudanum.

## SECTION LVII.

### *Of the Nightmare, or Incubus.*

This disorder attacks persons in their sleep, and in its most severe form, distresses with ideas of danger, such as imagining they are about to be torn by animals, or stabbed, or shot at; about to fall from dangerous precipices; or bestrode by some vicious creature, which keeps us from moving; from these we make desperate efforts to escape, by getting away, or by hallowing, or striking, &c. The immediate cause of this affection is probably some obstruction in the blood, from debility of the heart, or other parts concerned in the circulation. And its most usual cause is debility, arising from great fatigue, or such as is constitutional.

That overloading the stomach at supper, may occasion this disease, I have no doubt, but I am well convinced

an empty stomach is more dangerous to such persons; they should by no means overload the stomach, nor should they ever retire to bed without some solid food upon the stomach. Its cause in most cases is constitutional debility; and, anxiety or want of exercise, or fatigue, or intense study, will excite it; so will sleeping with the clothes on, especially garters, handkerchiefs, &c. It may also arise from indirect debility in full habits.

Whatever is calculated to invigorate the constitution, as temperance, exercise, &c. is calculated to remove this disorder. All sensualities, fatigue, &c. must be avoided. The cold bath, and the occasional use of preparations of iron, bark, and elixir vitriol, will sometimes be highly useful. Those of full habits must lose blood, and take a little cooling physick. Persons subject to this disease should not sleep alone, or at least, they should sleep in a room where there is some other person; and enjoin upon them, in case of moaning or hollowing, that they shake or call the sufferer, till he answer; this may probably sometimes prevent death, in such cases.

There is a milder form of this disease, in which the patient imagines himself to be flying, or jumping, with all the sang-froid of a merry-andrew, over rivers, houses, trees, &c. and generally concludes with a self-compliment for having performed great feats, before admiring multitudes. Sometimes, however, he soars too high, and the jaunt becomes painful, and terminates in struggles similar to those of common *incubus*. Persons long subject to nightmare, are generally entirely, conscious of their situation, and while they endeavour to rouse a bedfellow, who they desire, most anxiously, to shake them, they still are unable to stir even a finger; but by great exertion they either moan or breathe audably, till they recover, or rouse up some person to their relief.

To conclude, whatever invigorates the constitution is the remedy for *incubus*. But I cannot dismiss this article, without cautioning the reader against a horrid practice sometimes recommended: the taking of drams at night, in order to prevent it; such a practice may possibly sometimes keep off this disorder, but in most cases, it will bring the devil in its stead. If the stomach re-

quires a late stimulus, take a little whole mustard seed, bark, elixir vitriol, or a little well boiled onion, or a pill or two of assafœtida and iron filings.

## SECTION LVIII.

### *Of Swoonings, or Fainting.*

Fainting appears to be a sudden prostration of the animal functions, while the vital, though impaired, still perform their office. Its causes are various, as loss of blood, fright, excessive fatigue, or weakness either direct, or indirect, long fasting, violent affections of the mind, breathing air of crowded places, which has lost a part of its *oxygen*. It also may arise from sudden exposure to a stove-room, or fire, after having suffered much cold. I have seen it brought on, once, from swallowing a spoonful of hot soup: the person lay in a deep swoon for a few minutes; he then arose, and made no further complaint. It is often excited from striking the elbow, so as to injure the *ulnar nerve*.

In all cases of fainting, it is essential, in the first place, to give the patient free access to the air; if they sink in a crowded room, or a room too warm, they must be carefully and speedily removed, cold water, or vinegar and water, may be sprinkled or thrown in the face; the body must always be laid straight, and with but a very small elevation of the head. If the place is warm, fanning will always be necessary; hartshorn, spirit lavender, or burnt feathers, may be held to the nose.

If fainting is alarming from its long continuance, we should give spirits hartshorn, spirits lavender, or ether; or, for want of these, a little wine, or spirit and water. And if it occurs in full habits, we should bleed as soon as the patient is somewhat recovered, for fear of congestion; and it may be well to open the bowels, and avoid whatever may have occasioned the fit. Where it proceeds from exhaustion, as from *hemorrhage*, *flooding* in childbed, &c. the patient's safety often depends on the strictest quietness: a little exertion, at such a time, may destroy life: we should give a little wine, with a few

drops of laudanum, as soon as possible; and a little salted meat, or nice fish, or a little panada, will be advisable. We must always bear in mind, that there is much danger to be apprehended from stimulating too rapidly; therefore, in all cases, we must give our remedies in small quantities. Where it arises from sudden distress of mind, it will generally be sufficient to rouse the patient by volatiles applied to the nose; and when somewhat recovered, let the patient drink freely of some mild drink, to promote perspiration.

Persons who have fainted should never be bled without the the advice of a physician. All such as are liable to faint easily, should avoid crowded places, more especially in the summer. Let it be remembered, that in all cases, we must give the patient free access to fresh air, lay the body on the back, and not raise the head too much; throw water in the face: the last remedy must not be continued long; if it does not succeed, volatiles must be used. Many persons have been lost, for want of those simple remedies, and more especially, where they have been suddenly *raised to a sitting posture*, by which means, the weight of blood is thrown too much upon the languid heart, and lungs, and destroys the patient.

Persons who have fainted, should indulge themselves, for a day or two, and live on the lighter kinds of diet; always remembering that, where there is much languor, from exhaustion, the diet should be cordial, and consisting pretty much of animal food, if there is no strong *contraindications*, from an inflammatory *diathesis*, which sometimes attends persons labouring under debility.

To conclude, frequent fainting is an unpleasant and dangerous occurrence, and the best advice should be had, to discover its cause, and remove that state of the system, which may predispose to it.

## SECTION LIX.

### *Of Flatulence, or Windy Bowels.*

This disorder mostly troubles persons who do not use sufficient exercise, those who study intensely, or whate-

ver tends to impair the tone of the stomach, or general system. If it arise from costiveness, a pretty free use of magnesia, or mild glysters, will be necessary. We must endeavour to use such articles, as agree best with the stomach, and in general, it will be found much vegetables cannot be used; potatoes and well boiled onions, are mostly the best; and the frequent use of dry water biscuit, and a very little salted meat once a day, with proper exercise, will be principal remedies towards permanent relief. This affection is mostly accompanied by acidity, arising from indigestion, which suffers a species of fermentation to take place. As palliatives, the following articles will generally answer: take soda half a dram, oil anise, or peppermint five drops, rub this a little, and add ten table spoonfuls of cold water; of this a table spoonful may be taken occasionally. Or, take magnesia two drams, and treat it in the same manner; of this a table spoonful will be a dose, and if too thick for some persons to swallow, a little more water may be added. A little strong ginger tea, a tea spoonful or more of ether, or sweet spirits of nitre, and in some cases laudanum, will give relief. The use of the iron pill, which will be found in the list of medicines, or the elixir vitriol in water, or tincture of bark, with ether will be excellent remedies.

Lastly, avoid drams; they may spur up your stomach, but soon lose their effect, and never fail to impair the tone of the stomach of young people. The aged will often find relief in those cases, from taking tincture rhubarb, or heira picra, dissolved in good old whiskey or spirit.

## SECTION LX.

### *Of Chilblains and Kibes.*

There appears to be some ambiguity in the application of these arbitrary terms. I shall speak first of KIBES, as a disease of the heels; it proceeds, perhaps, in all cases from exposure to frost, or much wet applied to the feet; snow water in particular. It is a painful affection of

the heels, but, something similar occurs about the toes, in some cases; the symptoms are swelling, intolerable itching, small whey coloured blisters, crackings of the skin, like cuts: it occurs in winter, and is most troublesome when the patient becomes warm. Apply equal parts sweet oil and spirits turpentine, two or three times a day, and wear a plaster of some mild ointment, and in general, such persons, even children, ought to wear boots in time of snow, or wet weather, and these should be well oiled or waxed. Roasted turnips are sometimes applied, they may be useful in cases which have been suffered to run on till there is high inflammation, but they should never be applied in recent cases. Vinegar containing a considerable quantity of sugar lead, is a good remedy: a liniment of lime water and sweet oil, will sometimes succeed.

CHILBLAINS may be excited in the same way as *kibes*, by dabbling with the hands in hot water, or too much handling of snow, or snow water, and also by slight frost bites. But I suspect, this is often a humour connected with some constitutional defection, and is somewhat similar to ringworm, and humours which occur about the *perinæum*. Chilblains is a violent itching and cracking of the skin of the palm of the hands, in particular, or on the fingers, or other parts, these dry up now and then; a new itching comes on after an uncertain interval, and is soon followed by whey coloured blisters, cracks in the skin, &c.

The same remedies may be applied here, as directed for *kibes*, particularly a very strong wash of sugar lead and vinegar, or a weak solution of arsenick may be used: frequent washings with castile soap and water; or lime water and sweet oil, may be applied. But persons affected with *chilblains* should take a little cooling physick, particularly cremor tartar with a great deal of mucilage now and then, and perhaps that of the slippery elm is best; nice gum arabick, or other mucilage, may, however be used. The diet must be temperate, and the drinks of the mildest kinds, as milk and water, buttermilk, infusions of burdock, sarsaparilla, or sassafras, but these should be very weak, and taken when cold.

## SECTION LXI.

### *Of Herpes in general.*

There is a great variety of this affection of the skin: I shall mention a few necessary distinctions.

1. *Herpes simplex*, a dry mealy eruption, which affects various parts of the body, sometimes confined to the knees, or face, &c.

2. *Herpes miliaris*, or ringworm, mostly on the face.

3. *Herpes zoster*, or shingles, encircling the body.

All these appear to be but varieties of the same disease. Where they have become habitual, it is useless to apply outward remedies; here mild diet consisting of a good deal of milk; taking occasionally a little cooling physick, as cremor tartar, alone, or mixed with sulphur or magnesia; the use of mucilaginous drinks, and frequently washing the parts affected with mild soap and water, and after drying the part well, it may be dusted with prepared chalk, starch, flowers of sulphur, or peruvian bark.

A course of mucilage of slippery elm water, and small doses of Fowler's solution, may be safely tried, but the arsenick must not be continued long at a time; two or three weeks, in small doses will be sufficient at one term, but it will often be necessary to repeat.

The ringworm may, however, generally be removed by outward applications: a strong solution of sugar lead in vinegar; rubbing with green walnuts, or an ointment of white precipitate. Sometimes a liniment of sweet oil and sugar lead will answer, or a very weak ointment of corrosive sublimate, or a solution of corrosive sublimate in lime water, or a blister applied over the part.

4. *Herpes syphiliticus*, or venereal eruptions.

5. *Herpes pustulosus*, or the milk crusts of infants, the scaldhead, and other ulcerous affections of the skin.

For the treatment of *syphilitick herpes*, the reader is referred to the article on *syphilis;* for that of *milk crust*, to the diseases of children; it remains, then, to say something respecting scaldhead.

## SECTION LXII.

### *Of Scaldhead, or Tinea Capitis.*

This is a dreadful scabbing and ulceration of the head, mostly in children, and is mostly the consequence of filthiness, or gross feeding. To the unpleasant symptoms of violent itching, scabs, and ulcers, is soon added an abundance of lice; these, with the matting of the hair, render the disease as disgusting to the sight, as dreadfully tormenting to the patient. If this disease is early attended to, a few careful washings with soapsuds, twice a day, and, after drying the part, applying a pretty strong ointment of red or white precipitate, or of tobacco, with a few purges, and mild diet will seldom fail to arrest it.

If it has progressed, we must proceed with caution; the bowels should be opened, the hair cut away, or carefully shaved off; the head well washed twice a day with soap and water, and a poultice of carrots and yeast applied for a few days; then the head may be dusted with well powdered fresh charcoal, and this succeeded in a few days with sprinklings of bark, at first, containing a little powdered savin leaves, never, however, forgetting to continue the washing, nor to give cremor tartar, or magnesia, with mucilage, so as to keep the bowels well open. In violent, neglected cases, we should commence the washings with milk and water, for a day or two, and must never, if the weather is cool, neglect to keep a warm cap on the head, after removing the carrot poultice. The lice will cause much irritation, and must carefully be sought after and removed.

Almost instant death has followed the rash application of tobacco, and other violent things, to the head extensively ulcerated and inflamed. And in other cases, dangerous diseases of the eyes, ears, and general disease, as fever, and even dropsy of the brain. I have always found the course above laid down to be successful and perfectly safe. If there should be a translation of this disease, we must give a little brisk physick, as jalap and

calomel, bleed according to circumstances, as fever or pain require, and apply blisters on the neck; and if there is much apparent danger, warm fomentations, and an onion poultice may be applied, or linseed meal may be made into a poultice and applied.

SECTION LXIII.

## *Of Pimples in the Face.*

These need no description, but are sometimes very troublesome. Persons much troubled with these pimples should avoid too much singing, stooping, exposure to the heat of a fire or stove; all spirituous drinks, as well as fermented liquors, are to be avoided, and much animal food. They should live on a diet consisting a good deal of milk and vegetables, and drink nothing but cool water, milk and water, buttermilk, or vinegar and water. A little cremor tartar, and flowers sulphur, or magnesia, should be taken, to keep the bowels open, and a free use, now and then, of mucilage of slippery elm will be found useful; afterwards the pimples may be rubbed with flower of sulphur in the evening, and washed off in the morning; or rubbing them with sweet cream, and washing off with castile soap and water; or wash the face with sour buttermilk, or a decoction of sour dock; but these must be applied cool.

SECTION LXIV.

## *Of the Itch.*

The itch is most generally the companion of those who live uncleanly, but by contact with the matter of it, it sometimes invades the most cleanly families, affecting all its members before they are aware of its nature. This eruption is found particularly about the fingers, elbows, hams, but in tender skins it rapidly spreads over the whole body; and I have even seen it in infants, not only excessively tormenting, but really dangerous. It may be known by its regularity of appearance; while

other eruptions change colour frequently, this goes on slowly, and regularly to increase, and it is in the evenings when we undress, that it is particularly troublesome. The little watery pimples which appear about, and particularly between the fingers, and which contain a thin fluid, may be considered as sufficient evidence of itch.

Philosophers have amused us with their speculations about animalculæ, resembling ticks, turtle, &c. I shall not stop to acknowledge or deny those notions, for if it be caused by animals of diminutive size, I am sure they are vicious little gluttons; and as they prey on our living bodies, we should destroy them wherever we find them. This I know to be true of itch, that dirty families can seldom be free from it, and I strongly suspect, cleanliness alone would eventually banish it from society.

The most speedy and effectual remedy for itch, is flowers sulphur mixed with lard, and rubbed on the parts affected, every evening. A strong ointment of white precipitate, is a very good application for this affection of the skin. Or an ointment of red precipitate, or of white hellebore, or a weak wash of oil vitriol in water. Washing the parts with soap and water, and after drying, rubbing with dry flowers of sulphur, or starch containing a little very fine powdered white hellebore. In inveterate cases it may be necessary to take a little flower sulphur and cremor tartar, so as to keep the bowels open, and use a course of the mucilage of elm.

Lastly, bed clothes, apparel, and in short, every article of the household must be perfectly cleaned, and kept so, or you can never banish this disease of the skin for any length of time. In delicate persons it will be safest not to rub too much of the body at once, but go over it gradually with the ointment. Quicksilver ointment is a dangerous, unnecessary, and very often an ineffectual remedy, and ought never to be used by persons exposed to the weather. Nor should persons exposed to the weather use the other ointments too freely: I have seen a case of severe salivation, from the use of the red precipitate ointment, applied on account of itch.

## SECTION LXV.

### *Of Prickliheat.*

Prickliheat bears some resemblance to itch, but is more fiery coloured when the body is warm, and almost disappears when the skin is cool; not much about the fingers, and more equally distributed over the body than itch. Its usual causes are, uncleanness of the skin, surfeits in eating and drinking, too much acidity on the stomach, and sudden exposure to extremes of *temperature.* Use mucilaginous drinks with cremor tartar and sulphur; or magnesia and rhubarb. A tepid bath, and frequent changes of linen, or flannel next the skin, and avoiding all irregularities will be necessary.

## SECTION LXVI.

### *Of the Yellow Morphew, or Morphœa Icteroides.*

This disease of the skin principally affects persons of delicate constitution. It generally begins about the breast and neck, and from thence spreading very slowly over the whole body, gives the skin the appearance of deep sun freckles; but wherever it appears the scarfskin is raised, and may be easily rubbed off, leaving a red spot; upon this the same yellow scarfskin soon appears again. Sometimes it appears in the face, but this is very rare.

From its long continuance, it no doubt has some connexion with some visceral disorder, and this I suspect is always the liver; no discolouration is seen in the eyes, and so far as my information goes it is not dangerous. It very probably is more owing to slight debility in the functions of the liver, than to any real disease in that organ. Sulphur, applied in ointment, will remove it speedily, but it returns, and probably nothing but remedies which operate on the whole system, so as to give tone and vigour, will remove it, such as reasonably good living, with constant exercise, and perhaps, the occasional use of tonicks, and of mucilaginous drinks. Cleanli-

ness is essential, but I suspect bathing is generally improper for such persons, for there is an openness of the skin which causes it to absorb water. This I suspect from the following circumstance: I have been affected with this eruption for many years, and ever since, if I go into the water but a few minutes, my skin feels tense and unpleasant, and gives considerable impediment to walking for some time after it, and if I remain for more than a few minutes in, I become enfeebled, and sickness at stomach, and sometimes very severe vomiting succeeds. I have been less sensible of these symptoms from the cold bath. Such persons should wear flannel at all times, and in the winter, two ply of flannel should be worn, for they are predisposed from this openness of the skin, to pulmonary affections, and suffer particularly from cold moisture, or even duckings from rain.

## SECTION LXVII.

### *Of the Leprosy.*

This disease does not often appear in this country, but instances do sometimes occur. It is a great scourge to the eastern nations, but I suspect it is mostly the offspring of uncleanness. The disease is known by a very extraordinary thickening of the skin, cracks, welts, dry prominences, with a whitish scurf constantly forming, a weeping which issues from these cracks. The whole appearance of the skin at some distance, is something like a light mouse or lead colour. But there is nothing more characteristick of this disease, than the thickening of the skin. I have seen but one case of it, the subject was a Frenchman, a young mechanick who had just made a trip to Orleans, from the Ohio, and came by the way of one of our seaports. During this long journey, he was subjected to a great variety of water, and no doubt was not sufficiently cleanly in changing his linen, &c. Immediately after his return, he was attacked with a bilious remitting fever, then prevalent, and with it came the leprosy. He was the patient of a physician of great experience, who politely asked me to see the case with him;

every endeavour was made to relieve him, his fever was subdued, but the prostration was too great for him to contend with this horrible leprosy; and after suffering a few weeks he died.

I do not feel competent to lay down the best treatment for this disease, at any rate advice should be taken. I will, however, state, here, as my opinion, that the utmost cleanliness and frequent washing with mild soap and water, with the liberal use of mucilaginous drinks, mild tonicks and diaphoreticks, as sweet spirits of nitre taken two or three times a day, and succeeded with cold infusions of bark, snakeroot, or contrayerva, are among the principal remedies.

## SECTION LXVIII.

### *Of Worms.*

I beg leave, in the first place, to observe that this is the hobby of quacks, old women, and mothers. What cramming and stuffing have I seen practised on poor little children, suffering under diseases, sometimes no doubt, in cases in which worms had no concern. Even agues, inflammatory fevers, &c. must be treated as though every child was likely to be eaten up with these worms. And it is a fact as strange as it is true, that many, very many mothers are to be found, who will cram their children, and by force too, with pink root tea, garlick boiled in milk, worm seed and its oil, soot, rue, &c. that will turn their faces against every thing which they call *doctor stuff;* should it even be a few grains of ipecacuanha or prepared chalk, unless you assure them it is for the worms. Thus, if a child have a bad breath, it is worms: if it grind its teeth in sleep, it is worms: if it eat too much, or if it has little appetite, it is worms: if its upper lip swells, it is worms: if it start in sleep, has a purging whether sick or well, it is worms. In short, such is the ridiculous infatuation of people about worms, that few children are safe, even under the care of the most skilful physician, for in almost every family, they will give what they consider vermifuges, by which the stomach

and bowels are rendered weak and irritable, or fever, or inflammatory affections of the viscera, the head, &c. are so much aggravated, that no skill can avail. Reader! I speak without prejudice, for I have no favourite notions to offer, but I have beheld such wicked and prostituted exercise of parental authority, that my heart bleeds for the poor little sufferers, who smart under the ignorant regimen, of *worm mothers*, and *worm doctors*. I will answer for it, if your child is full of worms, it is your own fault: give children such diet as they ought to have; keep them clean, and let them exercise freely, and you may spare your trouble, and much risk to your children.

If a child is labouring under a pleurisy, or inflammation of the head, or if inflammation exists about the liver, bowels, &c. what greater risk could you expose your child to, than to give it strong pink root tea, oil wormseed, and such like heating articles; thousands of children are thus detsroyed. I would admonish every head of a family, that they should never give worm medicine without good advice, when their children are sick, and most sacredly follow directions; when they are well it is not often needed.

The only certain sign of worms is their appearing in the stools, or being vomited up, and it must be admitted that they sometimes produce disease, both in children and adults, particularly the tape worm. The following are the most common kinds which are found.

1. The *teres*, or common round worm, resembling the earth worm.

2. *Ascarides*, or small thread like worms, particularly troublesome about the *rectum*.

3. *Tænia*, or tape worm: there are many others found in the human intestines, but they are rare, and will yield to such remedies as are proper for the expulsion of the three kinds enumerated. Where advice is not to be had, the following symptoms may be considered pretty strong evidence of worms: a sudden swelling of the upper lip, provided the subject is not scrofulous, frequent pains and uneasiness in the bowels without fever, irregular appetite. If these or other symptoms leave strong grounds

for believing worms are present, a purge of jalap and calomel may be given, provided the patient is not labouring under a low state of disease; this will generally dislodge more or less of them, and we may now venture, provided no inflammatory disease forbids, to give oil wormseed, powder of tin, pink root, rue, garlick, or a little salt water, always remembering to work those articles off, with castor oil, or jalap and cremor tartar. More than one or two doses of calomel should not be given, in those cases.

Those habitually troubled with worms, should take pills composed of equal parts of tin powdered, and assafœtida, made into pills. Or any other tonicks, as bark, bitters, iron filings, elixir vitriol, &c. They should avoid unripe trash of fruit, or green herbs: and live on solid wholesome food, and for a time, delicate children, or perhaps others, will be benefited from an occasional glass of good old wine: exercise and sound nourishing food, in small quantities, are the best preventives.

The *ascarides* are sometimes excessively troublesome on account of the itching, they produce about the seat, and as they are situated so low down, are more difficult to dislodge by medicines. Glysters alone will remove them speedily: glysters containing a good deal of salt will sometimes succeed, or two or three table spoonfuls of sweet oil, and a few drops of oil wormseed, in the usual quantity of water; or a little aloes ground in water, or lime water, or a strong decoction of wormseed.

## SECTION LXIX.

### *Of a Strangury.*

A strangury or difficulty of passing urine, proceeds from various causes, as stone or gravel, from injuries done the abdomen, from diseases, the application of blisters, &c. In all cases we should open the bowels with emollient glysters, give mucilaginous drinks; and now and then, a tea spoonful of sweet spirit nitre. If these do not succeed, we must have recourse to the warm bath, or bleeding; according to circumstances. In reduced patients where much pain accompanies this affection, we

must give laudanum. In general, the use of linseed or parsley tea, with sweet spirit nitre, will relieve.

## SECTION LXX.

### *Of Ischuria.*

Ischuria is a term which seems to have a much more extensive application than that of *strangur*. It is applied to obstructions of urine from every cause, as diseases of the kidneys, *ureters*, bladder or strictures of the *urethra*. In all cases of *ischuria*, we must carefully ascertain, whether the disorder be a retention merely, as in *strangury*, or whether the kidneys have ceased to perform their functions. By feeling gently on the lower part of the belly, we may feel the bladder full and tense, and the presure gives the patient pain: here, it would be improper to give the patient *diuretick* drinks; we must either bleed, give emollient glysters, apply warm fomentations, or the warm bath, according to circumstances; and, if these do not succeed, a *catheter* must be introduced, and when the water is drawn off, gentle purges, and mucilaginous drinks, and sweet spirit nitre may be given; and in aged persons, a very free use of horseradish is necessary. If there is no urine found in the bladder from pressure, we must give mucilaginous drinks, mild glysters and purges. When it proceeds from diseases, as inflammation of the kidneys, or *ureters*, or bladder, or the stone, &c. the reader is referred to the treatment in such cases.

## SECTION LXXI.

### *Of Eneuresis, or a Habit of wetting the Bed.*

This disagreeable habit is sometimes found in grown persons, and there is some probability of its arising from neglecting to correct children for this practice. But while I give it as my opinion that this habit is often established by neglect, I have no doubt but it is often a disorder, over which the person affected has no control,

and therefore measures for correction should never be extended to cruelty. We are assured by Cullen, that blistering the *perinæum* has often succeeded in removing this disorder. I would recommend it to be tried, in preference to the many ridiculous articles which have been used: but I think it highly probable that the tincture cantharides would answer our wishes.

## SECTION LXXII.

## *Of Diseases of the Organs of Sense.*

### SUBSECTION I.

### *Gutta Serena.*

Is a deprivation of sight, without any very evident defect of the eye. It is a loss of nervous power, and most generally an incurable disease. Sometimes, however, it may be removed where it proceeds from inflammation, or from congestions, or what is called *humours* about the eye. It sometimes proceeds from a hardening or wasting of the *optick nerve:* all such cases are hopeless. But as the most skilful cannot judge of this in the living eye, and as this disorder has sometimes been cured, we should in all cases indulge hope, and use our best endeavours, particularly at an early stage; and as diseases of the eye are only to be distinguished by skilful oculists, the earliest opportunity should be taken to consult a person who is competent, otherwise we may easily do ourselves irreparable mischief.

There never can be any necessity for persons prescribing for themselves, in cases of *gutta serena*, but it may save them from imposing quacks, &c. to describe the disease, and point out some principal remedies. There is a glassy, dead-like appearance of the eye, the *pupils* mostly considerably enlarged, but after the disease is confirmed, it is sometimes very small. If the eye is held shut some time, and then opened in a strong light, no change occurs in the *pupil;* whereas, in an eye where the nerve is sound, it dilates while the eye is shut and

dark, and contracts rapidly when the light is admitted to the eye again.

In the early stage of this disease mercurial purges; blisters to the neck; and, in full habits, bleeding from the arm, and leeches applied about the temples. When it is more confirmed, a salivation, a *seton* in the neck, *cephalick snuff*, with a little calomel added to it. Take white hellebore in fine powder half a dram, sage or other green leaves well dried two drams, calomel half a dram; rub these fine, and use frequently as snuff. In some cases *gutta serena* is accompanied with constitutional debility, and with scrofula, which would render it unsafe to give strong purges, or to salivate. In those cases we should use the *seton*, the *cephalick snuff*, and tonicks, as bark; iron, with the gums; and if no strong symptoms of scrofula are present, calomel in small doses, combined with tonicks. In all cases of *gutta serena*, we should use electricity, or rather *galvanism*, as soon as the more inflammatory symptoms are removed. And in cases accompanied with scrofula, the extract of hemlock should be given, accompanied with occasional mild purges, in full habits; and with tonicks, where there is much debility.

SUBSECTION 2.

## *Of a Cataract.*

In *cataract* the optick nerve remains healthy, but vision is lost in consequence of the *chrystaline lens* turning white, or clouded, so as to prevent the rays of light from reaching the *retina* or *optick nerve*, at the bottom of the eye. When confirmed, it gives something like the appearance of a speck upon the eye to the unskilful. If the eye is held shut, and then opened before a strong light, the *pupil* contracts rapidly before the light. Such people can always distinguish day from night.

No outward applications can be of any use in these cases, and they have often done much mischief. In the early stage, we should use the same remedies as for *gutta serena*, but when the disease is confirmed, nothing

but an operation affords the least hope. I have known instances of severe applications being made, under an idea of specks on the eye, when it was a *cataract*, entirely out of the reach of all such remedies. In all diseases of the eyes, it is particularly necessary to get good advice, early. Diseases of this organ, require prompt and powerful treatment, and a little errour may be destructive to vision.

### SUBSECTION 3.

### *Of a Strabismus, or Squinting.*

This affection of the eyes is too well known to require any description. It is generally occasioned by exposing children to the light in such a manner, as to let it shine into one eye only; often it proceeds from imitation, therefore, nurses who squint, may excite this unpleasant disorder among young children. When it is early attended to, wearing *goggles* which oblige the child to look straight forwards, will often remove squinting: it must be obvious, such children should be removed from persons of this habit.

### SUBSECTION 4.

### *Of Specks or Films upon the Eyes.*

These are generally the consequence of violent inflammations, and often succeed smallpox, the measles, injuries done the eye, &c. I suspect most of them proceed from neglect, or improperly treated inflammation. In recent cases, while active inflammation continues, we should by no means use vitriol, white sugar, alum, and many other things of this kind, which are often recommended; they are always attended with danger, and occasion total blindness in some cases. Instead of these violent articles, two or three brisk mercurial purges; blisters to the ears, and neck; and a liniment of best oil almonds and fresh clear lime water, are the best remedies.

If the case is confirmed, and inflammation removed, benefit may sometimes be derived from using strong vitriol water, made by dissolving white vitriol in water; or, a little alum and white sugar, rubbed till you cannot feel their particles, may be blown into the eye. These are always very doubtful, and I have never seen any advantage from them, in my own practice. Nor have I ever failed in cases proceeding from common inflammation, in arresting these specks at an early stage, by purges, blisters, free use of warm milk and water, and the lime water liniment. See the article, Inflammation of the Eyes.

SUBSECTION 5.

## *Of the Blood-Shot Eye.*

This is occasioned by many causes, as strokes upon the eye, straining in vomiting, coughing, and often from intemperance in drinking. If pain and inflammation follow, we must have recourse to such remedies as are recommended for inflammation of the eyes, from other causes. Washing the eye with cold mucilage of elm, will often succeed, if not, we should apply leeches: take a little cooling physick, live low, and if these do not succeed, we should use brandy, beginning with it considerably reduced, and gradually augmenting the strength till it answers the purpose, or till we use the strongest brandy without dilution.

SUBSECTION 6.

## *Of the Watery, or Weeping Eye.*

This is generally owing to neglect or badly treated inflammation; sometimes it proceeds from relaxation, and debility of the vessels of the eye, and this from scrofula or other constitutional debility. Sometimes it is owing to an obstruction of the *lachrymal duct,* by which the tears that are constantly forming to moisten the eye, (and then pass into the nose,) are thrown out upon the cheek.

The use of general strengthening remedies, and temperance, avoiding much candle light sewing, or reading; with frequently washing the part with brandy, or a very clean filtered infusion of bark. When it proceeds from an obstruction of the *lachrymal duct*, nothing can be of the least service but an operation, by which we restore the passage for the tears into the nose, this obstruction is called *fistula lachrymalis*.

## SUBSECTION 7.

### *Of Deafness.*

The ear is liable to many accidents, which interrupt its functions, or impair or destroy its structure. Diseases, catching cold, wounds; too much or hardened wax; too much moisture; or malconformation of the ear may occasion deafness. When it proceeds from disease, we must in general keep our views upon the disease, and leave the symptom of deafness to nature. But if it remains after the disease is removed, or when it proceeds from an unknown cause, by examining the ear, we will often find it choaked up with wax; too dry, or weeping out a thin fluid. In all those cases the treatment may be nearly the same, and must be very simple. Syringe the ear frequently with milk and water, or mild soapsuds; stop the ears with wool, or cotton, and drop a few drops of oil almonds, or nice sweet oil into the affected ear, every night. Blisters should be applied, and repeated, but I most seriously caution every person not to tamper with the inside of the ear; its structure is delicate, and easily injured, therefore, the best advice should be taken. We are told by the celebrated Cheselden, that a gentleman in England had four children born deaf, he was advised to apply blisters to the ears of his future children. He did so, and three were born and thus treated, and all had their hearing. Does this not leave a hope that *congenital deafness*, if early discovered, might be removed by blisters, electricity, or other remedies, under the direction of a skilful physician.

What a lamentable fact it is, that we have no schools for the dumb in this country! How has it happened that no good heart, in devising and executing plans, for the comfort of their fellow creatures, or honour of their country, should not have chosen this humane and necessary measure, for the vast number of dumb persons, which are in a good measure useless to themselves and to society; and indeed, often rendered vicious from ill treatment, or for want of understanding those around them! If some humane person, or persons, were to set about this great work, by raising a small fund, some gentleman of talent might soon be got to teach such a school, and scholars no doubt would soon accumulate. After the success of Mr. Braidwood, and since at London, it really is surprising no such schools have been attempted in this country, at least none within my knowledge. I recollect reading somewhere, an interesting account of a young gentleman who was sent from New-York, to Mr. Braidwood's school in Edinburgh, which I consider one of the most agreeable narrations upon earth.

Let a fond parent imagine their unfortunate child, sullen, stupid, vicious, or rash and awkward: who like the animals around him has no movements of the *sweet little tattler*, to express his wants, his thankfulness to his parents, nor of knowing, and acknowledging the goodness of Him who made us, as sent to a school where he shall not only learn to read and write, but speak in daylight, with fluency; and what greater source of pleasure, praise, and gratitude could they find.

Would it not be worth your while to rest upon a pillow of straw, and live on bread and water, to obtain such a gift for your unfortunate child! But more especially, would it not be worth the attention of every clergyman, and every society, to endeavour to found schools for such persons, and make them free to the poor, and even maintain such as require it? Surely, if the Lord repays gifts given to the poor, this must be one which will never reap less than "thirty, sixty, or an hundred fold."

It is with peculiar gratification I mention, that, since the first edition of this work, a school has been established at Hartford, in Connecticut; on a very extensive plan, by which, it is hoped all the dumb persons of the whole nation may be accommodated, for a considerable time to come.

SUBSECTION 8.

## *Loss of the Taste*

Is generally the consequence of some disease, but no doubt this sense is often impaired by intemperance, and too high seasoned food. We must endeavour to find out the cause, and avoid it if possible. If this defect exists in weakly habits, or is accompanied with palsy, we must use such remedies as are calculated to invigorate the constitution; apply gentle galvanick shocks; or simply chewing horseradish and beets, alternately, will probably often have a good effect, for, galvanick piles, of weak powers may be made of these roots; or you may gargle the mouth with a decoction of seneka snakeroot. In cases where an inflammatory state of the mouth, or general system exists, we must pursue an opposite course, such as sipping frequently mucilaginous drinks; taking a little cooling physick, and if much foulness of the mouth, or nausea are present, we should give a gentle emetick, and use a mild vegetable diet. In all cases it will be essentially necessary, to keep the mouth perfectly clean, by frequently gargling with mild stimulant gargles in cases of low action, and in the inflammatory, with milk and water.

SUBSECTION 9.

## *Of the Loss of Smell.*

This sense is often destroyed by the use of tobacco; or inflammation, suppuration; or by the nervous power being impaired or destroyed, or suspended by *polypus* in the nose. In general, it will be best to content our-

selves, in this disorder, with frequent washing, by means of a syringe, or snuffing up the nose milk and water, or mild soapsuds; and attending particularly to the general health. In *polypus*, a surgical operation alone, can remove either the *polypus*, or restore the smell. Stimulants, as different kinds of *cephalick snuff*, or pungent articles, may somestimes be useful, but there never need be any particular hurry in those cases, and therefore advice should be had.

## SUBSECTION 10.

### *Of Loss of the Sense of Touch.*

This perhaps is always a symptom of palsy, and therefore, is to be treated on general principles, as laid down for that disease. There is, however, a morbid acuteness of this sense dependant on irritation, applied to some part of the body, particularly the stomach, as in *hypochondriacks;* this too, must be treated on general principles, as laid down for *hypochondriasis.* The cold bath, or tepid bath, according to circumstances, will be necessary in most cases.

# OF HABITUAL DISEASES.

I AM now about to enter upon a set of diseases, which are known to lurk in the body, and are easily excited, by a variety of causes, into activity for a time, till having expended their force, the patient gradually returns again to his usual health, and this in many cases, is very perfect until some little accident, or irregularity lets it loose upon the system again. Or such as having grown out of some epidemick, or fortuitous disease, continues with more or less violence to distress during life, as *scirrhous*, cancer, and other diseases.

I shall commence my observations on habitual, or chronick diseases, with gout, and treat of its varieties, as legitimate gout, irregular gout, and chronick rheumatism.

## SECTION I.—SUBSECTION 1.

### *Of a Legitimate Gout.*

I believe a true or legitimate gout is mostly hereditary, or occasioned by the intemperate use of ardent spirits, and perhaps, more frequently by the immoderate use of wine, and malt liquors, together with want of exercise. But in those strongly predisposed to gout, the most trifling causes may excite it. Such as fatigue, idleness, a full meal, catching a slight cold, or it may be excited by disease, intense thinking, and many other causes, so that persons subject to gout, or who have reason to expect it, from their ancestors having been severely affected with it, must use the utmost circumspection, to guard against this most cruel foe. The attacks of the gout are supposed to be most usual in the spring, or beginning of winter.

As there is a great similitude between the grade of diseases of the United States, and those of SYDENHAM'S time in England, I have copied his description of the gout. He says, "this distemper comes towards the latter end of January, or the beginning of February, and begins commonly about two in the morning, with a pain in the great toe, but sometimes in the heel, the ankle, or the calf of the leg: immediately a chilness, shivering, and slight fevers succeed, the pain increases gradually every hour, and chilness and shivering abate in proportion as the pain becomes more severe, which at length comes to its height towards night, sometimes resembling a violent tension, sometimes the gnawing of a dog, and sometimes a weight and constriction of the parts affected, which becomes so exquisitely painful, that the patient cannot bear the weight of the clothes upon it, nor the shaking of the room from a person's walking briskly therein. The pain does not abate till two or three the next morning, that is twenty-four hours from the beginning of the fit, when the patient being in a breathing sweat, falls asleep, and at waking finds the pain much abated, and the part affected newly swelled. A slight pain is felt next day, and sometimes the two or three following days, which increases towards night, and remits towards break of day. In a few days it seizes the other foot in the same manner, and after attacking both feet, the subsequent fits prove irregular both with respect to the time of seizure and their duration; and what we term a fit of the gout is made up of a number of these small fits, and goes off sooner or later, according to the age of the patient. Thus, for instance, in strong constitutions, and such as seldom have the gout, the fit often goes off in a fortnight; but in the aged, and those who have frequent returns of the disease, it lasts two months; and in such as are more debilitated, either with age or the long continuance of the distemper, the fit does not go off till the summer advances, which drives it away.

"During the first fortnight the urine is high coloured, and lets fall a red gravelly sediment, and the patient is usually costive. A loss of appetite, and a chilness of the whole body towards evening, accompanying the fit

throughout; and when it is going off, a violent itching seizes the affected foot between the toes, and afterwards the skin of it peels off by scales.

"In this state of the distemper the pain only affects the foot; but when the gout is exasperated, either by wrong management or long continuance, so that the substance of the body is in a manner changed into gouty matter, it then seizes the hands, wrists, elbows, knees, and other parts; sometimes rendering one or more fingers crooked, by degrees destroying their motion, and forming at length stony concretions in the ligaments of the joints like chalk, or crab's eyes. Sometimes it occasions a whitish swelling upon the elbow, almost as large as an egg, which gradually grows red. Sometimes it seizes the thigh, which seems to sustain a great weight, yet without much pain, and thence gaining the knee, attacks that part more violently, and the limbs are now so contracted and disabled that the patient halts with pain. The urine resembles that which is voided in a diabetes, and the back and other parts itch much towards bedtime.

"After many severe fits, the subsequent fits are less painful, nature being partly oppressed by the large quantity of peccant matter, and partly by old age; but instead of the usual outward pain, the patient is seized with a sickness at stomach, pain in the belly, spontaneous lassitude, and sometimes a tendency towards a looseness. Upon the return of the pain into the joints the symptoms go off, and the pain and sickness coming thus by turns, prolong the fit considerably. In many persons the gout breeds the stone in the kidneys. It seldom attacks women, and only the aged of this sex, and those of a masculine habit of body. Children and young persons rarely have it."

It may be remarked of the above description of gout, that it does not very generally assume all those terrible symptoms in the United States. This is, perhaps, owing to so few families having, for a succession of several ages, pursued such habits of high living, and inactivity, as in England. And also, to the great improvement in the treatment of our acute diseases. I am decidedly of opinion, a true gout is always an inflammatory dis-

ease, and as much under the control of the skilful physician, as any other, provided the patients will live as become them in the intervals. That it is a curable disease, I infer from the circumstance, that many have been cured by misfortunes which obliged them to labour for a subsistence; and others, almost in the twinkling of an eye, from fright.

Unfortunately for mankind, theories or notions of this disease gained such firm ground, during the mistaken ideas of *concoction*, an undue reliance on the *anima medica* of STAHL, or the *vires naturæ medicatrices* of CULLEN, that they still chain down the practice in this disease with despotick sway. Thus, we are gravely told by Buchan, that it would be as prudent to stop the smallpox 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. In the first place I answer to this, that there is no similitude between smallpox and gout. The first is a violent acute disease, wherein the system has to undergo a thorough change, which shall secure it in future from similar disease during life; while the latter is a mere chronick predisposition, capable always of restraint, and sometimes to speedy removal, even in its paroxisms, or fits.

Again. What a pretty *out* was made of smallpox before the time of SYDENHAM, in consequence of these notions of concoction, and assisting nature to throw off the offending matter! By unduly stimulating the body, the whole mass, solids and fluids, were assimilated to the nature of smallpox matter, so far as a living system could sustain it. And are we not to look for a similar result from neglected, or improperly treated gout, which always has a tendency to assimilate the body to its own nature, or more correctly speaking, fills the body with congestions, which, like a stock in trade, or the exercise of the mind, accumulates in proportion to the capital?

Moreover, when the discerning genius of the great SYDENHAM discovered the errours in smallpox, and boldly pronounced, that we not only must refrain from pushing on nature's apparent efforts, in driving out the matter up-

on the skin, but that we could not trust her without actual opposition, the whole faculty was alarmed. Thus, nature raised a fever, SYDENHAM endeavoured to lower it, the skin was warm, this invited the pustules, he applied cool air, gave cool drinks, &c. to oppose the extravagant efforts of nature. And what was said? almost the whole world rose up at this supposed daring resistance to the *anima medica*, or healing powers of nature. But happily the improvement in the practice was self-evident, and irresistibly gained ground, slowly, spite of all opposition. We cannot hope for so easy a conquest in the treatment of gout; but I feel sanguine in the belief, that mankind will eventually perceive, not only the folly of grounding our hopes in the healing power of nature, but discover also, that most of the terrible ravages of gout, are owing to wrong treatment, and more especially to viewing it as operating some friendly change upon the system.

It is a furious despotick disease, and one unworthy the courtship of the meanest reptile. A man who nurses the gout under an idea of its improving his system, and prolonging his life, is like one who having lost all hope of pardon from heaven, sells himself to the devil, as was the case with Judas Iscariot. The result will always be similar, and instead of finding rest, they plunge into greater misery.

And, while the people of Lancastershire, *elephantise* themselves, by wearing monstrous legs made of wool, to keep off this disease,* the aborigines of our country walk the snowy forest with a thin mockasin, nor dream they of gout. Let proper remedies be used, both in and out of fits of the gout, and we need not be afraid to immerse the tortured foot in cold water.

I am not singular in the opinion that gout is curable, and ought never to be invited or nursed: the illustrious Rush, gave rise to the views I have of this disease, and I believe with him, it is a general disease, accompanied with local inflammation, of a high grade; and which may often be subdued by the usual remedies, for inflammato-

*See Buchan on Gout.

ry diseases. It behooves all mankind to live temperately, and actively, but to those who are predisposed to gout, from gouty ancestors, it is absolutely necessary, otherwise the disease will come on at some period of life. A legitimate gout, generally comes on in the spring or fall, therefore, it behooves them to be doubly circumspect at those seasons, regulating their affairs according to circumstances. Those of weakly frail habits, are by no means to live low; they should live reasonably well, and take as much exercise as possible; and on feeling any indisposition, in the usual time of the appearance of gout, a mild purge of sulphur, or rhubarb and magnesia, may be taken. Those of full habits are to live temperately; milk and vegetables should compose the principal part of their diet.

If gout comes on with many or all the symptoms laid down by Sydenham, we should attack it at once with spirit: we are to abstract blood from the arm, according to circumstances, give purges every day in active cases of sulphur, combined with cremor tartar, or rhubarb; and if nausea, or indigestion are manifested, by wind or acid eructations, we should give gentle vomits: after carrying these to a reasonable extent, we may safely venture to apply cold water, or cold molasses to the part affected, but in general, it will be sufficient to expose the part freely and uncovered, to the cool air. These remedies in first attacks of gout, accompanied with rest, low diet, and mild cooling drinks, and, perhaps, pleasant bitter infusions will be the best, will generally completely banish it from the system, till it is recalled by some irregularity; and with this great advantage over suffering nature, to work off the disease, that no congestions are left, which terminate in chalky stones in various parts of the body. These concretions in the kidneys, liver and joints, from gout, are the consequence of inflammatory action, unwisely left to vitiate the whole system, and assimilate all its parts, to this morbid condition. And this is precisely similar, to watery congestions in the head, from neglected or wrong treated inflammation of this part of the body.

SUBSECTION 2.

## *Of Vibrating Gout.*

There is a *vibrating* state of gout, occasioned sometimes by the great force of the disease, which soon prostrates the system; but, perhaps, more frequently, it is occasioned by suffering the disease to expend itself several times unopposed. This is a critical state of the system, and calls for the utmost skill to adapt suitable remedies, but in general, we must be governed by symptoms. If there be violent pain in the feet, or joints, we must bleed and purge moderately; if the disease shifts its ground, and attacks the stomach or liver, we are to apprehend the disease has lost its inflammatory grade, and we must now test the system with laudanum: if it allays the pain, and no fever, nor other unfavourable symptoms occur, we may proceed to give laudanum in small doses, with mild tonicks; and particularly iron filings, and pleasant bitters: and it may be well to apply blisters to the feet, or at least keep them warm, not fearing to bathe them in tepid, or cold water, according to circumstances. I shall now pass on to give some account of irregular gout, and conclude with some general observations.

SECTION III.—SUBSECTION 1.

## *Of Irregular, or Illegitimate Gout.*

I do not intend, under this head, to speak of that *vibrating* state of gout, which has just been mentioned, nor of the low grade of gouty diseases, usually acknowledged as such, but to speak of such as are either not generally known, or acknowledged to be of a gouty nature. This is departing, in some measure, from the usual application of the names applied to this disease; but on much reflection, I consider the application of these terms, which I have chosen, calculated to lead to important truths, which are not generally known, or received. Among these cases of misplaced gout, we may notice the

*cephalalgia spasmodica*, or the sick or habitual headach. This often exists at an early period of life, and as it progresses, is mostly conjoined with *dyspepsia*. It is a state of gout of much less force, than the *arthritis podagra*, or gout of the feet; and I think the most local, or fixed, of any other variety of this disease. It is known by its periodical returns; but these periods are uncertain in duration, being governed much by the conduct of the subject. Violent passions, want of regular sleep, excess in eating, taking cold, and many other causes may excite it. A violent headach of several hours, or even days continuance, low spirits, loss of appetite, nausea, and in some cases, especially after repeated attacks, severe vomiting attends, sometimes great intolerance to noise. In those whose constitutions are not particularly broken down, bleeding is a safe and certain remedy, and it ought in general to be checked by a single bleeding; that is, if the patient, in the intervals, is in good health, me may draw blood till some symptoms of faintness are produced, and if the patient is difficultly affected in that way, he should be desired to stand up while the blood flows; but we ought never to bleed very largely, we should rather endeavour to bleed suddenly, by means of a large orifice. If any remains are left of the disease, a purge or two of castor oil, senna and manna, &c. should be given.

If the case becomes protracted, or where the disease exists in very weakly habits, or where *dyspepsia* is rather the most distressing, we should give a gentle emetick of ipecacuanha or white vitriol, and follow it up with purges of rhubarb and magnesia, or sulphur and cremor tartar. In cases still more reduced, we should empty the stomach by the free use of chamomile, or carduus tea: open the bowels with mild glysters, and give laudanum in small doses, frequently repeated. But I have seldom seen this disease, where it would not only be safe, but really necessary, to take a little blood, and if it is succeeded by small doses of laudanum, it can scarely ever be wrong. In the intervals, persons liable to this variety of gout must pay a scrupulous regard to regularity; but it is seldom, if ever necessary, for them to live very low; in general, a diet somewhat generous is best,

consisting a good deal of the lighter kind of animal food: fat meats and windy vegetables are to be avoided; and if spirituous drink is ever allowable, it must be used very sparingly. Much malt liquors, or cider, are improper; the best porter is, however, often one of the best drinks; nor need such persons, in general, be afraid of a glass of pure old wine; but unless it be really such, it ought never to be used. It is essentially necessary for those subject to gout in the head, to avoid intense study, troubles of the mind, costiveness, and loss of sleep. They should never encounter fatigue, but reasonable and constant exercise must be unceasingly pursued.

### SUBSECTION 2.

### *Of Gout in the Kidneys.*

Nephralgia, or pain in the kidneys, without fever, is also, sometimes, a misplaced gout; and whether accompanied with *calculi* or not, in its height, is an inflammatory state of disease, and requiring the use of the lancet, mucilaginous drinks, the free use of magnesia, and mild injections; and after the reasonable use of those remedies, small repeated doses of laudanum; and a common *diachylon* plaster, worn for some time, will be advisable. A milk diet, and the occasional use of lime water, will be useful in this affection of the kidneys.

### SUBSECTION 3.

### *Of Gouty Gonorrhœa.*

Gonorrhœa spuria, or *laxorum*, a disease resembling *gonorrhœa* from impure coition, is also a gouty affection, requiring remedies which operate generally on the system. The same may very often be said of the *fluor albus* of women. In both these cases mild injections, first of milk and water, or mild mucilage; and these succeeded by weak solutions of lead, or peruvian bark filtered through paper: in some cases of gouty *gonorrhœa*, injections of nice sallad oil, with a few drops of laudanum, will be found an excellent remedy.

SUBSCETION 4.

## *Of Gout in the Testes.*

A sudden and excruciating pain of the *testes* without swelling, or any venereal complaint, is also, sometimes, a symptom of gout; it is apt to alternate with slight gouty affections of the stomach. This pain is so severe sometimes, as to prostrate the patient very rapidly, and the part affected continues painful for a day, or more, and then leaves the part extremely sore. Large doses of ether, combined with repeated small doses of laudanum, will generally answer; and after a few doses have been given, pouring ether upon the part affected, and suffering it to evaporate, will be useful: the bowels should be opened with mild laxatives, and mild glysters given.

SUBSECTION 5.

## *Of Gout in the Hip.*

There is a most obstinate and severe pain in the hip, which sometimes lasts several weeks or months, in spite of all remedies: there is neither swelling, nor does the part ever suppurate, although the hip joint is sometimes crippled. This form of gout is found, according to my observations, mostly in females, and seems to bear a near similitude to gout in the feet of men. I have never been able to arrest this disease until it has continued several weeks, and sometimes several months. A salivation in one instance had no sensible effect, the pain continued during the height of it: this remedy does, however, succeed sometimes, after the disease has in some measure expended its force. Perpetual blisters have little effect. I am inclined to believe we should bleed largely, at the commencement of this affection, and follow it up with large doses of ether and laudanum; and now and then give tincture cantharides, so as to excite strangury.

A pain of an obstinate nature, but not very acute, accompanied with some fever, nausea or vomiting, and cos-

tiveness, but more especially a discharge of bile, green as grass, or rather resembling the verdigrise green, is also a gouty affection, and most usually found in the female. Mercury, and gentle emeticks, are the principal remedies in these cases; but it is slow to yield to any treatment. It will seldom bear stimulants, or even tonicks, till the system is reduced by bleeding and purging, which is generally necessary in those cases.

In short, every part of the body is invaded by this disease, and in all cases where sudden pain occurs, which does not yield speedily to depletion, or anodynes, and especially if disposed to recur, now and then, whether it be in the same part of the body, or sometimes in one part, and then another, or whether accompanied with fever or not, we are to view it as gout, and treat it on general principles.

## SUBSECTION 6.

### *Of the different Grades of Gout.*

I shall here endeavour to lay down a scale of gout, which applies to the regular as well as the irregular gout, by which, I think, we may in general, with tolerable certainty, determine the grade or inflammatory condition present: they appear to be

1. Gout of the lower extremities.
2. Of the head, in form of habitual headach.
3. Of the hip, resembling rheumatism, and to be met with, principally in females, or weakly habits.
4. Diffused throughout the body, in the joints resembling chronick rheumatism.
5. In the kidneys, liver; and in the lungs, in form of asthma.
6. In the lungs, in the form of angina pectoris.
7. In the urethra, vagina; in the skin, resembling leprosy, and various eruptions.
8. In the stomach, and intestines; this is the lowest grade, and seldom appears till the constitution has been debilitated by gout in some other part of the body. If

there be exceptions to this remark, it is in cases of obstinate dyspepsia.

What has been termed *flying gout*, will be found more or less inflammatory, as it preponderates to either extreme of this scale. Each case of misplaced gout calls for some little variety in the treatment, locally considered, but gout is always to be treated on general principles, both as regards medicine and regimen. And I feel confident that, by bearing in mind the foregoing scale, we will seldom be wrong. It follows that in gout of the stomach, or intestines, we are to stimulate rapidly, and largely; large doses of ether; laudanum; tincture guaiacum; tincture assafœtida in spirit wine, with equal quantities of ether, are good remedies; the juice of garlick or rue, and especially wine, or even brandy, in large quantities, in some cases, is indispensably necessary.

There is still one variety of gout to mention, I have seen two cases of it. This form of the disease, is a strange mixture of *angina pectoris*, and hysterical symptoms; or rather, it resembles the symptoms of both those diseases at the same time, and as the case is more or less inflammatory, partakes more or less of the one or the other; those resembling *angina pectoris*, being most inflammatory. It is accompanied with a strange condition of the arterial system, which is a most powerful and convulsive force in the pulse; this extraordinary action of the arteries extends throughout the system, and continues in considerable force during the intermissions, remissions, or intervals of the other symptoms. The larger arteries cannot be compressed, such is their tension: the blood is sizey, and the abstraction of blood generally gives temporary relief. But blood-letting in this disease, like in consumption, is but a palliative, and the cure depends on the use of the most powerful tonicks, as iron filings with assafœtida; bark; and the acetate lead; arsenick, &c. but those mineral tonicks ought not to be given without good advice. In the paroxysms incredible quantities of ether, tincture assafœtida, garlick, and rue juice, are necessary; a saturated tincture of camphor is also useful.

Of all the forms of misplaced gout, that of the intestines is most difficultly known. It occurs mostly in the

decline of life, and often hurries away its victims, in a few hours, or a day or two. Persons who are subject to indigestion, to asthma, to chronick rheumatism, or gout in other parts of the body, are admonished to be on their guard against this insidious disease; and wo be to those, who in the decline of life, should view this as a salutary effort of nature, to throw off disease, and suffer it to run on. Persons who have reason to apprehend a looseness or other affection of the bowels, is of a gouty nature, should take glysters containing full doses of laudanum; small doses of laudanum and ether, should be taken by the mouth; warm wine, toddy, or brandy, according to circumstances; an anodyne plaster should be applied over the abdomen, and in obstinate cases *sinapisms* to the feet. When convalescent, especial care must be used to avoid catching cold, by keeping the feet warm, wearing flannel, and dressing warm. A mild nutritious diet should be used, of light animal food, and warm drinks, slightly cordial, as warm wine whey, snakeroot tea, warm toddy, milk toddy, or milk and water with a little ginger.

## SUBSECTION 7.

### *General Observations on Gout.*

I come now to make a few general observations. It has been alleged by the great Cullen, that wherever bleeding was proper, opium was inadmissible; this no doubt is strictly true as respects acute diseases, but I believe the reverse is nearer the truth in chronick diseases, and particularly so, in gout and chronick rheumatism. We may generally with perfect safety bleed, and purge, in those diseases, provided we follow it up immediately with anodynes. It has been held as ridiculous, or even dangerous by some physicians, to pull down with one hand, while we build up with the other, as they express it. This language is somewhat imposing, but crouches before a scrutinizing examination: and facts will be always found to support this contrary position, that where we deplete, and succeed it immediately with stimulants,

and particularly opium, or mercury, the abstraction of blood will reduce excitement, and leave the excitability not accumulated as some would have it, but much more susceptible of being acted upon. This increased susceptibility, is disposed to take on new impressions, and action, or a condition follows, which is characterized by the new stimulus. Thus if we remove a part of peccant stimulus, by abstracting blood, and give a dose of laudanum, a new and more healthy condition is induced, and this position is supported by facts; and we can bleed in gout, or chronick rheumatism, or the diseases of the aged generally, with perfect safety, if inflammatory symptoms are present, provided we follow it with opiates; and these should mostly be conjoined with sweet spirits of nitre, which will determine slightly to the skin, and to the kidneys. I consider this an important fact, not generally known; and applicable to consumption, and most chronick diseases.

It must be acknowledged that gout is often so firmly seated from constitutional predisposition inherited, or acquired; or the system may be so completely gouty conditioned, that it is not to be removed, nor even rashly treated. But such a condition of the system is, most generally, the consequence of wrong management in its first fits. To illustrate and maintain this opinion, let us examine but a single series of gouty fits. It commences with fever, and violent pain in the lower extremities; and it has been remarked, that the duration and violence of the gout, is mostly in proportion to the severity of the fever. And are we not to infer from the periodical increase of pain, that fever continues; the state of the pulse generally indicates it. Now, what are we to expect from this fever; does it make any particular deposition upon the feet, and thereby renovate the system? It may be answered without hesitation, that it does not; on the contrary, congestions are formed in other joints, in the liver, in the kidneys; and I have no doubt, in the urinary bladder also. Then why are we to let this fever expend its unfriendly force on the body? Fever, from whatever cause, is unfriendly; and if inflammatory, will always form congestions in some part of the body, if we do not remove the fever.

Facts warrant the assertion, that in proportion to the continuance of this fever, so will be the increase of the gouty *diathesis* in future, for it will assimilate the system, more and more, to the gouty condition. It is true, nature eventually wears off the fever; this she is enabled to do, by the patient's lessening the usual stimuli, as that from exercise of the mind and body; change in diet, and drinks, &c. and thus by this weak, but gradual abstraction, the fever and pain is carried off. This in general could be more safely and effectually accomplished, in a few days by suitable remedies, than in so many weeks, or even months, in some cases, by the natural operations of the body.

Let not the intemperate or idle gouty cripple imagine, nature will remove the consequences of his own, or his ancestors artificial diseases; if we expect nature to cure our diseases, we must live agreeably to her dictates, but so long as we trample on her laws by intemperance, she will mock us to scorn: and while she wrings the debauchee by the great toe, &c. she would scare him from his folly, but not cure his disease.

How long are we to talk of nature's curing our diseases, which are wholly artificial? Is it not one of nature's most invariable laws to lead us to death; and there is no period of life exempt from it, why are we not rather to suppose it one of her leading aims, to carry us to the grave.

To conclude, disease is ever a war upon animation, and we are to endeavour to remove it under all circumstances. If we are often disappointed, we are still to suppose that the physician, who has to trust his patients to nature, and endeavour to cure them by *expectation*, has gained but a slight knowledge of his profession.

Lastly, in all forms of gout, most reliance is to be placed on activity, and regularity in every thing appertaining to our condition. Those of gross full habits, or subject to regular gout, must live low, particularly, a milk diet; those subject to the vibrating, or misplaced gout, must be less abstemious, but strict temperance is always necessary, and while ever the gouty subject can walk, he should walk, and even labour constantly.

Chronick rheumatism, asthma, *angina pectoris*, gravel, *dyspepsia*, and *goutier*, are satellites revolving around gout, as their sun or centre; and although some of them are remote, still their motions are excited and maintained by this gouty centre. I shall, therefore, briefly treat of those diseases, in the order in which they have been enumerated. This brings me, first, according to promise, at the commencement of gout, to treat on chronick rheumatism.

## SECTION III.

### *Of Chronick Rheumatism.*

Chronick rheumatism is seldom attended with fever, or swelling, or evident inflammation. Persons in the decline of life are most subject to this kind of rheumatism, and in general it is fixed to some particular part, as one or more of the joints, the back, loins, and shoulder blade, &c. It is remarkable of rheumatism, that persons affected with it, are highly sensible to the changes of weather; and like the barometer, are sensible of changes, before they are perceptible by persons in general. It is also notable of rheumatism, that it is most troublesome at night, and not apt to suppurate. There is a kind of venereal rheumatism, attended with painful suppurations. These are often taken for mercurial sores; but I suspect they are always scrofulous. The disease under consideration, appears to be continued by a predisposition to taking cold, whereby inflammatory action of a peculiar kind, is excited; and therefore, we are to pay especial regard to our dress. I think, in general, the diet should be reasonable and not too low: it is not reasonable to suppose that a disease, which yields most generally to stimulants, should require a low diet. But such persons must avoid ardent spirits, and gross animal food, or too much fats. When the disease is present, the diet must be low, consisting of milk, and mild vegetables; and the drinks should be mild and cool. Small bleedings, and frequent purging with sulphur, and where this will not operate sufficiently, castor oil, or rhubarb, or jalap, should

be given to carry it through the bowels. A decoction of seneka snakeroot, will be often found useful, and after the inflammatory symptoms are somewhat abated, tincture guaiacum, or powder of bark, which will be found in the list of medicines; or powders of snakeroot camphor and nitre. This may be made by mixing one dram of snakeroot in powder, (no matter which kind) camphor half a dram, nitre one dram, grind these fine, and make four or six powders, according to circumstances, one of which may be taken morning, and evening, drinking a cup of whey after it. An infusion of prickley-ash and pine knot shavings, is a good remedy; or a table spoonful of whole mustard seed; if of the dark seed a little less will do. The limb pained may be rubbed with opodeldock, volatile liniment; or a blister laid on till it merely inflames the skin; or a poultice of mustard, may be applied, till it becomes painful: but, in general, we should reduce the system a little, before we stimulate outwardly: I have seen rheumatism translated in good measure to the skin, by such applications, and the skin became intolerably painful, and sore to the touch. It will always require a discriminating judgment, to adopt suitable remedies to this disease: I shall conclude this article by observing, that the cold bath, purging with sulphur, and the plentiful use of whey, are the principal remedies for rheumatism; and warm clothing, and exercise are indispensable.

## SECTION IV.

### *Of the Asthma.*

I shall copy this article principally from Buchan: his ideas of a *spasmodick asthma*, without any marks by which it is to be distinguished, I shall omit, for, I confess I know of no difference in asthma, except that of its being of more or less force or violence. I shall also take occasion to suggest a few remedies, which have been particularly useful in my own practice. "Asthma is a disease of the lungs, which seldom admits of a cure. Persons in the decline of life are most liable to it. It

is distinguished into the moist and dry, or humoral and nervous. The former is attended with expectoration or spitting; but in the latter, the patient seldom spits, unless sometimes a little tough phlegm by the mere force of coughing.

"*Causes.*—The asthma is sometimes hereditary. It may likewise proceed from bad conformation 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, hemorrhoids, &c. the sudden retrocession of the gout, or striking in of eruptions, as smallpox, measles, &c. violent passions of the mind, as sudden fear or surprise. In a word, the disease may proceed from any cause that either impedes the circulation of the blood through the lungs, or prevents their being duly expanded by the air.

"*Symptoms.*—An asthma is known by a quick laborious breathing, which is generally performed with a kind of wheezing noise. Sometimes the difficulty of breathing is so great, that the patient is obliged to keep in an erect posture, otherwise, he is in danger of being suffocated. A fit or paroxysm of the asthma, generally happens after a person has been exposed to cold easterly winds, or has been abroad in thick foggy weather, or has got wet, or continued long in a damp place under ground, or has taken some food which the stomach could not digest, as pastries, toasted cheese, or the like.

"The paroxysm is commonly ushered in with listlessness, want of sleep, hoarseness, a cough, belching of wind, a sense of heaviness about the breast, a 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 these 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 easy of 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 broth, and ripe fruits, baked, boiled, or roasted, are proper. Strong liquors, of all kinds, especially malt liquors, 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. And 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. Asthmatick people can seldom either bear 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 with the smoke. Some asthmatick patients breath easier in town than in the country; but this is seldom the case, especially in towns where much coal is burnt. Asthmatick persons who are obliged to be in town all day, ought at least to sleep out of it. This will often prove of great service. Those who can afford it, ought to travel into a warmer climate. Many asthmatick persons, who cannot live in Britain, enjoy very good health in the south of France, Portugal, Spain, or Italy.

"Exercise is of very great importance in the asthma, as it promotes the digestion, preparation of the blood, &c. The blood of asthmatick 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

* I would rather advise asthmaticks, at all times, to take small meals and repeat them often. And in a majority of cases, they will be the better of a light supper. Persons much reduced will generally find benefit from taking a little food, once or oftener, during the night. A desideratum here, seems to be, neither to suffer the stomach to be entirely empty, nor overloaded.

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 glyster, with a solution of assafœtida, ought therefore to be administered, and if there be occasion, it may be repeated two or three times. The patient's feet and legs should be immersed in warm water, and afterwards rubbed with a warm hand or dry cloth. Bleeding, unless extreme weakness, or old age 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 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 asthmatick paroxysm. In the moist asthma, such things as promote expectoration or spitting are to be used; as the syrup of squills, gum ammoniack, 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, of equal parts of assafœtida and gum ammoniack, at bed time. After copious evacuations, large doses of ether have been found very

* Old age can never be an objection to bleeding. The aged cannot bear large bleedings, but their diseases, in general, yield to small repeated bleedings more readily than at any other period of life. Vomits rack them to pieces, purges sicken and exhaust them; but reasonable bleeding, they not only bear with safety, but in diseases of high excitement, it is the only remedy that will either give speedy relief, or prevent congestions, so often the consequence of fever left unsubdued by this remedy. Further, sweating subjects them to take cold, so that bleeding, and diureticks, are remedies especially adapted to the aged. Therefore, in asthmatick, as well as in the diseases, in general, of the aged, we are not to ask "how old art thou?" but examine into the force or violence of the symptoms, &c. and prescribe accordingly.

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 ammoniack, add two ounces of simple cinnamon-water, the same quantity of balsamick syrup, and half an ounce of the paregorick elixir. Of this, two table spoonfuls may be taken every three hours."

To these remedies, I shall now add, that I have found more benefit in the paroxysms of asthma, after evacuations, from the use of sugar of lead and opium, than any other remedy. In weakly patients, where the blood vessels are not much disturbed, this medicine may safely be given immediately: Take sugar lead twelve grains, opium three grains, make six pills: of these, the patient may take one every hour, till the disease abates, or till three, four, or the whole six are taken, according to the sex or strength of the patient. This will generally check the fit, and it will now be advisable to follow these pills, with some of the above remedies. Much benefit has been derived, in some cases, from smoking the leaves of the Jamestown weed or stramonium in the fits. Dr. Miller, of this state, who has been severely affected with this disease, speaks of it in high terms.

Lastly. Asmaticks must exercise, dress carefully, keep warm dry feet. And they will find benefit from the occasional use of the cold bath, and taking pills of assafœtida and iron filings in the intervals.

## SECTION V.

### *Of Angina Pectoris.*

This disease is treated of in the appendix to the article on medicine, in Dobson's Encyclopædia. Dr. Heberden is said to be the first who has written upon this disease. It seizes those who are subject to it when they are walking, and particularly when they walk soon after eating, with a most disagreeable and painful sensasion in the breast, which seems to threaten immediate death: but the moment they stand still, all uneasiness vanishes. In all other respects, the patients, at the beginning of this

disorder, are well, and have no shortness of breath; from which, the *angina pectoris* is wholly different.

After it has continued some months, the fits will not cease instantaneously on standing still; and it will come on, not only when the patients are walking, but when they are lying down, and oblige them to rise up every night, for many months together. In one or two very inveterate cases, it has been brought on by the motion of a horse or carriage, and even by swallowing, coughing, going to stool, speaking, or by any disturbance of mind. The subjects of it are principally men, but cases of it have been found in boys and women. The best opinion which I can form of this complaint, (which has been spoken of by many eminent men since Dr. Heberden's reports, as Fothergill, Wall, Percival, Haygarth; and by Smyth of Ireland, who has probably suggested the best, or only method of cure,) is, that it is a gouty affection of the heart. This disease has mostly terminated in sudden death. But I entertain strong hopes, that if it is viewed as a gout of a middle grade, and reasonable evacuations by blood-letting, &c. advised, in the first paroxysms, and in the intervals treated according to the advice of Dr. Fothergill, together with immediate recourse to one or more issues, according to circumstances, this disease may often be cured.

Such persons are advised by Fothergill, not to eat voraciously; to be particularly abstemious, in respect to every thing heating; spices, spirits, wines, and all fermented liquors; to guard most scrupulously against passion, or any vehement emotions; and to make use of all the usual means of establishing and preserving general health; to mitigate excesses of irritability or pains, if they quicken the circulation, by anodynes; to disperse flatulencies when they distend the stomach, by moderate doses of carminatives; among which, perhaps peppermint water may be reckoned one of the safest. But since obesity is justly considered as a predisposing cause, he insists on the necessity of preventing an increase of fat by a vegetable diet, and using every practicable method of promoting the thinner secretions.

I have twice seen a disease of this kind blended with hysterical affections, which I have spoken of under the head of gout. I shall conclude this article by admonishing the reader, that all the usual means of invigorating the general system, with one or more issues open, is his principal hope, and in the paroxysms large doses of ether, tincture of assafœtida, &c. in reduced habits; and moderate bleeding, and the use of mineral tonicks afterwards, in first paroxysms, or in strong habits.

## SECTION VI.

### *Of the Gravel and Stone.*

It is said, the gravel or stone is occasioned by unwholesome waters, containing stony or calculous matter; unwholesome windy food; by high living; a sedentary life; lying long on the back; an hereditary disposition; the use of strong and astringent wines. People at every period of life are subject to stone, but it is mostly found in persons who have been affected with gouty or rheumatick pains. In short, stone and gravel is attended with all the usual symptoms of *vibrating* or retrocessent gout; and often accompanies regular or inflammatory gout, being a congestion commencing in the kidneys, and growing out of an infarction of these organs.

Gravel in the kidneys occasions pain in the loins; sickness; vomiting, and sometimes bloody urine. A stone in the *ureters* occasions more acute pain reaching down towards the bladder; the thigh and leg of the side affected are benumbed, and the *testes* are sometimes drawn upwards, and there is more or less obstruction of urine. A stone in the bladder occasions pain in the lower part of the belly, and is particularly felt at the time of making water, and immediately afterwards; the urine can, often, only be discharged by drops, and is sometimes bloody, particularly after riding in a carriage, or more especially on a horse: there is occasional discharges of mucous, which is either white and thick, or at other times even fetid, and accompanied with small particles of gravel. There is a needless inclination to go to stool,

arising from irritation communicated to the *rectum*. In the male, there is an unpleasant stinging itchiness about the end of the *urethra;* and in the female, a similar irritation about the *urethra*, and often a most tormenting bearing down of the *uterus*, accompanied with pain and much irritation of this organ, which sometimes excites considerable fever. These symptoms are generally sufficient to enable us to distinguish cases of stone and gravel, at least, so far as is necessary in directing to a suitable remedy. It will, however, always be necessary for the surgeon, to determine by sounding in the bladder, with a suitable sound, or catheter, whether mere gravel or a stone is present, before he could think of an operation.

Persons subject to this disorder should avoid much windy vegetables, or gross fat diet. They should live temperately, but not too low; mild animal food, and even a little salted meat, occasionally, will be proper. Milk with ginger, or horseradish boiled in it, is a good article: well boiled onions, asparagus, spinage, radishes, and well boiled turnips, and cellery, are perhaps the best vegetables. They should drink mild mucilaginous drinks, as milk and water, slippery elm, gum arabick, quince seed, or other pure mucilage may be used; or infusions of parsley, march mallows, or linseed. In weakly habits, a little good gin is allowable, or other nice old spirit with a drop or two of oil juniper.

Much may be done in the early stage of this disease, by exercise, and such other remedies as are calculated to strengthen the system; and iron filings in particular, will be useful as a tonick; but when the disease has progressed, exercise to any great extent is impossible: it ought in every case to be pursued in some form, so long as it can be borne. Soap of the mildest kinds, as castile, has been taken in large quantities with good effect, and also lime water used freely; but we should always commence with small doses, and increase them gradually. Half an ounce of soap, and half a pint of lime water per day, are reasonable portions of these articles; they may be continued for years, at intervals, but a too constant use of them will injure the stomach. A decoc-

tion of raw coffee berries; and of the wild carrot seeds, sweetened with honey, has been found useful in some cases. From twenty to sixty grains of powdered uva ursi, taken in milk, has been found useful.

In inveterate cases, particularly in the decline of life, the free use of laudanum, and the warm bath become indispensably necessary. I suspect a gouty fever often accompanies cases of stone or gravel, and in fits particularly severe, we will give much relief by bleeding; nor need we be afraid to repeat it several times, if the symptoms run high. When the kidneys, uterus, &c. take on much irritation or inflammation, which is often occasioned by exercise on a rough-gaited horse, we must bleed, give mucilage, and enjoin abstinence for a few days. In the intervals, I have uniformly seen the most marked advantages from the use of large quantities of magnesia, and mucilage. To most persons, it is more agreeable than soap or lime water, and I believe it better, because it keeps the bowels open. It will always be a desideratum to get magnesia of a good quality.

## SECTION VII.

### *Of Dyspepsia.*

It has been pretty generally supposed, that *dyspepsia*, is seldom a primary, or a local disease of the stomach. I suspect, it is most commonly a gouty affection. It is known to follow gouty habits invariably. No disease admits of a greater uniformity of treatment; so that for *dyspeptick* symptoms, we are to rest our indications of cure, first on correcting the acidity present, and secondly, by means of mild tonicks, give tone to the stomach. The disease is known by irregular appetite, mostly bad; occasional nausea; dejection of spirits; flatulency of the stomach, and bowels; *cardialgia*, or pain at the pit of the stomach; much belchings of sourish, or other unpleasant tasted fluids, which rise up, and are sometimes thrown up in mouthfuls; slight spasms are often felt, headach is frequently one of the most distressing symptoms; great oppression about the stomach after eating; with general

languor and giddiness. These symptoms sufficiently characterize *dyspepsia*, and they are generally more or less violent, or constant, as the patient conducts respecting his food and drink, and general condition. It may be remarked of *dyspepsia*, that although acidity is mostly present, there is nevertheless, exceptions, where the contents of the stomach offend in form of *oxyds*, and in other cases, these fluids have even been found *alkaline;* in these cases, it must be obvious, acids are the proper correctors; and in all cases, where sourness is not plainly perceived, or where magnesia in reasonable quantities does not loosen the bowels, we are to suspect this condition of the *gastrick liquor*. The depraved fluids of the stomach may be corrected by magnesia; but in some cases it must be calcined; soda water highly charged with fixed air; prepared chalk; or white oxyd of bismuth: and also by the elixir vitriol, or nitrick acid; and in some cases the acid of lemons, or even nice vinegar rendered aromatick by a little cayenne or other pepper: these acids will often succeed even in cases where acidity abounds, for they are as capable of destroying the phosphorick, and other weak acids in the stomach, as the *alkalies* are. These remedies with emptying the stomach in severe cases, by a gentle vomit, or by drinking freely of chamomile or carduus tea, and opening the bowels, will generally remove the symptoms for a time: but as debility either partial, or, mostly, general, is the cause of *dyspepsia*, we are only to expect permanent relief from such remedies as are calculated to invigorate the body. These have been so fully pointed out in various parts of this work, that I shall briefly state a few leading aims.

Exercise, and particularly on horseback; or labouring; the occasional use of the bath, cold, warm, or tepid, according to circumstances; a diet consisting principally of light animal food; dry plain biscuit, rice, barley, and potatoes well boiled, in general, are preferable to fermented bread: boiled onions; milk with horseradish, or ginger, boiled in it. A glass of choice wine, or a little old spirit and water, may be taken by persons in the decline of life; but the young had better use a few drops of

elixir vitriol, or increase the quantity of condiments. Cold water may generally be used, or cold pleasant bitter infusions; sometimes good porter is agreeable. But in general, fermented liquors, much butter, cheese, fat, or much salted meat, is to be avoided. In general, such people will be enabled by attending to their diet, to discover what agrees best with the stomach, for each case has some peculiarity.

A little salted meat once a day will impart an agreeable stimulus and tone to the stomach; and in warm weather it is indispensably necessary. With the above regimen our views will often be promoted, by using occasionally as tonicks, iron filings combined with the gums; bitters as powdered bark, columbo, or gentian; the elixir vitriol; white oxyd of bismuth. The bowels must be kept open; nor is a looseness, which sometimes occurs, in *dyspepsia* to be considered as answering this purpose, on the contrary, it generally indicates a necessity for mild laxatives; much purging is perhaps always injurious to such patients, and therefore, after mild laxatives we ought to check it by laudanum, if necessary.

## SECTION VIII.

### *Of Goutier, or Goitre.*

This is an enlargement of the *thyroid gland*, or an unpleasant swelling of the neck. It prevails in Switzerland, some parts of New-England, and in some parts of the western country, adjacent to the Ohio; but cases of it are to be met with in every part of this country, in which I have travelled. All the cases of this disease which I have seen, that were of long continuance, were accompanied with asthmatick symptoms. There is cases, on record, where removal has effected cures, but in general this affection of the throat is associated with some other visceral affection, and I suspect, it is only to be removed by occasional b eedings, and one or more issues kept open for a long period, or during life. Exercise, particularly in the form of travelling, the cold bath, and

such tonicks as are most durable and least stimulant, should be used.

In the early stage of it, I think it highly probable, that by adding to the above remedies, frequent applications of the extract of lead to the part affected, the disease may be arrested. I think it particularly necessary to keep the feet dry and warm. And the issues will probably answer best in the calf of the leg.

Several causes have been assigned as producing this disorder, such as snow water, cold climates, and hilly countries. There appears to be something of an endemick character in this disease; but I suspect it is occasioned most frequently, by persons going barefooted, who are predisposed to gout. It follows, that, in places where *goitre* prevails, females in particular are to pay a scrupulous attention to keeping the feet and legs warm. If they are more exempt from regular gout than men, they are more liable to *goitre*, and to misplaced gout; and, in this country, suffer more from neglecting to keep the feet and legs warm, than from any other circumstance.

## SECTION IX.—SUBSECTION 1.

### *Of Scrofula.*

In treating on *scrofula*, I have thought proper to depart from the common tract, and suggest some new ideas, which I think calculated to lead to a rational and safe practice. I shall divide the subject into *strumosa rachitialis*, or rickets: *strumosa glandulosa simplex*, or simple, *scrofula* of the glands: and *strumosa maligna*, or malignant scrofula. Each of these forms of this disease, partake of different grades, and like all other diseases affecting different parts of the system, are often blended, or transformed from one grade to another.

SUBSECTION 2.

## *Of Rickets, or Rachitis.*

A simple *rachitis* usually commences with a looseness; flabbiness of the skin; a swelling of the abdomen, while the muscles in general grow lean; a flaccid tumour of the head and face; the joints appear enlarged; the patient becomes weak, and languid; the bones soft and yielding, so that if the child has been walking, it becomes gradually weak and tottering, till at length it is unable to walk; and this is often rendered more difficult on account of an enlargement of the head, which often occurs: the sutures of the head open, the breast becomes distorted, the ribs knotted or crooked, the abdomen becomes still more protuberant, the teeth become blackish, and the tongue generally falters. And if these symptoms are not arrested, the whole of the solids become dissolved down, and the patient having lost all power to support himself, dies. In most cases, however, this disease would eventually wear off; but not without much deformity. My principal reason for placing *rickets* as a variety of scrofula, is to caution persons who have been affected with this disease in infancy, that they are disposed to scrofula, and must be circumspect in pursuing the strictest regularity. This form of scrofula is principally found in young children.

In attempting its cure, we are always to attend to keeping the *alvine* excretions regular; this with perseverance in the following tonicks, using them alternately, will mostly answer our purpose: Iron filings made into pills, with extract of bark; or the iron combined with a little gum myrrh, and crumb of bread; from five to twenty grains of filings per day, should be given; phosphate of lime, in doses, of from five to fifteen grains, twice a day. In low cases muriated tincture of iron, with the alternate use of the above articles; we are also to use diligent frictions applied to the whole body, and there is strong reason for believing frictions with oil, would be useful. The cold, or tepid bath, must be

constantly used, and such exercise as the patients can take, or sustain, should never be omitted; they should wear flannel next the skin, and the utmost attention paid to keeping them dry. Their diet must be light, but nutritious; milk boiled with ginger, or horseradish, or a little pepper; and dry water biscuit, should constitute a large portion of the diet; light animal food, and occasionally a little salted meat will be proper; and a glass of choice wine may be allowed. A little ripe fruit may be allowed; all unripe fruit or vegetable trash, are to be withheld; nice fresh jelly of calves feet, &c. are proper.

SUBSECTION 3.

## *Of Malignant Rickets.*

A more malignant form of this disease, because more concentrated on one particular part of the body, is seen in white swellings, usually so called; the hip disease, and the *spina bifida* or disease of the spine; these are all but varieties of *rachitis*, of a more malignant form. And the same general indications of cure are necessary, with some variety in the local or topical applications. This form of *scrofula* is usually ushered in by violent inflammatory symptoms, particularly when it attacks the hip, or knee: the symptoms generally run high where any of the larger joints or bones are attacked; the inflammatory symptoms are less marked when the spine is attacked. In these cases, active measures should be speedily adopted; bleeding from the arm; purging; scarifications, on the part pained, with cupping glasses; leeches; blisters: after these remedies have been, speedily, carried, as far as may be considered safe, we may apply warm fomentations, and give anodynes combined with ipecacuanha or sweet spirit of nitre, and await suppuration, which is often tedious, and requires onion poultices; but in all cases, it is improper to continue wet or dampness of any kind, for a length of time: gum plasters will answer better.

*In the disease of the spine*, we are never to apply poultices; a warm gum plaster may be applied; if the disease advances, our only hope is issues, on either side of the

spine, kept open with savin ointment. This form of the disease usually attacks weakly children; and seldom requires severe evacuations; the principal indication, here, is to strengthen the general system, and keep open the issues.

All machines, tight bandages, &c. are to be carefully avoided, they are the offspring of ignorance, or officiousness, and never fail to harass the little sufferers with more pain than the disease. The cold bath, frictions, and such exercise as can be borne, are the only things which will support an *automaton machine*. Let me admonish every head of a family to bury all these tormenting machines with the "*quiescent momentum*" of a late machine, said to possess powers of perpetual motion. I am not singular in these opinions; professor Davidge has taken much pains to propagate this important advice, against these machines. A staff or crutch, will often be useful, and even with these long standing should be avoided.

The machines worn for a weak back or legs, may be called, emphatically, *yokes of folly*, designed to support the back, but break the heart with vexation, and double labour, owing to the obstructions put upon the circulation.

## SUBSECTION 4.

### *Of Scrofula in the Glands.*

I come now to speak of *strumosa glandulosa simplex*, or the simple scrofula of the glands. This form of the disease is known by hard indolent swellings under the chin; behind the ears, &c.; they go on mostly to enlarge gradually, then, sometimes, go away in the same gradual manner; at other times they go on to increase in size and number, and become painful, suppurate slowly, and then discharge a thin watery or brownish liquid. Sometimes the arm pits, groin, hands, eyes, mammæ, &c. are affected in a similar manner. The lungs, liver, spleen, &c. are also liable to *strumous* affections; but this form of scrofula seldom affects the viscera; a permanent swell-

ing of the upper lip, is reckoned a strong mark of a scrofulous habit.

In this form of the disease, the free use of the bark, iron filings, cold bathing, travelling, with the usual exact attention to diet and regimen generally, which has been pointed out for *rickets*, are the principal remedies. If the case becomes inveterate, tending to obstinate suppurations, and ulcerations, advantage may be expected from alternating the use of hemlock, with the bark. But I think it clearly established, that the very free use of the bark, and cold bath, with due attention to keeping the bowels regular, by opening them with phosphate of soda, when costive, and restraining a looseness when necessary, with small doses of laudanum, are the only means likely to arrest this disease. Mercury is never useful, and is attended with much danger.

### SUBSECTION 5.

### *Of Malignant Scrofula, or Cancer, &c.*

*Strumosa maligna* is found in the form of scirrhus, and cancer; I shall speak of them conjointly, and wish merely to premise, that cancerous ulcers sometimes occur without *scirrhus* having preceded; but from the frequent termination of *scirrhus* in cancer, we are warranted in considering them one and the same disease; *scirrhi* being incipient or *occult cancers*.

In these diseases, when they are locally situated, we are to extirpate the part, and thus remove the *centre* of the disease; after which suitable remedies may subdue the slighter taint of the general system. The removal of these tumours is the business of the most experienced surgeon, but it may be proper to point out those cases, which at an early stage, may generally be removed, these are *scirrhus* of the *mammæ*, of the *testes*, and tumours generally which are superficially situated. In that variety of *scrofula*, known at present by the name of *fungus hæmatodes*, amputation is alone to be trusted.

The liver, stomach, and uterus, are more especially liable to *scirrhus*: these are known by pain and burning

in the part affected, and a hardness is soon perceptible, by pressing on the part. Such cases require the most skilful attention, and therefore, I shall conclude this article with a few general observations.

We are never to apply external remedies to scrofulous sores, unless they break: in common cases, an ointment with a few drops of oil of savin in it, or some of the powdered leaves in common basilicon is the best dressing.

In malignant cases we may use the carrot poultice, sprinkle the part with powdered savin leaves, touch it with the juice of garlick, or a weak solution of arsenick; but where these articles produce irritation and pain, they should be omitted, and the carrot poultice, with frequent fomentations of hemlock, or Jamestown weed used. Exercise, and frictions, accompanied with mild nutritious diet, are proper in all cases of scrofula, but in the malignant we are not to expect any benefit from the cold bath, if it be not really dangerous; neither is any benefit to be expected from the bark, in the malignant scrofula: the free use of hemlock, and perhaps the occasional use of a solution of arsenick, with avoiding all heating drinks, or harsh articles of diet, disturbances of the mind, and attention to the bowels, are our hopes, together with occasional anodynes, to keep down pain or irritation. An *incipient scirrhus* of the liver, may probably be arrested by mercury, but in all other cases it is useless or hurtful.

## SECTION X.

### *Of Syphilis, or Lues Venerea.*

In treating on this disease, I consider it a matter of primary importance, to point out the symptoms by which it may be known. Persons are sometimes found willing to believe that scrofula and other diseases are venereal; but more frequently, persons are found who wish to conceal this disease, under pretence of having some other. Moreover, we are assured by many most reputable authors that this disease may be communicated by simple

contact, as touching the virus with a part from which the scarf skin is removed, sucking a venereal person, with a sore mouth, &c. in these cases it may be of great importance to distinguish this disease from scurvy. But although I have no doubt of such communications producing this disease, I am confident they are very rare, and many people conceal their own vices under a cover of this kind. I believe ninety-nine cases of a hundred, are the offspring of impure coition, and therefore not only might be avoided, but cannot be contracted but at the expense of virtue, of one of the parties, in all cases.

I shall take occasion to observe here, that the more artificial our diseases, the more difficult are they of cure; and this is strongly exemplified in syphilis and gout. When the usual local symptoms of a *virulent gonorrhœa*, as *chancres*, *buboes*, *phymosis*, &c. do not yield to the usual remedies, or if these heal, and break out again, without a renewed infection, we are to suspect the general system is affected. If ulcers break out in the throat, pains in the shins, with nodes or little knots upon the bone; ulcers in various parts of the body, or ill-looking blotches, or eruptions, unattended with itching, we may generally conclude the case is venereal. Venereal ulcers may be distinguished from scorbutick ones from these circumstances: Venereal ulcers never affect the gums first, but generally commence in that part of the mouth called the *fauces*, more commonly in the *tonsils*, or *uvula*, of the upper part of the throat; scorbutick ulcers affect the gums first. Venereal ulcers are red around their edges, scorbutick ones are livid. Venereal ulcers are mostly deep and covered at bottom with white or yellowish sloughs, scorbutick mostly put out loose *fungi*. Venereal ulcers are apt to rot the subjacent bones, scorbutick almost never. Venereal ulcers are well defined in their edges and mostly circular, scorbutick are more extended and undefined. Venereal ulcers are callous in their edges, scorbutick ones are not so. Venereal ulcers are apt to spread from the mouth to the nose, scorbutick are not. Lastly: scurvy may be known by difficult breathing, remarkable lassitude, rotten gums, and swelled legs. But our greatest danger is that of

mistaking scrofula for *syphilitick* affections; nor in general can we determine without much experience in these diseases, unless it be from the circumstance of knowing we have been infected with *syphilitick* poison; or where it is preceded with the most usual forerunners, as *buboes*, *chancres*, &c. or from the circumstance that the patient is evidently scrofulous; and even this will sometimes deceive us, for scrofula and syphilis are often blended. And further, a scrofulous taint which lies dormant, is sometimes roused up by syphilis, but more especially by mercury used for its cure. It follows, that persons of scrofulous habits run double risk from contracting lues venerea, for they cannot be cured of *syphilis* without mercury, nor use it in scrofula without risk: and I have elsewhere said, that, I believe most of the dreadful consequences which sometimes follow the use of mercury, and what is usually called the mercurial disease, is nothing but aggravated scrofula.

Upon the whole, I consider it one of the most important affairs in medicine to distinguish between scrofula and syphilis, in some cases; and as much mischief may arise from mistakes, it behooves every patient to take the best advice. I therefore, shall conclude this article with a few general observations. I have cured *lues* at every stage of the disease by the mildest remedies, which have been proposed for this disease. Give from three to five grains of calomel, according to circumstances, in pills; suffer these to purge the patient a few days; and if the least affection of the gums occurs, quit the calomel till this wears off. After the patient has been reasonably purged, if necessary, combine opium with the calomel.

If the case is recent, we should bleed once or twice, and enjoin a low diet with mild drinks. But in confirmed cases, we may commence at once with pills of calomel and opium, observing always to omit the medicine when the gums are affected, till this wears off, and then begin again; after pursuing this course for a few weeks, we should quit the medicine, and put the patient on the use of nitrick acid; with this, should be used decoctions of mezereon, sarsaparilla, sassafras, or burdock;

this course is to be continued for a few weeks, and then changed again for the calomel and opium.

In all reduced habits, or in cases accompanied with scrofula, we are to commence with short courses of the mercury, and longer courses of the acid, &c. In good habits and recent cases, we are to reverse this procedure. In all scrofulous habits, we should constantly use the bark, in conjunction with other remedies.

By this treatment we can arrest *syphilis* in every stage, (and I speak from actual experience,) provided due attention is paid to avoid catching cold, by keeping the feet and legs warm and dry, and wearing flannel next the skin, dressing warm, avoiding heating articles of diet or drinks, venery, and fatigue, and excess of every kind: but free exercise is always necessary in good weather. The patient is also to avoid rash exposure to night air, and also that of cool mornings and evenings, and getting wet, or rashly drinking cold water when warm. In recent cases, animal food, and spirits, and spiceries, must be avoided: in those more confirmed, or in weakly habits, a tolerable generous diet, with a little gin and water, may be used, more especially if the patient has been accustomed to ardent spirits.

For local affections, as *buboes*, *chancres*, ulcers of the mouth, or sores of other parts of the body, if ulcerated, a wash of calomel, honey and water, together with daily washing the parts very clean, with mild soapsuds, will answer every purpose. This wash may be made by rubbing half a dram of calomel with two small tea spoonfuls of honey, to which, add two ounces of cold water.

For venereal inflammation of the eyes, or *buboes* not open, mercurial ointment is the best remedy; but for the eyes, the ointment should be fresh, and contain nothing but the quicksilver, and the best fresh lard. It will be advisable, in ulcers of the mouth, to gargle frequently with a weak decoction of bark, containing a little soda.

I am satisfied from observation, that the use of mercurial ointment is one of the most unsafe forms of this medicine. We can make little or no calculation on the effects which will follow, and patients are often saliva-

ted in this way before they are aware of it: this is never necessary, and to persons who are going about, or to scrofulous patients, it is always dangerous. Besides, it is a dirty practice, as disgusting as it is unnecessary. In cases of fever, where we wish to salivate, and where of course the patient is confined to the house, the ointment should always be preferred; or accompany mercury in some other form.

Much confidence has been placed in the use of the corrosive sublimate: it often answers a good purpose; but the calomel is more mild, and equally effectual: besides, serious injury is often done the stomach and appetite, by using corrosive sublimate,* which I have never seen follow the use of calomel. Where there is much pain, we should use anodynes freely; but in general we must endeavour to avoid the long continued use of opium.

Let me solemnly admonish every person, to beware of persons who pretend to cure *confirmed lues* without mercury: they will either deceive you in giving it clandestinely, or they will injure your constitution, and possibly do away all chance, which you might have had, for its removal, by mercury. And further, never daub your skin with mercurial ointment, if you intend to go abroad during its use, or if you have any suspicions of scrofula.

## SECTION XI.

## *Of the Yaws.*

Much confusion or ambiguity exists respecting this disease, but from the best information which I have of it, it does not prevail among us, at least, not in the form known under the names of *frambœsia guineensis*, or *americana*, the former of which prevails in Guinea, and the latter in St. Domingo, &c. I suspect, what takes the name of *yaws* in the United States, is a combination of a slow or low grade of *lues* and *glandular scrofula*.

*This medicine has acquired a very great reputation in the publick institutions in New York, brought about by Dr. Hosack.

Such has been the case with all the cases I have seen, and when thoroughly confirmed, it is seldom if ever cured. But there is some consolation in the belief, which I think well founded, that those deplorable cases are always the consequence of neglect, or improper treatment on the part of the physician, or imprudence, &c. on the part of venereal patients. All these declarations comport with my observations on cases called *yaws*.

It would seem to follow, that by avoiding the usual causes of *lues*, and by carefully attending to the speedy removal of it when caught accidentally, or at the expense of decency and virtue, we may banish this uncouth name from the list of our diseases. Or, perhaps, no better term can be used than that of *frambœsia* for this compound disease, formed of *scrofula* and *lues*, more especially as the American people seem to have adapted the term *yaws*, to a low chronick state of *syphilis*.

## SECTION XII.

## *Of Epilepsy.*

This disease is also known by the name of falling sickness, from the circumstance of the patient's being generally suddenly seized; and falls down, and sometimes receives great injury from fire, bruises, cuts, &c.

I have seen one most shocking case of an *epileptick* patient falling with his face against a hot stove. I was present, but the weather being cold, and not recollecting immediately that he was an *epileptick* patient, at my father's, he was suffered to remain a few moments before the true state of his disease occured, for it was supposed he had merely stooped to warm himself, till the usual noise made by such people, called me to his assistance; and it appeared as though he would have been burned to death, if I had not been present, for he made no efforts towards relieving himself. This suggests a strong caution, to those who are subject to sudden attacks, to avoid dangers of this kind.

There are many cases where the fits are preceded by premonitory symptoms, which enable the patient to pre-

pare in some measure for the attack: these symptoms are pain and confusion of the head, lassitude, dread, noise in the ears, palpitation of the heart, uneasiness of the head, disturbed sleep, &c. these are often succeeded by cold tremulous like sensations, ascending upwards to the head. If the patient be standing he now falls, and generally utters a violent distressful cry, and these are often repeated; the thumbs are drawn up into the hands, the eyes are distorted, the breathing is laborious; sensation is suspended; so that smelling, seeing, hearing, and feeling, are entirely suspended. Many other unpleasant symptoms occur, which it is unnecessary to mention, in as much as the above always sufficiently characterize epilepsy. After these symptoms, if they occur in the day, the patient may be awoke, and he feels sore, and stupified for some time afterwards. Often, however, it attacks in sleep, and the patient, after the most violent fits, falls asleep again unconscious of what has happened, except from the soreness which is felt over the whole body. In inveterate cases, a pretty constant giddiness and confusion of the head continues.

All search after the cause of this unpleasant disease has been fruitless, the dissection of persons who have died after being affected with epilepsy, has sometimes discovered organical affections of the brain, caries of the skull, indurations, collections of water, matter, &c.; but in many cases no traces whatever were to be discovered.

Cases of epilepsy are to be found where strong pressure upon the region of the stomach will suspend the fit, or check its violence, so that upon the whole, I imagine, epilepsy is as often the consequence of diseased viscera, and particularly of the stomach, as of disorders of the head. And indeed, from the remedies which have often been found useful in this disease, and sometimes cured it, I think it highly probable the stomach is the seat of the disease, at least in those cases which yield to powerful tonicks. It is generally believed, epilepsy is incurable after puberty, but there are many cases on record, where they were cured after this period of life.

I have generally been able to suspend the force of epilepsy, by the use of sugar lead, but it has always re-

turned: but by a more free and long continued use of this article, I think it likely it might be cured, where there is no disorganization of parts, which must preclude all hopes from medicine. It behooves persons subject to this disorder, to live temperately, avoiding all excess in eating, drinking, exercise, passions, venery, &c. Of all unfriendly things venery, and disturbances of the mind, are most conspicuous. With the strictest regularity with respect to exercise, which should be constant, but moderate, to diet, sleep, avoiding spirits, and much gross animal food, I should recommend the following course in preference to any other. Take the flowers of zink for a few weeks, in the usual doses; then use iron filings and assafœtida, for a like period; succeed this with the sugar lead, in doses of from one to four or six grains a day; then stramonium in the usual doses; then the bark in the largest possible quantities, that the stomach will bear; then the cuprum ammoniacum. With these remedies we should open one or more issues, in some part of the body; and use the cold bath occasionally. Should a round of all the above powerful tonicks prove abortive, it will be advisable to go over them again, changing the order of them in some measure, so as to produce as much variety as possible.

## SECTION XIII.

### *Of Hypochondriasis.*

It has been supposed by many unthinking people, that hypochondriasis is but an imaginary disease; and it is often unwittingly called blue devils, and other rude or trivial names. For that of spleen, there is some foundation; as from the days of HIPPOCRATES, it has been supposed to be an affection of the spleen. But this distressing malady, probably is seated in the three principal organs of digestion, the stomach, liver and spleen; and the melancholy state of the mind is symptomatick of a languor, or perhaps owing to depraved functions of the organs enumerated; by which I think it highly pro-

bable the blood, and animal fluids, are not sufficiently prepared.

It is well known that reasonable pleasantry or mirth, has a beneficial effect upon hypochondriacks, and subjects of other diseases, and hence it comes that well disposed persons, who wished to befriend or relieve such patients, by a prudent use of good humour, &c. have brought the unthinking to suppose hypochondriacks are fit subjects for derision, and rude sport, because their disease is imaginary. But let me admonish all such, that this is an egregious errour, and as inhumane as it is ill founded. We know that all diseases are much influenced by the mind; and moreover, that the stoutest heart, or constitution is assailable by, and essentially governed, supported, or depressed and even destroyed, by the operations of the mind.

In hypochondriacks we have unequivocal evidence of disease preceding, and giving rise and maintenance, to the gloom of the mind, this is manifested by the following symptoms: all the usual symptoms of dyspepsia; costiveness, tormenting pains under the false ribs, which sometimes become lancinating, burning, &c. disturbed sleep. Sometimes there is an inflation about the region of the stomach, or spleen, flushings of the face, and heat or prickling through various parts of the body, with slight twitching or quivering of the flesh, colicky, and cardialgick pains; to these and many other symptoms, which sometimes occur, succeed dread, and a great susceptibility to frights: then comes gloomy forebodings, and still more disturbed sleep, insomuch that such patients are often almost deprived of sleep, under an apprehension that they will die without waking. When the disease is confirmed, it is particularly characterized by errour of judgment respecting their own case, while the judgment, and other powers of the mind are correct on all other subjects; and also, by a propensity to dwell, with minuteness, on every trifling symptom which occurs. If the case becomes still more inveterate from neglect, improper management, &c. this disease sometimes terminates in fixed melancholy, or a gloomy low state of

madness, often leading to a desire of death, and which too often is accomplished, violently by their own hands.

This disease is generally curable, or perhaps more correctly speaking, may mostly be mitigated by suitable attention to regimen, exercise, and the occasional use of medicine. In all recent cases, and in the occasional exacerbations, small evacuations are essentially necessary, as bleeding, aloetick purges, gentle emeticks, and these are to be repeated till the symptoms abate. In the intervals, I have no hesitation in pronouncing the use of iron, the cold bath, and riding on horseback, superiour to all other remedies, and I speak from what I have seen in the extensive practice of my father, who has frequently had these kind of patients, coming from a distance; and often sent them home perfectly well; some of which never relapsed. It is, however, probable, that the change of scene, &c. which attended going to, and residing for some time with or near a physician, in whom the patient had confidence, had a large share in affording that relief, which invariably followed cases from a distance, in the practice of my father. And I feel confidence in recommending to hypochondriacks, to seek out some celebrated distant physician, in preference to taking medicine at home.

The following course will generally succeed: take iron filings, gum myrrh, and assafœtida, each equal quantity: form these into pills of the usual size, and take four to six per day, drinking a small glass of a bitter infusion, made by steeping a little bark, chamomile, carduus, centaury, orange peel, or gentian; either of these alone or combined, will answer; and a quart of water, and one gill of pleasant old rum, spirits or whiskey, (to prevent souring,) and one dram of salt of tartar. If the bowels are costive, give a little aloes and calomel. It will always be necessary to observe the state of the feces; if they are not blackened from the use of the iron, we should omit the salt of tartar, and give fifteen or twenty drops of elixir vitriol, before each meal, about an hour. If things progress well, we should discontinue the iron and bitters, once in every ten or fifteen days, and give the elixir vitriol, as above, without any other medicine.

for three or four days. In all cases where evacuations are necessary, and in debilitated habits, and generally, in cases of long standing, we should give mild anodynes at night; half a grain of opium, with two or three grains of ipecacuanha, is the best form of the anodyne, as it is more durable in its effects than laudanum, and the ipecacuanha determines mildly to the surface. An anodyne plaster should be worn over the stomach. These remedies, with the occasional use of the cold or tepid bath; and constant riding on horseback, will render such people comfortable, and often wholly eradicate disease from the body.

Much benefit will, however, be derived from proper attention to the mind. Those who wish such persons well, are to avoid all rude jokes, and every thing like intimation, that cheerfulness is assumed merely to rouse them from imaginary evils; such conduct is generally offensive, and often drives such patients from society to gloomy retirement. The better way is to listen with good nature, to their distressful relations, by times, but on all suitable occasions preserve a cheerful lively deportment; endeavouring to recall all pleasurable subjects which may have preceded, or which may be anticipated, relating either to the patient, or his companions. If he takes offence at a too lively deportment, and seems to think it pointed at him, never argue or contradict him; yield the point, and after a seeming repentance for having given offence, go on, but not particularly in his presence, to cheer up those around you by lively airs of musick, or the sprightly gambols of children and young persons; always guarding against rude noise. The frequent company of agreeable neighbours, or when riding, endeavouring to connect it with business, will be beneficial.

It will readily occur to the reader that I am addressing myself particularly to the wife; but persons of every description may materially promote the welfare of suffering hypochondriacks, by suitable endeavours to amuse and call off their attention from their disease. It is also of importance that such persons avoid spirituous drinks, and gross, or much vegetable trashy food, or pickles, fats, and excess of every kind. The diet should consist

principally of light animal food, with eggs, milk seasoned with ginger, horseradish or pepper, well boiled onions, and occasionally a little garlick, as a condiment. Good coffee with bread, and a little nice butter, and a relisher of a little nice ham, salted beef, or fish is a good breakfast; but coffee in general should not be used more than once a day; water biscuit should occasionally be preferred to raised bread, and also well boiled rice, potatoes, or barley, &c.; animal jellies are proper, and roasted or broiled animal food, is preferable to boiled; and broths, unless rich and in small quantities, are improper. It is to be particularly observed, that such persons neither fast long, nor eat full meals; they should eat more frequently, but upon the whole they should eat sparingly; and if any particular article is found to disagree, or to agree well, they must choose accordingly. For drinks, water should constitute their principal drink; and if it seems to disagree with the stomach, a slice of carefully toasted bread, without burning, will often make it agreeable; or very weak bitter cold infusions may be drank; an occasional glass of good wine after dinner, will mostly be proper; but such people must be cautious how they use fermented or spirituous drinks; they are never allowable in large quantities. Persons in the decline of life, may be the better of a little old spirit, of some kind, mixed with a little water; but it must be used with much caution, and can seldom be used with safety, as freely, as by persons of the same age in health.

## SECTION XIV.

### *Of Hystericks.*

This disease nearly resembles hypochondriasis, but differs in some measure in its symptoms, and requires some difference in the method of cure. For the treatment of hysterick colick, the reader is referred to the article colick. Hysteria has mostly been supposed to be a disease peculiar to females; but I have seen all its most marked symptoms in males. It occurs sometimes with, and often without, the most permanent symptoms of hy-

pochondriasis. The disturbance of the mind in this disease is more transient, and violent, than in hypochondriasis, consisting mostly of sighing, crying, talkativeness, laughter, &c. wonderfully alternating each other: a choking sensation in the throat, from a feeling as though a ball was rising up; large quantities of limpid urine; sick stomach, vomiting, and colick. In some rare cases libidinous desires are excited. For permanent relief from hysterical habits, we are to pursue the means laid down for hypochondriacks; in the fits or exacerbations, we are to pursue a treatment somewhat different. In full habits we should bleed, give a gentle emetick, and then use *diffusible stimuli* in small doses, as ether, laudanum, spirit hartshorn, tincture assafœtida, peppermint essence, or mixtures of these; the juice of garlick, or rue, will often have a good effect.

In reduced habits, we may generally content ourselves with emptying the stomach by draughts of chamomile or carduus tea; and in those still more reduced, this may even be dispensed with, and the *diffusible stimuli* just mentioned, given with considerable freedom: an anodyne plaster may be applied over the stomach. But in general a very weak dose of ipecacuanha should be given, where there is much nausea or vomiting. It will always be necessary to attend to the bowels; and magnesia, or a little calomel and aloes, where the bowels are not easily moved, will answer. In old age the tincture of rhubarb, or tincture of rhubarb and senna, will answer, or heira picra. Such patients should carefully pursue the regimen, &c. laid down for hypochondriacks; and it is especially necessary to guard against passions of the mind, and to keep the feet dry and warm; and here, as in all other cases of the valetudinary condition of the body, flannel should be worn next the skin.

Persons much subject to hysterical affections, must carefully avoid indulgence in sensual pleasures; in delicate females it is often an exciting cause of the disease, and the offspring of the cohabitation of healthy vigorous men with weakly females, more especially where the woman is barren; but there are cases where bearing children does not prevent such consequences, and where

the increased stimulus of pregnancy upon the system aggravates the case. I beg that this may be particularly remembered; it is not the transient notion of my own imagination, but is founded on a well-grounded opinion of an aged physician, who justly acquired much celebrity for his skill in chronick diseases.

## SECTION XV.

### *Of the Piles, or Hemorrhoids.*

This is a troublesome affection about the muscles, which form the termination of the *rectum*. It has been called the *blind piles*, and the *bleeding piles;* the first is formed of one or more painful tumours, the latter has added to the tumours occasional, or periodical discharges of blood. They have also been divided into external and internal *piles;* sometimes this affection is wholly outward about the verge of the *anus*, at other times they are entirely within. But for these distinctions there is no good foundation: whether the disease be seated an inch higher, or lower, can be of no consequence.

I think it of much more consequence, to do away the ridiculous notion of the salutary nature of this discharge which is held by Buchan, and others. I can easily believe that where the patient has been long under the habit of *bleeding piles*, it would be dangerous to check it suddenly; but no person should dream of inviting such a *crippling:* on the contrary, it should be attacked with spirit, and ever viewed as an enemy to the constitution.

This affection may arise from a variety of causes, as costiveness, or an opposite state of the bowels; from drastick purges; heavy lifting; a weakly, or gross habit; but it seems to be more especially excited by irritation about the *rectum*, from the above enumerated and all other causes. Strict temperance in every thing appertaining to our condition, is the most likely means to avoid, or remove *piles*. When they become painful, or bleed much, it will always be advisable to use means as early as possible, for a little neglect now may subject you for life to a loathsome and painful disease.

*Treatment.*—Where it is accompanied with costiveness, whether *blind*, or *bleeding*, we should open the bowels with mild laxatives, as sulphur and cremor tartar, or rhubarb and magnesia. If the bowels are laxative, and in a state of debility, injections of cool starch and water should be used; sulphur may be taken alone as a purgative, and at the same time a little laudanum and sweet spirit nitre, now and then. In full or good habits, if piles are accompanied with very severe pain, and some fever, the patient should be bled once, or oftener, if the symptoms require it.

It is obvious, that as piles may arise in opposite states of the system, we are to suit our general remedies to that state which is present. In full or athletick habits, low diet with occasional laxatives, &c. will be necessary. In the weakly, the occasional use of the bark, elixir vitriol, reasonable exercise, the cold bath, &c. As a local application, sugar lead will generally answer every purpose. Persons subject occasionally to piles, should keep a strong liniment of sugar lead and sweet oil; and as soon as strong symptoms of piles occur, they should lay down on the back, elevate the feet and legs, and employ an hour or two in gently rubbing the part with this liniment, now and then; and in the intervals, apply a gentle steady pressure upon the part: for want of this liniment, strong cold lead water will mostly answer. This will seldom fail to arrest outward piles, if the patient can indulge a little for a day or two; and a relapse may often be prevented by applying a pledget of tow, and binding this up pretty firmly with a strap fastened to a bandage around the body; this should be worn till the parts recover tone.

If the disease is internal, or attended with much bleeding, cold starch and water may be injected, and if this does not check the bleeding, or remove the pain, an injection of weak lead water should be thrown in, not exceeding in quantity a spoonful or two; and the same procedure should be pursued by lying down, &c. as directed for the outward affection. In these internal cases, we should pass a piece of ivory, or a smooth wax, or clean tallow candle, of a small size, up the *rectum*, and

confine it there an hour or two. If the case has progressed for some time, and the pain has become extreme, whether the disorder is internal or external, we must use emollients: in this condition of the parts, it might be dangerous to apply cold astringent applications; here we should foment the part with a bath of bitter herbs; and in more severe cases, a poultice of bread and milk, with a little camphor in it, should be applied. But these warm emollients are seldom or never necessary, unless the case has been neglected. I have had occasion in many cases to apply them, and suppuration has never followed; so that, in all cases where the cold astringents, with bleeding and purging, in strong habits, and mild glysters and gentle anodynes in weakly habits, do not succeed in checking the pain, we may in all cases where the pain is extreme, have recourse to emollients with safety and advantage.

But it is a fact not generally known, that in most cases of *blind piles*, the pain arises from the violent contraction of the *sphincter* muscle of the *anus*. Where this exists, keeping some smooth substance up the *rectum* for an hour or two, now and then, will not only remove the pain, but wholly subdue the disease: it is always advisable at the same time, to use cooling washes, or warm fomentations, as the state of the case may require.

There is a case on record, which occurred in this state, of a man who had suffered the most extreme torture from this disease, for several months, in spite of the usual remedies, applied under the direction of several respectable physicians. An old lady at length advised twisting some tow pretty firmly into a long plug, and after greasing it well, it was passed up the *rectum;* and to the astonishment of every one, it gave instant relief, and the patient soon recovered. In such cases the *sphincter* muscle becomes irritable, and contracts, its surface is sore, this gives an increased propensity to contract, and the muscle, by thus forcing its tender surface together, produces extreme pain, and the passage becomes so closed, that even a small glysterpipe can scarcely be introduced.

All persons subject to piles, should take a little sulphur now and then; should avoid sitting long at the *cloatick vault;* should occasionally use common glysters, particularly if they feel any itching or soreness about the seat, or are affected with ejections of a hard consistence. They should always, when undergoing fatigue, or when the disease is present, wear a firm smooth bandage, so as to keep up the part: this is easily done by a cushion of tow, confined by a strip of cotton cloth, made by doubling the cloth several times, and fastening this bandage to a handkerchief, or other bandage around the body. Lastly. A habit of this kind is always a sign of debility, and therefore every thing which may contribute to give tone and vigour, is to be practised: and this consists, principally, in *temperance* and *regularity,* of every kind.

## SECTION XVI.

### *Of a Fistula in Ano.*

This is a disagreeable and painful affection of the *rectum* and *perinæum,* and consists of an opening *alongside* of the *anus.* It, perhaps, most commonly arises from neglected piles, which are suffered to run on till the part suppurates, and a cavity, or an opening is formed: into this the feces is forced, and if there is no opening through the *perinæum,* new suppurations occur, and after much suffering, an opening is formed, which mostly becomes *callous* in its sides, and will not heal. This disease seldom, perhaps never, heals without a surgical operation, but it is one attended with little or no danger, in the hands of a skilful surgeon. The best advice is necessary in these cases, and the disease is mentioned here more with a view of admonishing people never to neglect piles, and if habitually troubled with this disease, they must guard against costiveness, by the frequent use of glysters.

But although piles are probably often the cause of fistulous sores, I strongly suspect these fistulous sinuses arise from an affection which I believe has not been no-

ticed by any author, except Denman, who treats of it under the name of the *ball stool;* this affection is not infrequent in some of our domestick animals. It proceeds from hardened feces happening to lodge firmly in the *rectum,* and remaining there, the natural efforts of the intestines, &c. force on the feces, a small opening is forced, and through this the thiner part of the feces is strained, while the more solid part continues to accumulate till much irritation arises; first from the distention, and secondly the feces acquire such an increase of acrimony, as to unduly stimulate the parts.

When this disease is somewhat advanced, it will sometimes require manual assistance, with a proper instrument; but in most cases it may be prevented, and to those disposed to piles, this is a matter of much importance. Therefore, in all cases where persons have to sit long at the *cloatick vault,* where there is itching, heat, obstinate costiveness, although there may be small loose stools, it behooves all such to use frequent injections. In every state of the body, persons of a costive habit should use frequent glysters; but in those troubled with piles, they are especially necessary; these, with every other attention to cleanliness, will render even those labouring under *fistula,* tolerably comfortable; but in all such cases, if a surgeon of judgment can be had, an operation should be submitted to; as an early operation will seldom fail to remove the disease, and never is attended with danger in the hands of a surgeon of good judgment.

## SECTION XVII.

### *Of the Land Scurvy.*

Scurvy is sometimes found in garrisons, with all the horrible train of symptoms which attend this disease at sea. This kind of scurvy proceeds from the same causes, and requires the same treatment as that to which seamen are liable. There is another disease often met with, in children and others, in country families, principally in the winter; and seems to arise from the use of

too much salted meat. But owing to such persons having free access to pure air, partaking of exercise freely, and being reasonably clean; and also to their taking a good deal of vegetable food, the disease is generally very mild, and seems to be local. If it extends beyond the mouth, it probably, under the above circumstances, never goes beyond a slight affection of the stomach. The symptoms are spongy gums, which bleed on being touched with a finger or any hard body; the breath becomes offensive. It is probable that cold has a share in the production of this complaint.

We should dress the patient warm, but let them partake freely of the fresh air and proper exercise; give more fresh meat and vegetables, and less salted meat. Let them use cremor tartar freely, in any way it can be most easily taken; and if the cure is obstinate, give a small dose of ipecacuanha every third evening, till two or three doses are given. If these articles should not purge the patient moderately, give a little senna tea.

Another disease of the mouth is sometimes met with, which is supposed be of a scorbutick nature. Its symptoms are spongy gums, which are apt to bleed; loose teeth; a fetid breath. It progresses till the teeth sometimes are all removed. Whether we should class this as a variety of scurvy or scrofula, I am at a loss to say; but, it is known to be attended with caries of the spongy part of the jaw-bones, in which the teeth are set, called the *alveolar processes*. I know of no remedy for this disease which can be applied without surgical skill, and therefore, I only wish to observe that cleanliness and the frequent use of charcoal, as a dentrifice, are all I can recommend.

## SECTION XVIII.

### *Of Corns.*

I have observed in a preceding part of this work, when speaking of the anatomy of the skin, that corns seem to arise from a union of the scarf with the true skin; this seems to be unquestionable, since cases are met with

where nerves and blood-vessels are found throughout their substance. It follows from this, as well as experience, that, to avoid, or remove this disease, we must remove all severe pressure from the part. There are cases, however, where, after such union of parts, the disease reaches through the muscles to the periosteum. The best remedy is bathing the part in warm water, and paring down the excrescence so far as it is devoid of feeling. The part may then be covered with a gum plaster, on very soft leather; or the expressed juice of garlick may be applied, and a little soft cotton laid over the toe, or other part affected.

## OF CASUALTIES.

### SECTION I.

UNDER this head, I shall treat of accidents of every description to which we are generally liable, whether belonging to cases of surgery or not; a distinction into cases, such as require the physician, and those which require the surgeon, can be of no use in a work of the nature of this, I proceed to speak of dislocations.

### SUBSECTION 1.

#### *Of Dislocations in General.*

When the articulation or connexion of the bones is broken up at the joint, it is called a *dislocation*, or *luxation*, and in common language, it is said to be out of joint. But, little can be done by persons unacquainted with the structure of the parts, and in many cases, a certain practical dexterity, will alone enable us to reduce or replace a *luxated* bone. Besides, *luxations* are sometimes accompanied with compound fractures near the joint, which renders these cases still more difficult.

*Luxations* are sometimes incomplete, and at other times so sufficient a laceration of the *ligaments* has occurred, as to render it an easy matter to reduce, and therefore, in all cases where the practitioner is not to be had speedily; it would be advisable to endeavour to relieve the sufferer, as speedily as possible. The most usual dislocations are those of the jaw, the shoulder and wrist. Other *luxations* occur; but I am well persuaded, no benefit will arise from unskilful attempts to reduce them, unless they are evidently incomplete; and much mischief may easily be done by increasing the irritation and swelling, which always follows, and is aggravated by every unsuccessful effort at reduction: *luxation* of the neck is perhaps an exception and will be described.

SUBSECTION 2.

## *Of Dislocation of the Jaw.*

Some persons have the under jaw so loosely connected, that it is thrown out frequently from gaping, &c. this accident also occurs from violence, as blows, falls, &c. To reduce it, place your thumbs firmly against the inside of the jaw, and your fingers on the outside; taking a firm grasp, you are to pull the under jaw pretty forcibly directly outward, it will generally follow a little way, pretty easily; at the precise moment it seems to halt, you are to press downward, applying the force as far back upon the jaw as possible, and while pressing downward, you are to force the jaw to that side from which it has receded. These motions are difficult to express, but by a few repetitions we will find that we can impress a kind of three-fold motion, outward from the head, downward on the inner end of the jaw, making a *fulcrum* of your thumbs and fingers, and sideways by pressure in that direction; and all these different directions of force, may be impressed almost simultaneously, or in such quick succession that they seem to operate together. It will always be necessary to secure the thumbs,

by lapping a handkerchief or a piece of sheep skin, around them.

A luxation on both sides, is known by the chin being pushed forward, and downward, while the mouth is wide open. When but one side is *luxated*, the jaw is downward and sideways, in this case, we are only to change the direction of the force, putting it principally on the side affected. The patient must be careful in gaping, or any considerable use of the jaw for some days, as the part is always left much weakened and liable to to be thrown out.

### SUBSECTION 3.

### *Of Dislocation of the Shoulder.*

In luxations of the shoulder, we are to pull the arm outward by taking hold of the wrist, while we set the foot against the arm pit, or rather below it, always placing the foot lengthwise upon the body, so as to get into the hollow, formed by the muscles before and behind when we raise the arm; the arm is now to be raised to a right angle with the body, and pulled with regular force for some time if necessary. If this does not succeed, we should increase the force, and carry the hand of the patient in various directions. If this does not succeed, let one person make these extensions, and after having elevated the arm, lower it gradually while another person pretty forcibly presses the arm upward, applying his force near the body, but never pressing on the portions of flesh which rise up on either side of the arm pit. The arm should be carried in a sling for a few days, and the part washed frequently with good vinegar, in which some sugar of lead is dissolved, and if much swelling occurs, it may be well to bleed the patient, and he should be abstemious in his diet.

SUBSECTION 4.

## *Of Dislocations of the Wrist.*

There is somewhat of an exception here to the general rule of extending the limbs, when *luxations* are to be reduced; in general, we will succeed by general extension, while our principal force is applied inwards; the palms of the hand are to be applied to both edges of the wrist, or the sides to which the thumb and little finger are attached, we are then to press powerfully inwards; or while we grasp the wrist with all the force of one hand, with the other we should carry the hand upwards, and downwards a few times.

But in general, most people make poor out at reducing *dislocations*, and if surgeons are to be had in reasonable time, any considerable efforts should not be made.—Some people are incredibly awkward in such matters, and others are too timid; and all this I speak from experience; and can with truth add further, I have more than once corrected the mistakes of men long in practice.

SUBSECTION 5.

## *Of a Dislocation of the Neck.*

This accident seldom, if ever, proceeds from any other cause than falls, such as falling from an eminence, from a running horse, &c. A complete dislocation of the *vertebræ* of the neck, can never occur without producing instant death, because the spinal marrow, or elongation of the brain, is always injured. But cases sometimes occur where the bones are slightly misplaced, and the patient may easily be relieved by almost any person.

If a person falls and lies stupified, his chin forced toward the breast, his face bloated and livid, and with the face turned in some measure toward one side, together with the loss of sense and motion, attempts should immediately be made to relieve him; and for that purpose, the patient should be turned on his back, the head is to be raised and firmly grasped, while the knees of the opera-

tor are to be placed against the shoulders of the patient. The head is now to be drawn, and the force directed in such a manner as to straighten the neck, which will be done by pulling principally upon the chin, and turning the head to that side from which it has moved. The force should be gradually augmented till it is considerable, if necessary. If we succeed in time, the patient resumes breathing, as soon as the parts are replaced; and he ought to be bled as soon as the system has recovered the shock in some measure; and take a little cooling physick, and refrain from much exercise for a day or two. In these cases, if we were to wait for a surgeon, the patient would expire in a few minutes, and therefore, we should promptly give assistance.

## SECTION II.

### *Of Strains.*

Considerable strains about the joints, are sometimes difficultly distinguished from *luxations*, or even fracture of the *condyles*, or ends of some of the bones, as the outer ankle bones, the *olecranon* of the elbow, the condyles of the arm bone, &c. As these cases often end in stiff joints; or remain very long weak, and painful, we should endeavour to get the best advice as early as possible. Where this is either impracticable, or the injury not of sufficient importance, the best application is good vinegar, applied either cold or warm, as the patient may prefer. If the inflammation runs very high, apply cold poultices of slippery elm, comphrey root, or milk and bread, with linseed. The patient should be bled, take a purge, drink cooling drinks, with cremor tartar; reduce the diet, and always rest the injured part, and keep it elevated, particularly, if in the lower extremities or hand. After the inflammation and pain has began sensibly to decline, apply equal parts of vinegar and whiskey; if much discolouration occurs, and the swelling seems obstinate, add camphor to this mixture; or use volatile liniment, camphorated spirits, and such like. I have seen well marked benefit from the application of the cold slippery elm poultices: the manner of preparing this will be found

in the list of preparations, but it is only suited to the inflammatory stage of strains. No advice is of more importance in these cases than recommending perfect rest of the injured part, and never neglect any considerable strain; a little attention in time would save many persons from being crippled.

## SECTION III.

### *Of Fractures, or Broken Bones.*

These call for the most skilful surgeon, and therefore ought never to be undertaken by others, unless absolute necessity render it unavoidable. I shall treat this subject with a few general observations and directions.

Has a compound fracture occurred, which is, where the flesh is wounded, and the bones either thrusted out, or liable to be easily forced through, much caution is to be observed in handling the patient. Many thoughtless people, the moment a person falls, no matter what injury they may have received, lift them hastily and rudely: such a procedure has often rendered fractures compound, that were but simple and oblique; the ends of the broken bone being very sharp, passes through and cuts, bruises, or lacerates the flesh and skin, and thereby does extensive mischief.

Fractures are not the only cases where persons are thus injured who have fallen; in all such cases we should carefully examine the patient, and content ourselves by first gently turning the patient on his back, carefully observing, even here, whether all the limbs follow, if we have any suspicions of fracture. Let the head be gently raised, and fan the patient with your hat, if necessary; and if means are at command, such remedies as are recommended for fainting or swooning, are to be applied.

When the patient revives, carefully examine his limbs, whether any fracture exists, before you attempt to raise him. If there is a fracture, the patient should remain where he is, till the easiest carriage can be obtained to remove him; and if cold or wet weather does not forbid, the surgeon should be taken to the spot; and the patient dressed before he is moved.

If no surgeon is to be had, the limb should be secured, if a leg, by applying a pillow, and outside of this, a strong splint on either side; this should be tied with woollen strings, firmly, but not too tight. When the patient has been carried to a suitable place, the limb is to be washed with vinegar; but if there be deep holes, as mostly happens in compound fractures, we should carefully stop them with lint, and prevent the vinegar from getting in, otherwise it may do much mischief.

We are now to take a pillow, spread on it, first, strips of strong muslin or fine flannel, about two inches wide, or rather less, and long enough to go round the limb after the splints are applied; these strips are to be spread so as to lap over each other nearly one half, and from one end of the limb to the other; that is, in the leg, we should carry them from the foot to the top of the knee joint; and in the thigh, from the knee to the groin, and if the fracture be oblique, we should carry the splints, &c. to the foot. On these, we are to lay two strong splints of shingle, or thin board, one for the inner, and one for the outside, and a flexible one in the middle, made of green wood, to lay immediately under the limb; these splints are to be the length of the limb, or as long as the layer of strips, and well lapped with soft tow; on these again we are to spread a clean soft piece of old muslin, or linen, large enough to lap up the whole limb. The pillow thus furnished is to be laid under by one person, while a second gently raises the limb; the lapping cloth is now to be smoothly applied; on this, the splints; all spaces between the splints and limb, are now to be filled with tow or cotton, and while they are held in place by one person, another begins at that end of the limb where the last strip was laid, and laps them over one by one, and when the whole are evenly applied, a few pins must be put in where they overlap, to prevent their opening. The whole is now to be wet with vinegar, and kept wet: these dressings should be changed once in two, four, or six days, accordingly as the weather is warm, or the skin open. The patient may lie on the back, or either side, provided the limb is carefully adjusted to the position of the body.

In fractures of the arm, we are to proceed nearly in the same manner; but unless the fracture be very near the joint, we may put it into a sling, taking care in all fractures of the forearm, or about the elbow joint, to secure the fingers from all motion, by carrying the splints and bandages out over them.

In severe fractures it will always be necessary to bleed once or twice; take a little cooling physick, and live abstemiously, except there be considerable debility of habit, or in patients accustomed to high living. But even such persons will be benefited by a reduction of their diet, taking care not to continue it so long as would be necessary for those of better constitutions and habits. In depraved habits, as soon as the inflammatory symptoms begin to subside, which will generally be from five to seven or eight days, the bark and port wine should be given with some freedom. If mortification threatens, which seldom, if ever, occurs in good habits, without mismanagement, but is always to be dreaded in depraved habits; and more especially where there has been considerable lacerations, we are to examine the limb every day, particularly if there be much fever, or pain and heat in the limb. If the part weeps out thin bloody matter, feels flabby about the edges, has much ill, or dark-looking flesh, and more especially if the limb begins to blister, exhibiting small blisters for some distance around, we should apply a blistering plaster, reaching all round the limb, and a good distance above and below the sore, having a hole the size of the sore; and over this part we are to lay the carrot poultice; and after the blister is removed, we should extend the poultice over the limb, as far as the blistering plaster has acted, or as far as those of the gangrene extend. At the same time the bark must be taken, with elixir vitriol, snakeroot tea, or vinegar, &c. as the case may be supposed more or less inflammatory.

And it may be remembered, that the bark will avail nothing in mortification, unless it be taken largely, as two to four ounces in twenty-four hours. Let it also be remembered, that these instructions are given for cases of absolute necessity, and that fractures always call for the utmost skill and attention, and there are even but few practition-

ers, who are really competent to manage them: how much less then are we to trust these cases to the ignorant in those matters.

In all places, officious persons are found, who are not only willing, but anxious to be employed in such matters; such conduct is sometimes highly reprehensible, and never justifiable unless necessity requires it, when it becomes a duty, and is sometimes attended with success, as I have seen. But I am compelled to observe, that in general, I have found those most officious in these matters, least calculated to manage them, and woful mischief often follows. Nay, more, I have seen ignorance itself endeavouring to direct the skilful surgeon, who with all tenderness was applying the proper means, so that upon the whole, I think the best advice I can give in cases of this kind, is, for those who are anxious or willing to act, simply this: select the best horse you have, or can get, and go with all speed for a skilful practitioner, and you will seldom do any mischief, barring accidents which may befall the inconsiderate rider.

## SECTION IV.

## *Of Wounds.*

### SUBSECTION 1.

### *Of Cases which heal by the first Intention.*

From the earliest ages of mankind, mistaken views have prevailed, respecting the healing powers of many articles. Every nation, surgeon, or old woman, possesses some wonderful healing *nostrum*, and from the variety of discordant things employed, we have well grounded assurance, that some of those supposed remedies are inert, some of them slightly unfriendly, others highly injurious. It seems as if the human mind was ever more subject to embrace, and perpetuate errour, than to discover truth, or correct views of subjects, until corrected by *long suffering*. I am led to these reflections from the unaccountable circumstance, that from time immemorial mankind have

looked up to the natural operations of the body, for the cure of their internal, or hidden diseases, while in those obvious to our senses, because superficially situated, they attribute little or nothing to the natural healing powers.

And yet, the united judgment of many men of experience and discernment, has long since discovered, that the reverse is much nearer the truth; that is, while the natural powers are seldom to be trusted in internal diseases, in wounds or superficial diseases, these natural powers are alone to be depended on.

It may not be amiss to state a few positions in favour of the opinion, that we are to expect more from the natural operations in external, than in the internal diseases, with which mankind are afflicted. In the present state of society, all our diseases are in great measure artificial, or perhaps more correctly speaking, they are the offspring of vicious, or improper habits, and as they are brought on us by warring with, or trampling on the natural healthy operations, we cannot even hope that like the licking cur, nature will kiss the hand of the assassin, or unthinking persecutor. He who is an enemy to himself, must be an enemy to the *anima medica;* and while experience proves beyond a doubt that nature is punctilious, yet kind to those who tread with becoming fidelity, and pleasantry in her sober but delicious paths, the same experience teaches us, that she will meet her enemy face to face, or hand to hand, and while she whips the culprit with his own weapon, with her right hand she points to the grave, and with weeping eyes, the left quivers on the beam, unwilling to give the preponderating stroke, till heart broken with anguish and despair, with closed eyes the tremulous stroke is given, and disease or death mounts the scale. But she is not inexorable, but often relenting she lends her aid, in banishing disease from the body; not often, however, till she has obtained promises of amendment, from the sufferer.

I have elsewhere endeavoured to prove that nature either cannot, or will not cure our diseases, I therefore proceed to state some opposite positions, why we may reasonably look up to nature for aid in our superficial dis-

eases or wounds. In all situations and conditions of life, mankind are liable to casualties, and therefore, it has been kindly and wisely provided, that the natural powers shall restore in a reasonable degree, the various breaches made on our bodies; and although the surgeon must often aid by taking up bleeding arteries, removing unsound bone, or mangled limbs, yet, the healing process is wholly dependant on nature. If we find these healing powers, slow at times, at others we are equally astonished at the vast and important repairs, which she accomplishes in a short time; and it will often be found, that the most tardy cures are owing to disease, lurking or manifest within.

Upon the whole, I am supported by innumerable facts, and the concurring experience of many discerning men, that in disease we are ever to watch nature carefully, and never trust wholly to her operations; while in wounds or external *læsions*, we can do nothing more than defend the parts by suitable warmth or moisture, and by proper means, guard against irritation, by suitable bandages, or dressings; but to dream of adding one particle towards the restoration, by outward applications, is truly preposterous.

But although nature may emphatically be styled the physician in these cases, we can promote her intentions by suitable means, founded on experience, and on science: to point out these indications and means, shall be the sequel of this section.

Nature has two modes of healing wounds, first by an immediate union of vessel to vessel, fibre to fibre, or particle to particle, this is called healing by the *first intention*. The second mode she employs in more violent injuries, and here she accomplishes her purpose, by suppuration or secreting a healthy matter or pus, designed to defend and support the arteries, and nerves, in their architectural functions. These modes being opposite in their nature, it follows that we are to vary our applications, or we may materially thwart her designs. In judging of the probability of a wound's healing by the first intention, we are to bear in mind, that superficial clean cuts, or those which run lengthwise on the limb, or those which merely split

the muscular fibres, those which have not been exposed too long to the air, and accompanied with the circumstance of a healthy body, are most likely to heal by the first intention. And in all these cases, if we are well satisfied nothing extraneous lies within, we ought not even to wet the part; all applications of spirits, tinctures, balsams, or washes, are at least unnecessary, and often highly injurious: the best method is simply to bring the part into contact, first removing clotted blood with a clean finger, or by means of a small stick lapped with soft leather; then with adhesive strips or sticking plaster of sufficient length, secure the edges of the wound well together, and over this lay a soft compress, and secure this by means of a roller passed several times round the limb.

If things go on well, in three or four days the dressings may be removed, and it will now be advisable to wash the part clean and apply a little mild ointment, and renew the roller. But if the pain increase to violence, and particularly if the wound is considerable, or the habit bad, we may expect suppuration, or even mortification may occur, and, therefore, the part should be undone, and if necessary, treat the case as detailed in this section for wounds, which do not heal by the first intention.

We are also to remark, that in most cases of *incised wounds* or cuts, though across the muscles, much benefit will arise from a few stitches in the part to keep them in contact, and they will mostly, at least in good habits, heal in great part by the first intention; and sometimes entirely. But we are to remember that such wounds must have ceased to bleed furiously, that all extraneous bodies are to be removed, in the most tender manner, before we proceed to sew up; in doing which we must have a crooked needle, that we may reach to the bottom of the wound, and large enough to carry a strong flaxen thread; the needle should be entered a considerable distance from the edge, otherwise the threads will soon cut out, and unless we carry the needle to the bottom there will be a cavity left, where collections of matter will form, and which, if considerable, must ever find its way out through the

wound, or it may descend among the muscles, and produce serious consequences.

### SUBSECTION 2.

### *Of Cases which should suppurate.*

In cases where there is considerable lacerations, or loss of substance, we must pursue such measures as will promote suppuration, or in other words we should keep the part clean, warm and moist, that nature may not be hindered by the irritation, which would arise from uncleanness, extraneous bodies, or the contact of cool air in accomplishing her secretion of bland pus, to cover the tender parts, which are to be formed by the arteries and nerves. To answer these *intentions*, we should first cover such wounds with lint, spread with the mildest ointment, and as soon as any considerable pain or soreness of the part supervene, we should apply warm poultices of bread and milk, or common Indian mush; and unless there be considerable cavities, we may apply the poultice immediately to the sore; but if there are cavities running in various directions, we are to put in a little very soft clean lint, spread with mild ointment; and the poultice should be greased with a little nice oil, or fresh lard. At every renewal of the poultice, which should be three times in twenty-four hours, the part should be well washed with milk and water, warmed a little, and in three or four days we are to use mild soapsuds for this purpose; remembering always to remove all old lint or pieces of poultice, which may adhere to the sore, but in doing this, we are by no means to use any violence. If things progress well, we should continue this course from ten to fifteen days, according to circumstances, and then the common basilicon, mixed with a little spirit turpentine, should be applied twice a day; never forgetting that in all sores it is of the utmost importance to keep not only the sore clean, but the skin around, or rather the whole limb.

In addition to these external remedies, we are to pay the most scrupulous attention to the general system, in

all considerable wounds. From the commencement, the patient should be put on a very low diet, refraining, if of good habit of body, from spirits, animal food, or even broth, or much fats. The mildest drinks of milk and water, slippery elm, toast water, apple, or barley, water, and such like. The bowels must be kept open by using cremor tartar, mild glysters, or mild physick, if necessary, and from the commencement, the use of full anodynes at night should be advised: and if fever supervene, we must bleed, and repeat, according to the violence or obstinacy of the case. The above means carefully applied, will generally answer our wishes. But unpleasant or dangerous consequences sometimes supervene, notwithstanding all our efforts. These are, first, mortification; if the sore does not matter well, but discharges a thin or brownish fluid, with considerable heat in the part, looks foul and ill-coloured, we are to pay close attention, lest mortification progress before we are aware of it. If to the above appearances are added blisters around the sore, with considerable chills and flashes of heat, gangrene or *incipient* mortification is at hand, and the treatment must be changed: the part is still to be fomented well with mild soapsuds, and the carrot poultice applied, and renewed every two or three hours: for the treatment in these cases, see the article mortification.

If locked jaw or tetanus arise from wounds, see the article on tetanus.

## SUBSECTION 3.

### *Of Wounds which bleed, or are like to bleed, dangerously.*

It ought to be borne in mind, by every man, that, in many cases of wounds, life may be lost in a few minutes for want of stopping bleeding from a wounded artery. By early attention to wounds of the limbs, which bleed furiously, a companion, or the patient himself, may often save life, till a surgeon is called to secure the bleeding vessel. For this purpose, in all wounds which bleed dangerously, a ligature or strong string should be

passed around the limb, and always between the wound and the body; this is to be tied so as to leave room for running a stick into the loop, and then, by turning round the stick, you are to twist the ligature so tight as to stop the bleeding. For want of a stick, a strong man can sometimes draw the knot sufficiently tight; or after tying the string tight, it may be rendered still more tight by stuffing in a waistcoat, or the like. A handkerchief will answer for the ligature, and where this is not at hand, tear a strong strip from your shirt. Many a life has been lost for want of attention to such means.

In deep wounds, as gunshot, from the sword, or other instruments which enter the flesh any considerable distance, another consequence is to be apprehended still more alarming than those enumerated above: if the injury has happened near to, or perhaps slightly injured a large artery, as those of the arm or leg and thigh, there always is danger of the artery being opened, by the *slough* which has to come away, and the period at which this will happen, is very uncertain; it may occur at any time from the accident, to the third week; in general, the term of two or three weeks is most dangerous.

Upon the whole, it plainly appears that much skill and prudence is necessary in all considerable wounds, and therefore experienced practitioners ought alone to be trusted. It may be remarked here, that mortification, as well as *traumatick tetanus*, mostly proceeds from too high inflammation; and, therefore, in mortification from wounds in good habits, we are by no means to stimulate by wine, bark, or any other articles; the *indications* here, are to lessen action by a more frequent repetition of the fomentations and poultices, and that of slippery elm is particularly proper; by bleeding from the arm, applying leeches, or scarifications and cups about the part; and if gangrene occurs, blisters should be applied entirely around the limb, above and below the wound, but leaving the lacerated parts open for the application of the carrot poultice. But if the habit be bad, or if a sickly season exists and diseases partake of a low grade, we must be extremely cautious in the use of evacuations,

and if kindly suppuration does not occur by the fourth or fifth day, use the carrot poultice; give the bark with elixir vitriol, or with wine, snakeroot tea, or milk, according to circumstances; and give the patient for diet, a little rich panada, broth, or light animal food, coffee, and such like: take especial care to give but sparingly of any kind of food for a few days. For more particular instructions, see mortification.

SUBSECTION 4.

## *Of Bruises.*

Under this head some very formidable accidents may be placed, occasioned by falls, blows, or from a person being run over by a carriage, a horse, &c. In all considerable bruises we are to expect considerable fever, and unless it is subdued, suppuration or mortification may supervene: severe pain, throbbing or beating in the part, with general chills and heats, are always unfavourable.

To bruises on the limbs we should apply slippery elm bark, moistened with good vinegar, or several folds of muslin or linen wet with vinegar, in which a little sal. ammoniack or sugar lead is dissolved; these are to be renewed every two or three hours; the patient must be bled, and the operation repeated daily till the fever and chills abate; cooling purges, as rochelle salts, senna and cremor tartar, or a free use of cremor tartar water. The lowest possible diet, and mild cooling drinks. As soon as the inflammatory symptoms abate considerably, or in cases where these do not occur by the fifth, seventh, or tenth day, according to circumstances, we must change the outward applications: whiskey and vinegar, volatile liniment, camphorated spirits, or opodeldock, or some of the patent articles may be applied, as British oil, Columbian oil, &c.; but it should be made an invariable rule to wash those articles clean off with soapsuds, once a day. These directions apply to persons in good habits and health. When these accidents occur in bad habits, or very delicate habits, or in sickly seasons, we are to

deplete with great caution, and often not at all; we are to apply stimulants outwardly from the commencement, as poultices containing camphor, or with British, seneka, or other stimulant oils, spread over them: repeat these twice a day, and wash the skin clean once a day with soap; the bowels are to be kept open, but purging is to be avoided; laudanum should be taken every evening. The diet must be light, but reasonably nourishing, and a little good wine, or weak punch may be taken. Snakeroot tea, a little bark, or elixir vitriol, ought to be used.

In considerable bruises of the abdomen, or chest, we are generally to bleed with great freedom; open the bowels with mild injections, and if vomiting occurs, give opiates with freedom: the utmost quietness and ease is necessary, and thin weak diet is only to be allowed, with the mildest cooling drinks.

In good habits, the less nourishment is taken the better for the first five or six days; and, I have often seen marked advantages from living on a little toasted bread soaked in water, with cooling drinks. I know of no cases which so invariably call for the use of the lancet: in strong athletick persons, we must bleed largely and freely, and even in the most delicate, a few small bleedings are indispensable; but we must be cautious in intemperate, or depraved habits, not to continue to bleed too long. Opiates, and open bowels are never to be overlooked; but these cases often call for the greatest skill, and therefore competent practitioners are alone to be trusted.

Bruises, or blows on the head, attended with stupor or violent pain, generally require bleeding, and also the free use of stimulant, or purging glysters, with low diet and cooling drinks; mild purges are sometimes necessary.

But if a person be suddenly knocked down, and lies stunned or insensible, we are by no means hastily to draw blood, a too frequent custom; but we ought, merely, to turn the patient on his back, and raise the head a little; a free circulation of air is necessary; a little water, or wine, or toddy, may be given; and if obtainable, a glyster

must be administered. A practitioner should be called in, but if none is at hand, in a reasonable time, we should venture to bleed as soon as the pulse is found active: if the pulse do not rise, it will always be safest to omit bleeding, and give repeated glysters, and a little wine and water, or five or ten drops of spirits of hartshorn in water, may be given.

Under these circumstances the skilful surgeon will often find it expedient to bleed, but I am confident I give a well grounded and correct opinion, when I say vast mischief is done in those, and many other cases, by the precipitate use of the lancet, by unskilful persons. Let no one infer from these remarks, that I am opposed to bleeding in these cases, we generally find it absolutely necessary, and without it, perhaps, few persons would recover from very considerable injuries done within the head. But it was long ago remarked by Solomon, that there is a time for every thing under the sun; and to bleed too soon, before the system has recovered the shock, is generally bleeding out of time, and whatever is not well timed, is wrongly applied. Therefore, never be too much in a hurry about bleeding, a few hours, or even a day or two in some cases, are necessary for the reaction of the system to bring the body to the bleeding point.

Lastly, if no skilful person is to be had, and the pulse does not rise in a reasonable time, we must bleed, or reaction may never occur, and the patient might be lost for want of unlocking the blood vessels.

## SECTION V.

### *Of Ruptures, or Herniæ.*

Ruptures, or a protrusion of the intestines, *omentum, peritoneum*, &c. occur in various parts of the abdomen, and pelvis: these ruptures are called *herniæ*, and occur most frequently in the groin, thigh, navel, and sometimes through the layers of the abdominal muscles, in various parts. They are sometimes *congenital;* some occur, without any known cause, at every period of life:

and often they proceed from violence, done by straining, lifting, &c. They are known to exist in many persons for long periods without any particular injury, but all such persons are invalids, and liable to suffer much; besides running extreme hazard from trifling causes, as slight injuries done the part; from the parts taking on inflammation and swelling, by which the gut, or other parts protruded, becomes strangulated, that is, the opening closes, and pinches or confines so as to check the circulation; and this soon leads to mortification.

In young persons, these openings often heal, if the patient wears for a sufficient length of time a TRUSS, well adapted to the part; and in those more advanced in life, trusses ought always to be worn, for, besides the greater security obtained by keeping the parts within, there is much less risk of its being violently thrust out from lifting, &c.

These trusses are always to be had by applying at the apothecaries,* or by consulting country physicians. Persons affected with ruptures should carefully guard against costiveness, and while they pursue active exercise, in order to maintain a due strength of muscular fibre, they are most scrupulously to avoid straining, or heavy lifts.

If a rupture at the groin, or elsewhere, becomes strangulated, as manifested by extreme pain, colick, costiveness, sickness and vomiting, all possible speed is to be made in returning the part into the abdomen. This is first to be attempted by the person lying down and endeavouring to push up the part; if he does not succeed by reasonable efforts, cold water should be poured upon the part; mild injections should be used to empty the bowels; the attempts at reduction are now to be renewed; if these do not succeed, we should, in good habits, bleed till some symptoms of fainting occur, when the attempts are to be repeated: all this failing, injections of tobacco, or the smoke of it should be thrown up the bowels. These remedies are to be used without loss of

* A truss has lately been imported from England, of a superiour construction to any I have seen. They are known by the name of Wright's patent truss.

time, and if ineffectual, a surgeon is to be called in, who, by a timely operation, can often save life; or who, by his superiour judgment, may think it safe to continue the means for reduction sometime longer.

In attempting reduction in general, if the patient is at years of maturity, he should reduce it himself: most persons are very heavy fingered, and awkward in handling such things, and may easily do dreadful mischief, by hastening mortification, which is always to be feared in these cases, and should induce us to be speedy in getting the best assistance.

Large quantities of warm water thrown up the intestines, is sometimes useful, and may always be tried before using the disagreeable remedy of tobacco smoke.

After the reduction, it will always be advisable to take an anodyne or two, to keep the bowels open with mild glysters, and avoid all solid food: these precautions, with reasonable rest, are of vast importance to those who have been severely affected with this dangerous kind of affliction.

## SECTION VI.

### *Of Burns, and Scalds.*

For slight burns or scalds, the immediate application of clean, soft carded cotton is a good application; or if this is not at hand, equal parts of turpentine and sweet oil, or weak brandy, should be applied, and for want of all these, slippery elm bark, simply wet with cold water, or scraped potato. But if the burn is deep, we should apply warm milk and water, till we can get spirit turpentine and sweet oil; or lime water and oil; or linseed oil, fresh and cold drawn, mixed with lime water. The patient should take a full dose of laudanum, and this is to be repeated till chilness abates, which always attends large burns.

If, on examination at a second or third dressing, we discover that the true skin is destroyed, and will of course *slough* off, we should apply a mild poultice of bread and milk, and repeat them every three hours till the parts sup-

purate freely, and pain and fever abate: when these appearances of suppuration are well marked, we may remove the poultice, and dress the sore with basilicon, containing some spirit of turpentine; if this should cause any pain, which is seldom the case, it must be removed, and Turner's cerate, or other mild ointments applied. In cases tolerably severe, we will in general succeed well by using the sweet oil and spirit turpentine, three times a day, and covering the sore in the intervals with soft lint, or old muslin spread with the basilicon and spirit of turpentine; or by simply applying, very frequently, linseed oil and lime water; but in all cases it will be well to wash the parts well with milk and water for a few days, and afterwards with mild soapsuds once a day.

In bad habits, or where cases have been improperly treated, this kind of inflammation, like all others, is liable to terminate in mortification: if the sore continues painful and ill looking, and especially if blisters rise after the second or third day, we are to be cautious how we proceed; and, for instruction in such cases, see the article on mortification. In all extensive burns we are carefully to watch the health of the patient; they should live low, drink nothing but mild cooling drinks; take a cooling purge now and then; and if much fever supervene, bleeding, repeated according to the severity or continuance of the fever, will be necessary.

But where there is reason to apprehend mortification from a bad habit of body, a more generous diet will be advisable, consisting in part of broth, light animal food; and a little good wine or punch may be allowed; and the bark and elixir vitriol, &c. must be taken; but for instructions on this form or grade of inflammation, from whatever cause, see the article on mortification.

Since the publication of the first edition of this work, a very alarming accident occurred in my family. A child of two years fell backwards into a tub of water and clothes nearly boiling hot; the clothes prevented him from sinking deep, but the whole of his back, hips, &c. to the extent of nearly a foot, in every direction, was severely scalded, and of a most fiery red; his pain was extreme. I had seen many similar accidents, and, had no doubt but

the whole would blister and throw off the scarf skin; but, fortunately I had a bottle of spirits of turpentine in which some white wax was dissolved, this was applied freely in less perhaps than one minute: after bathing the part for some minutes with this, soft cotton was laid on, and secured with a handkerchief. The child slept in a few minutes, and enjoyed it for two hours; he then arose and made no complaint. The part was opened in a few hours; and to my great surprize the whole had terminated in a few small blisters. The same dressings were continued till next day, when the whole was thrown off. I have no doubt but if this case had been otherwise treated, or if there had been any delay in the application, the whole would have blistered; and as these accidents occur frequently, every family should always keep those articles ready.

## SECTION VII.

### *Of Frost Bites.*

In treating on these accidents, I shall first speak of the means necessary to secure against their occurrence, and then conclude with some instructions for those thus unfortunately situated.

Persons who are about to travel in severe cold weather, should never drink any considerable quantity of spirits, as is generally practised, for spirituous drink not only is very transient in its stimulant effects, but always leaves the system lowered in its excitement, when it has expended its force, and this is more particularly the case in intense cold, which in a peculiar manner, seems to destroy the stimulant powers of ardent spirit. Neither should they eat a full meal just before setting out; persons of observation must be aware, that chilness almost invariably succeeds a large meal, even of animal food. The first consideration is to provide suitable warm clothes, and particularly to guard the feet: it may be said every person is sufficiently aware of this, but I beg leave to observe, many persons are found thoughtless enough to

despise cold, and sometimes suffer either severe frost-bites, or other disorders, and even death.

In this country, people seldom suffer death from intense cold, unless intoxication prepares the system for this *cold*, but fatal stroke. It may be remembered, that much advantage may be gained by those who are about to travel on foot, by taking care not to encumber themselves with heavy great coats, or heavy clumsy shoes; mokasins, or cloth shoes soaled with a piece of an old hat, is vastly warmer than the thickest leather shoes; instead of one or more heavy long coats, which are often worn, it will always be better to put on two or three pair of pantaloons, as many shirts and waistcoats. Every person, perhaps, knows the fatal tendency of sleep, which presses on the benumbed traveller, but every one may not be aware of the irresistible power it has over the most manly spirit: instances are on record of persons remarkable for good sense, and accustomed to travelling, and cold, being so overcome that they were anxious to enjoy this fatal sleep, although well aware of its nature.

In addition to the things prescribed above, for dressing, I would recommend to such travellers always to let digestion progress half an hour, or a little more, before they venture on their journey, after taking a nourishing meal, and this is always necessary; some solid article of food should be taken along, as gingerbread, a little crust of bread and cold meat, or a little whole mustard seed may be taken now and then.

When any part of the body is frostbitten, hold the part a few minutes in cold water, this, or gently rubbing the part with snow is the only safe remedy: to go into a warm room without a careful application of this remedy, would be certain ruin, the part will invariably mortify, and if the frost has penetrated deep, fever and death may follow. The patient must keep from the fire until the pain ceases; if able he should walk about until relieved, if too much exhausted, he should be constantly rubbed with a cold wet hand, until the pain ceases. If the patient is languid, a little warm tea, or a little panada, or broth, should be taken: should inflammation or ulceration fol-

low, the case must be treated as inflammation or ulcers, from other causes.

Should persons be found apparently dead from cold, I would advise, in preference to any other means, to select a *sunshiny* situation, as free from cold wind as may be, and there bury the body with the clothes on, with snow, and await the issue, or if attainable a little warm tea, or warm wine and water, should be given. If this is not attainable, carry the body carefully, that is, gently and without suffering any of the limbs to hang down, into a cold room, and there rub them gently with snow; or they may be dipped once or twice into cold spring water, and then lapped up in cold clothes, first a single cold sheet, then another, then a blanket, and thus leave the body.

It will be obvious, that the room must not be as low as a freezing temperature, but it must be quite cool; and in the application of clothes to the body, we are not to be in too much hurry; if a blanket is applied too soon it may have a bad effect. For the treatment of slight frost bites in the hands and feet, see the articles *kibes*, and *chilblains*.

## SECTION VIII.

### *Of the Disorder arising from drinking Cold Water, &c.*

It is to be remembered, that other cold liquids are equally dangerous, when taken under the following circumstances:

1. When the body is much heated.
2. The liquid very cold, and
3. When taken in large quantity, and it has been correctly observed, by Dr. Rush, that the danger is proportioned to the amount in combination, of all these circumstances.

I shall first give a few cautions for its avoidance, and then describe the symptoms of the disorder, and point out its cure. Before proceeding to these details, I think proper to admonish the reader, that if such dreadful and immediate consequences follow the rash drinking of cold

liquids, we cannot doubt for one moment, but that many bad consequences do follow such practices, and which are less known because less evident, but often more fatal, because more slow and hidden in their operations. And, therefore, while we rejoice with the amiable and illustrious Rush, that this disease is nearly banished from Philadelphia, by the humane and skilful attention of scientifick men, we should carefully remember that, by an improper use of cold liquids, too early in the day, or when too warm, from exercise, we may suffer seriously, and attribute it to some other cause. Among these, we are to reckon, cold punch, cold water, mineral water,* ice creams, &c. all these, when the body is too warm, produce extensive mischief: consumptions, *cholera morbus*, colick, fevers, palpitations, *dyspepsia*, gout of the stomach, and many other diseases proceed from the abuse of these articles.

PREVENTIVES: early rising which will enable you to get through your business, and allow a sufficient time to rest in the heat of the day; using mild bland food, and a reasonable quantity of good ripe fruit, will, in good measure, do away any ungovernable desire for these articles; and to pour them down without desire is servile, and base: if it is done from artificial taste, or with a view of amusing the palate, it is brutish; and after all, the brute in this respect is your superiour, for while they enjoy their regular appetites undiminished, the fickle palate of man, as if on purpose to befriend, soon loses all keen zest, and it is a fact, that the *epicure* enjoys of all other creatures upon earth, least pleasure from the taste: it often becomes a very curse, and while he racks every energy to procure new relations between his taste and aliment, each in its turn becomes offensive. A reasonable use of those cold articles is not particularly unfriendly, but we should ever bear in mind, the three circumstances which render them particularly dangerous, and which have been mentioned in this section. These are

* Of all these articles, water impregnated with fixed air, (carbonick acid,) is the safest, but, it may be misused, either by taking it too early in the day, too much of it, or too cold when the body is much heated.

a heated body, very cold articles, and lastly, taking them in considerable quantity.

In drinking cold water when we are much heated, we should rinse the mouth, or wash the hands or face; or simply holding a vessel in the hands, and taking a sip or two before we swallow much water, will obviate the danger; and it may be well to consider, that we often allay thirst better by small repeated drinks, than large draughts of cold water, which are never necessary, and are only indulged in by the hasty or inconsiderate.

If a person is found who has injured himself materially in this way, the following symptoms are said by Dr. Rush to follow, "in a few minutes after the patient has swallowed the water, he is affected by a dimness of sight; he staggers in attempting to walk, and unless supported falls to the ground; he breathes with difficulty; and a rattling is heard in his throat; his nostrils and cheeks expand, and contract in every act of respiration, his face appears suffused with blood, and of a livid colour; his extremities become cold, and his pulse imperceptible; and, unless relief be speedily obtained, the disease terminates in death, in four or five minutes."

"This description includes only the common cases of the effects of drinking a large quantity of cold water, when the body is *preternaturally* heated. More frequently, patients are seized with acute spasms in the breast or stomach. These spasms are so painful as to produce *syncope*, and even *asphyxia*. They are sometimes of the tonick, but more frequently of the clonick kind. In the intervals of the spasms, the patient appears to be perfectly well. The intervals between each spasm becomes longer or shorter, according as the disease tends to life or death."

And the doctor tells us he knows of no remedy for this disease but LIQUID LAUDANUM, given in doses of from a small tea spoonful to a small table spoonful, as the case may be more or less violent. For want of laudanum, a little raw whiskey should be given, and the region of the stomach bathed with the same, warmed. If disease follows, we are to treat it according to symptoms, but in general I would advise such patients, to live

on thin mild nourishing articles for a few days, avoiding full meals; and if headach, or pain, or a feverishness remain, they should be bled, or congestions of a dangerous nature may be formed. Or a few mild injections may be useful.

## SECTION IX.

### *Of Drowning, or Submersion.*

Persons have frequently been recovered after remaining a considerable time under water, and sometimes not till after long continued efforts, therefore, in all cases, we are to act promptly, tenderly, and perseveringly. I have chosen to give the means suggested by the late amiable and learned Dr. James Cocke, of Baltimore, for the recovery of drowned persons.

"1. Remove the body from the water as speedily as possible, to the most convenient place; let the clothes be taken off gently, and let the skin be dried by the application of soft towels or sponges. Place the body on a matrass or blanket, and cover it with a blanket. It is desirable it should be on the back. Having the apparatus prepared.

"2. Expand the lungs at the earliest practicable moment; this may be done by introducing a proper pipe into the *glottis;* if one is at hand; otherwise by putting the nozle of a common pair of bellows into the mouth or nostrils and working it, the air being prevented from returning by closing the mouth and nostrils, and from descending into the stomach, by pressure on the *thyroid cartilage* (or Adam's apple.) If neither the pipe and bellows, nor the bellows alone, can be procured on the instant, it will be advisable to have the lungs of the patient expanded by the breath of an assistant. If the inflation of the lungs cannot be effected by these means, *tracheotomy* must be resorted to. In either case, after the air has continued about a minute in the lungs, it is to be pressed out again, and the lungs are to be re-inflated, which alternated action is to be supported until signs of animation return.

"3. The temperature of the place, in which an attempt is to be made to restore the apparently dead from submersion, should never exceed summer heat. When the temperature of the air and water is about sixty degrees of Fahrenheit, no additional warmth need be applied; when the temperature of the air is below sixty, a very gradual augmentation of it may be allowed, until it has attained that point, beyond which it should not be increased by external means. The air used in artificial respiration, will, perhaps, furnish as much additional heat as ought to be applied, before there are obvious symptoms of returning animation.

"4. Permit no unnecessary persons about the body, or to remain in the apartment, which should be freely and fully ventilated.

"5. Let neither blood-letting, emeticks, agitation, nor the fumes of tobacco be resorted to.

"6. Electricity, if used at all, should be very cautiously exhibited, and never until the lungs have been frequently filled with air and emptied alternately for the space of three or four hours, except in cases in which the subjects have been long under water, then electricity may be used earlier in the process, as a desperate remedy.

"7. Stimulant applications to the senses must be ineffectual, until animation is in some measure restored, without which there can be no sensibility.

"8. The application of cordials to the stomach, and stimulating injections to the intestines, can only be useful after a passage for the blood, through the lungs, has been opened; they should not, therefore, be introduced before the lungs have been several times completely filled with air and emptied alternately, after which they may be serviceable; but nothing of greater bulk than four or five ounces of brandy or wine, or diluted *aqua ammoniæ*, or compound spirit of lavender, diluted, should ever be thrown into the stomach or intestines.

"9. Every degree of friction is to be carefully avoided, until the lungs have been several times expanded, and the heart has relieved itself of its distention; after which, friction should be unremittingly and sedulously made

four or five hours, or until the circulation is re-established. Frictions should only be made with the hand, lubricated by oil, or with a piece of soft flannel, and always from the ends of the extremities towards the body.

"10. Persevere."

It may be remarked of the above instructions that they differ in some measure from those usually given, or employed, for the recovery of drowned persons; but from what I have seen practised in those cases without system, or any well-marked design, often embracing things the most discordant, I am led to consider the foregoing directions of high importance: they are founded on scientifick views of the subject, and detail the means with a regularity which I have no doubt will often ensure success. I wish also to observe that the doctor gives more full explanations of his views in the Medical Recorder, from which this article was extracted, but which are too lengthy for insertion here. But as the whole of this was intended for the physician, who, it is always presumed, may make any small variation which may occasionally be necessary, I shall offer a few remarks.

1. No caution is of more importance than to be careful in handling the body; in carrying it, a small inclination of the head, or twist of the body, may prove fatal.

2. Let no authority, however respectable, induce you to use tobacco smoke.

3. If the patient revives in some measure, and is kept long in a languid horrible state of life, in which he seems to be struggling with death, and apparently can neither recover nor die, we should in some measure transgress the doctor's rule for rubbing. I have seen a most distressing case of this kind, where the patient was quickly relieved by brisk rubbing with a rough towel, till the skin was much inflamed: but it is to be remembered that this would only exhaust the little remaining life before the circulation is in good measure restored.

I have some little doubt about the propriety of rubbing only from the end of the extremities toward the body; I suspect the use of friction is not quite so mechanical as to merely act by pushing on the blood. Besides, this view of the subject supposes the heart to be

more capable of action than the veins; the reverse of this is nearer the truth; so that, by forcing on the blood before the heart is able to act, we may crowd the heart unduly, and thus prevent its action altogether. I imagine friction acts by its stimulus acting on the excitability, and thus renewing excitement, and therefore it is, perhaps, not material in what direction, we apply the strokes. But it must ever be remembered, that a reduced excitability is most easily destroyed by powerful stimuli, and therefore we are by no means to rub harshly, until the lungs and heart have in some measure resumed their action. Does this not explain the reason why electricity operated so fatally on the heart of drowned animals, in the experiments of Mr. Kite, as related by Dr. Cocke? And are we not warranted on this ground, never to apply electricity in force, or any other powerful stimulant, until the excitability shall have been in some measure restored?

4. Never let our efforts cease for many hours: persons have recovered after appearing lifeless for five or six hours.

5. Never over-stimulate by means of outward heat, before there is considerable life. It is a pleasing coincidence, that while I offer the best instructions in those cases, I bestow a small encomium upon departed worth; this friend of science and of the afflicted is no more; but let us imitate his good examples, and while we mourn his early exit from scenes of usefulness, which pointed to *fame*, let us christian-like believe he has secured the place of rest! and benignly smiles on those who walk in the paths of rectitude and of honour.

## SECTION X.—SUBSECTION 1.

### *Of Strangulation from Hanging, and other Causes.*

Persons are sometimes found, who in a fit of despair hang themselves, or this may be wickedly done by others. We also meet with children who are overlaid by their mothers or nurses, which may arise either from carelessness or some disease of the nurses, such

as fits. It is obvious no woman who is liable to convulsions of any kind, should ever take an infant into bed with her.

Death in all these cases is occasioned by the deprivation of air, or its oxygen (unless the spinal marrow has been injured by a dislocation of the neck) and, therefore, I shall point out the means suited to such cases, without distinguishing them by the causes from which they originate.

A first, and principal means, in all these cases, is the introduction of air into the lungs, as speedily as possible, by means of an apparatus for the purpose, or by introducing air by a common bellows, taking care to press on the prominence on the throat called *Adam's apple*, reasonably, so as to prevent the air going into the stomach, and also to close the mouth, and the other nostril; the air should be left, nearly a minute, and then pressed out again, and thus alternately inflate and gently press out the air, so as in some measure, to imitate the process of breathing. The body is to be briskly but gently rubbed, without intermission, while we entertain any hope.

If we have a well grounded belief that the patient has not been strangled for a length of time, the application of cold water, by throwing it over the naked body, is a remedy which I beg leave to recommend, in preference to heating the body. I am supported in my opinion respecting the use of cold water, by the fact of its usefulness in suspended animation from lightning, and also in great depression from intoxication, as well as in cases of dangerous fainting from too violent exercise, which sometimes occurs, in those unaccustomed to labour. I suppose it operates by rousing the lungs into action, and therefore in all cases of sudden depression or suspension of life, I think it one of the principal remedies, and very often the only one necessary, where the excitability or sensibility is not too much exhausted.

If we examine into the means by which animal heat is produced, we are sensibly met with the fact, that in what ever way it is elicited throughout the system, the process of respiration alone, can maintain it: and hence,

it follows, that where life is suspended by a sudden deprivation of air, the principal indication is to restore breathing; that the sudden application of cold water excites the muscles of respiration into powerful action, is manifest from the deep inspirations which we are forced to make, on going into the cold bath, &c. If this opinion be correct, it applies extensively to depressed life, from the use of *spirits, opium, narcotick poisons, overheating, or violent exercise;* and from inhaling *deleterious gasses,* from *lightning, submersion, strangulation,* and, perhaps, all other causes which require a sudden restoration of breathing; and we derive encouragement from the fact, that in all cases, where it has been tried, it has answered our wishes, in a greater degree than any other means, usually resorted to.

Mankind seem universally to have adopted opinions in good measure opposite to the foregoing, and seem to found all their hopes on infusing heat, and thus restoring life; and apparently from the simple belief that life is ever accompanied with heat, and heat being reduced in those cases, they seem to think, that to apply heat, must necessarily tend to restore animation. But I hope to prove by a few positions, that this opinion, or this practice, on whatever views it may be predicated, is unphilosophical, unchymical, and ill founded.

1. Because heat is not a necessary condition of animal life, many cold blooded animals, as fishes, possess great vigour; if it be objected that this is irrelevant. I answer, it is no more so than the supposition, that extraneous heat shall have a friendly influence on depressed life.

2. In most cases of sudden depression, which alone are under consideration, we have no evidence of the expenditure of heat; on the contrary, all the blood, nervous matter, and heat, are within, and the *defection* is occasioned by chymical or other operations, by which the heat becomes latent or hidden, and there is no more affinity between latent heat, and that which is sensible and free, than there is between any other bodies in nature. The exceptions to these remarks are cases where the body has laid long in cold water, or exposed to a low temperature; here *free calorick* or heat, in obeying its

general laws, will pass from the warm to the colder body, and, by congealing the fluids, will add to the danger of the case. But we are by no means to infer from this, that a hasty application of external heat, which has no peculiar animal principle combined with it, is likely to be useful in recoveriug life; for, simply to dissolve those congelations is one thing, to put them into motion is another, and one which can only be affected by the action of the lungs, brain, heart, and blood-vessels; the *main spring* by which these are put into, and maintained in, action, is *oxygen* derived from the atmosphere in breathing.

3. If it be argued that by dissolving or rarefying the fluids, by external heat, we prepare them to be acted on by the lungs, &c.; I answer, that until the lungs and brain act, these cannot move: if the principal vital organs act, heat is inhaled and distributed throughout the system, and elicited with a force and *quantum* which is especially suited to every part.

4. And further, I think it obvious beyond denial, that the heart and brain are oppressed with a weight of blood, and to dissolve and crowd on the fluids, remaining in the vessels, before the lungs are expanded to empty the heart, and brain of their surcharge, is only to increase the disorder, by crowding them still more. Besides, the fluids in a temperature reasonably low, will not undergo decomposition so soon as in a higher temperature.

5. The circumstances that a child will suffocate speedily in the warm bosom of its mother or nurse, and that a person hung in a warm room, or drowned in warm water, has no more chance of recovery than those placed in a reasonable temperature, must be admitted; nay more, I feel no hesitation in giving as my opinion, that those placed in a warm bed, &c. would die sooner than those in the usual summer temperature of the air, or water of rivers.

Upon the whole, I am persuaded, the sudden application of a heat, greater than about sixty or seventy degrees, is highly dangerous, and further, I think it probable this remedy has maintained its reputation principally because

it can seldom be obtained, until the patient has in some measure recovered from frictions, from inflating the lungs, &c.

Lastly, heat is a considerable stimulant, operating on the living body, under all circumstances, relatively, that is, the same degree of heat will produce an effect vastly different, in different conditions of the body; and when in any reasonably degree, will exert a greater force in proportion to the debility, or depression of the body, so that a degree of heat which might be friendly or innocent, to a body in health, may unduly stimulate in cases of suspended animation, and thus destroy the small remains of excitability. This observation applies to all stimulants, and, therefore, we are to commence in all cases with the mildest methods and means.

I shall conclude my reasonings, on this subject, by a few remarks on the use of cordials, and on blood-letting. It is universally known that excess in the force of stimulants, applied to the body, will prostrate the strength, and may subvert every action. In what condition of the body, then, can we apply the greatest force of stimuli? Will the enfeebled body, whether habitually or accidentally so, bear the greatest force of stimuli? I answer it will not, and instead of more powerful stimuli being necessary, they will exert a greater influence in proportion to the reduction of the excitability, and when excitability is gone, life is extinct. If these ideas are correct, it follows that we may easily destroy the remaining excitability by throwing stimulants into the stomach, and therefore, they should never be given till the circulation is in some measure restored, and then, with a very sparing hand. In all sudden cases that are early discovered, a glass of cold water is a more rational and safe remedy; and where the body has laid a considerable time, a little warm tea, or the wine, or brandy, &c. usually given, should be largely diluted.

Blood-letting can never be necessary until the lungs are restored in some measure, for, it is a fact well known, that in all cases under consideration, the left *ventricle* of the heart, the arteries, and the veins of the extremities, empty themselves and force the blood on into the great

internal veins, the *right auricle*, and *ventricle* of the heart. How then are we to remove this disorder in the *sanguiferous system*, by abstracting blood from the veins? There cannot be the remotest hope unless it be by bleeding in the jugular veins; even this is doubtful, and may interfere with the more important means of inflating the lungs. So soon as the breathing has been restored, and of course the circulation in good measure, we should bleed moderately, and repeat according to circumstances, in order to lessen the quantity of blood, which must have suffered some deterioration, and thus enable the vessels, heart, and lungs, to perform their functions more easily, and thereby, prevent congestions, infarctions, or infraction, in some of the tender parts of the body.

## SUBSECTION 2.

### *Concluding Advice in Cases of Suffocation.*

I here seriously beg leave to request the reader to read the first section of this article, and also the section, on submersion; and I go on to state what I consider the most likely means, for recovering those suddenly exposed to whatever may suspend life, for want of air. This more obviously includes submersion, strangulation, deleterious gasses, as those of mines, or wells, or old cellars, or chymical operations, and fainting from sudden overaction, blows, shocks from lightning, smothering, &c.

1st Indication. Lay the body carefully on the back, with the head slightly raised. If the air is cold or wet, carry it with the utmost caution to a room well ventilated, forbid unnecessary persons from coming in, for the lungs require the purest air.

2d Indication. If the body is wet, or dressed, wipe the skin dry, or remove the clothes and commence gentle, but brisk, frictions all over the body, having a blanket under, and another thrown loose over the body.

3d Indication. Apply a suitable apparatus to one nostril, or mouth, close the other nostril and mouth, or both

nostrils; press on the prominent part of the throat, or Adam's apple; this will prevent the air from returning, before it has entered the lungs, and also from passing into the stomach; leave the air *in* some seconds, then press it out, by applying a hand gently to the abdomen, and in doing this, apply the hand pretty low down, so as to avoid pressure immediately on the stomach. For want of a proper apparatus, a common bellows may be used, and for want of these, the breath of a strong person should be forced into the mouth; this process in immitation of breathing, must be constantly used while there is any hope. These means are more especially suited to submersion, or where the body has laid exposed to bad weather, or where we suspect the patient has been sometime affected.

4th Indication. Throw cold water over the naked body and head; wipe the body dry, and repeat this a few times; if no benefit follows, resume your frictions, and inflation of the lungs; this remedy (the cold water) is particularly suited to injuries arising from narcoticks, blows, lightning, hanging, or suffocation, and least useful in cases of drowning; but even here, provided the body was taken up immediately, it ought to be used; and I may observe here, that the chance of success, from this remedy, will be in proportion to the earliness of its application.

5th Indication. As soon as there are signs of life, give a little cool water, provided the accident has momentarily preceded; if some time has elapsed, a little warm tea, broth, wine and water, or brandy and water, may be given; giving preference always to the weaker articles, unless the patient is known to be of intemperate habits; here we may venture to give warm wine, or equal parts of brandy and water. This advice is applicable to all cases.

6th Indication. Open the bowels with injections containing common salt.

7th Indication. If life return imperfectly, and the patient is harassed with a coming and going of the breath, and circulation, and this continues more than a few minutes, bleed the patient in the arm, or jugular vein, and

increase the force of your frictions: if your patient revive under this treatment, put him to bed, cover moderately, let his room be well aired, give him a few draughts of warm tea, either common tea or chamomile, &c.; and if he now incline to sleep, let him enjoy it.

There will in general be great susceptibility to chills; and against these the patient must guard by dressing warm, taking warm teas, or broth, or panada, avoiding much *liquor*, which will over stimulate, and dispose to disease. Lastly. It has been proposed, that if the lungs cannot be inflated, that the windpipe should be opened, and air forced in and out, as before recommended. Cases may occur where a spasm may close up the *glottis* or opening from the mouth, and render this operation necessary, but it will very seldom be found necessary, and can only, with propriety, be performed by a person acquainted with the anatomy of the part.

## SECTION XI.

### *Of Substances stopped in the Throat.*

I have to acknowledge here, that I have seen but few accidents of this kind, and as I think well of the directions given by Buchan, I have copied this article from his work.

"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 imprudence; many adults put pins, nails, and other sharp pointed substances into their mouths on every occasion, and sometimes even sleep with the former there all night: a fit of coughing, or twenty other accidents, may force over the substance before the person is aware.

"When any substance is detained in the gullet, there are two ways of removing it, viz. either by extracting it, or pushing it down. The safest and most certain way is to extract it; but this is not always the easiest; it may

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 those bodies be sharp pointed, as pins, needles, fish bones, bits of glass, &c.

"When such substances have not passed too deep, we should endeavour to extract them with our fingers, which method often succeeds. When they are lower, we must make use of nippers, or a small pair of forceps, such as surgeons use. But this attempt to extract rarely succeeds, if the substance be of a flexible nature, and has descended far into the gullet.

"If the fingers and 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 used on such occasions, to avoid such ill accidents as have sometimes occurred from these instruments slipping out of the operator's hands. 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, 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 the 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 rings thus twisted, as to be moved every way, which must, in many cases, be a considerable advantage.

"A material employed on these occasions is the sponge. Its property of swelling considerably on being wet, is the principal foundation of its usefulness here. If any substance is stopped in the gullet, but without filling up the whole passage, a bit of sponge may be introduced into that part which is unstopt, 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 little 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 for its usefulness in such cases. A pretty large piece of sponge may be compressed or squeezed into a small size, by winding a string of tape closely about it, which may be easily unwound, and withdrawn, after the sponge has been introduced. A bit of sponge may likewise be compressed by a piece of 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 patient 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 such obstructing bodies are simply engaged in, and not hooked or stuck into the sides of the gullet; as in this case, vomiting might produce some further mischief. If the patient can swallow, vomiting may be excited by taking half a dram, or two scruples, of ipecacuanha in powder, made into a draught. If he is not able to swallow, an attempt may be made to excite vomiting by tickling the throat with a feather; and if that should not succeed, a glyster of tobacco may be administered in a sufficient quantity of water. 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 have 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 prefer the least of two evils, and rather run the hazard of pushing them down, than suffer the patient to perish in a few minutes; and we ought to scruple this resolution the less, as a great many instances have happened, where the swallowing of such hurtful and indigestible substances has been followed by no disorder.

"Whenever it is manifest, that all endeavours 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 used, 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 inhering body more effectually than instruments. Thus, a blow on the back has often forced up a substance which stuck in the gullet; but this is still more proper and efficacious, when the substance gets into the windpipe. In this case, vomiting and sneezing are likewise to be excited. Pins, which stuck in the gullet, have been frequently discharged by riding on horseback, or in a carriage.

"When any indigestible substance has been forced down into the stomach, the patient should use a very mild and smooth diet, consisting chiefly of fruits and farinaceous substances, as pudding, pottage, and soup. He should avoid all heating and irritable 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 glysters 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 windpipe, must be directly performed. As the 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 mention it, but it should only be attempted by persons skilled in surgery."

It may be remarked of the foregoing instructions, that they are quite ample; but, in general, I would recommend to persons thus unfortunately situated, not to be too precipitate, lest they do great mischief, by awkward attempts to extract the offending substance, and unless there is danger of immediate suffocation, it will always be most advisable to call in a practitioner.

In addition to the usual danger of accidents from pins, we are sometimes endangered by an improper practice some cooks have of sticking pins into turkeys, &c. which they are about to roast, and afterwards forget to remove them. I once dined at a very respectable house; Judge Hamilton, of Pennsylvania, was a guest, where as many as four or five pins were found in a turkey; and a gentleman of the bar got a pin in his throat before we were aware of the danger. This should be a caution to cooks, and also to those who dine with strangers; for so small an article as a pin may easily escape their notice, and getting into the throat may do serious injury, and even materially endanger life.

## SECTION XII.

### *Of Swallowing Cents, Buttons, &c.*

Children sometimes incautiously swallow cents, half cents, buttons, and other indigestible articles, which may injure either from their hardness, roughness, or sharp points or edges. I have seen several cases, where such articles were swallowed without any dangerous consequences following; but they are always to be ap-

prehended: and cases are on record of deplorable salivations, and other unpleasant effects having followed the swallowing of copper; and therefore children should be taught, as early as possible, to view these practices in their proper and dangerous light, and severely corrected, when necessary, to break so dangerous a practice.

I recollect reading a distressing case of a lad, who died about his seventeenth year from having swallowed a halfpenny when a child; it had stuck in his throat, and remained there until his death, and during all this period, was a source of great suffering. Children who have swallowed such articles, must be kept from all harsh or heating diet, milk and other bland articles should be given; and the bowels should be frequently opened with castor oil; or rather a mixture of this and sweet oil; mucilage should be given. If fever comes on, it must be reduced by bleeding, &c. If there be severe pain, without fever, a few drops of laudanum should be given now and then.

## SECTION XIII.

### *Of Substances getting into the Windpipe.*

This most alarming and dangerous accident occurs, pretty often; but perhaps, a more singular and distressing circumstance can scarcely be found, than the fact, that a sister of mine lost two fine boys, in less than two years, by each of them getting into the windpipe a bean, by which they were suffocated. Nothing can be attempted by unskilful persons in those cases, but a skilful surgeon should not hesitate a moment, to open the windpipe, and endeavour to extract the substance. Perhaps it would be well in all such cases, to raise the patient for a moment upon the head, and then lay them down gently with the head low, and by this means the article may possibly be thrown into the mouth, or lodged high up in the windpipe, where it will be much less irritating than on the lungs. In full habits we should bleed largely, and then keep down irritation, by the free use of laudanum.

I have seen a case where a delicate child, not more than five or six years of age, got a cherry stone into this situation; he was affected frequently with violent coughing, and symptoms of suffocation from which he narrowly escaped; at the end of the third week, in a violent fit of coughing, the stone was thrown out, and he soon recovered. I am encouraged in recommending turning the patient up on his head, from the circumstance that on either side of the windpipe, pretty high up, there is a little cup or shelf-like cavity, where bodies as large as can well pass the *glottis*, may, and no doubt often do lodge, therefore, in turning the patient upon his head, the body should always incline to one side; but these attempts must not be repeated too often. I think it would be advisable always to bleed the patient pretty largely, and give a dose of laudanum; and obtain the best assistance as soon as possible.

## SECTION XIV.

### *Of Fishing Hooks, and other pointed articles, sticking in the Body.*

I have known some shameful cases, in which persons who had got fishing hooks into the cheek, and other parts of the body, were considerably cut by medical men, in order to extract. When I resided on the Ohio, a lad got a fish-hook into his cheek, and within the mouth, the shank of the hook had a considerable flaw, which stood as a barb, and was fast to the boys round-a-bout; thus situated he exhibited a ludicrous appearance: but, the wonder of the case is this, an old surgeon who had served in the revolution was called, in my absence, but was not willing to act; I met him at the door, and was stopped by him, till he gravely told me to hold the shank firmly with the left hand, while with the other, with a *bistoury* I should trace out the hook, which would serve as a director!! Finding the boy in this situation, I cut off the end next his jacket with cutting pinchers, and then with a plain pair, forced on the point which soon reached the

inside of the cheek, and was thus forced out, without any cutting of the parts.

Let this be remembered, in all cases; you have nothing to do but cut off the line, if the hook is attached to one, and then force the hook on till the point turns out, which must necessarily take place from its curved shape.

I beg leave to relate a case of ingenuity, related to me by a person of veracity. A child had unwittingly swallowed a fish-hook, attached to the line; a neighbour finding the child likely to be strangled, took a leaden bullet, put a hole through it, through this hole he slipped the line, and then suffering the bullet to fall into the throat succeeded thus, in speedily dislodging the hook, and drawing it up with the bullet, which served the double purpose, by its weight, of loosening the hook, and guarding the point while it was drawn upwards.

Pieces of glass, bone, wood, metal, or old nails, &c. sometimes get into the feet and other parts of the body; these ought always to be extracted by means of tweezers, or nippers; but where considerable bodies are tightly wedged in, or broken off, as sometimes happen, with splinters of wood, it is necessary to cut down or enlarge the opening, which can only be done with safety, by those acquainted with anatomy, otherwise injury may be done by cutting arteries or nerves. The pain which follows these accidents should be mitigated, by reasonable doses of opium, and the solid will be preferable. Emollient poultices should be applied of mush, or bread and milk, in all considerable injuries of this kind; but in slight cases the application of a bacon skin, or bit of old bacon will answer a good purpose. If fever follows, we must bleed, give cooling purges, enjoin a low diet, and mild cooling drink; if symptoms of *tetanus*, or locked jaw occur, see the article on that disease.

## SECTION XV.

### *Of Extraneous Bodies in the Nose and Ears.*

Children are often found, who unwittingly put beans and such like, into the nose, and in their attempts to

withdraw them, thrust them so far up, that it becomes a difficult matter to extract them. No article is more troublesome in these cases than beans, which swell so readily on being subjected to warmth and moisture, and by becoming thus enlarged, are very difficult to withdraw unless they are speedily discovered and extracted.

I have always succeeded, in daylight, with the utmost ease, by simply grasping the nose firmly, high up, while with the flattened end of a common probe, I have carefully got beyond the substance, and with a hooking-like motion forced it out: the handle of a small silver tea spoon, is well suited for this purpose.

If a few efforts do not succeed, it will be advisable to send for medical assistance, otherwise much injury may proceed from the irritation, as suppuration, or injuries to the organs of smell.

When substances have entered the ears, as cherry stones, beans, &c. (which children will sometimes introduce,) or insects, we are to attempt their extraction, and in this, I have always succeeded best with the flattened probe, a little bent near the point; the forceps which are often recommended for this purpose, are apt to let the body slip, and sometimes with a projectile force which sends it much further in, besides they occupy too much room, as their ends must always be further asunder, than the diameter of the body. Live insects are best removed by means of injections of oil, or camphorated spirits; see the article on earach.

# OF INFLAMMATION, OR PHLOGOSIS.

## SECTION I.

I HAVE so fully treated on visceral inflammation, and have had occasion to speak so repeatedly of inflammatory diseases, that I shall confine my remarks in this section, to that kind of inflammation only, which is found in the muscular or glandular parts of the body, but more especially among the muscles of the limbs. The only case of internal inflammation which properly belongs to this article is the *psoas abscess.*

This kind of inflammation follows wounds, bruises, fevers, &c. and in all cases of considerable severity, is accompanied with fever.

*Imposthumations*, bealings, biles, stonebruises, &c. are consequences of this species of inflammation. And in all cases it can terminate but in three ways:

1. By resolution or scattering.
2. By suppuration or bealing.
3. By mortification.

In all cases of simple inflammation, provided there is no *contraindications*, we should endeavour at its commencement to disperse the disorder, by means of bleeding from the arm, topical bleeding by leeches, or scarifying and cupping; by cooling embrocations, as sal. ammoniack in vinegar, or lead water, &c. with low diet, cooling drinks, rest, and purging.

But where these cases succeed severe fevers, or violence done the part, and which will not probably yield to discussive applications, we are to encourage suppuration by mild warm fomentations, and emollient poultices,

frequently renewed; as every two or three hours; the best of these is, bread and milk, or mush containing linseed, ground elm bark, white lily roots, and such mild articles; and where the suppuration is tardy, in weakly or reduced habits, fomentations of bitter herbs, with the addition of onions to the poultices, and in cases still more tardy, a gum plaster will answer best, with occasional embrocations, with some stimulating oil.

In all cases of tardy inflammation of every kind, and in all kinds of habits, I have remarked that a long continuance of wet articles are injurious; and I feel full confidence in observing from considerable experience, that we ought never to continue washes, or poultices beyond the second week.

Suppuration is known to progress, by occasional chills; throbbing or beating in the part; heat; redness, well defined, or marked in its circumference; and if not very deeply seated, by a prominence of the part, and a soft feel, indicating the existence of pus or matter: as the suppuration advances, the pain which was constant and severe, together with the throbbing intermits, and finally, in good habits when the abscess is completed, pain almost ceases, for a time. But the matter must now be discharged by a sufficient opening which can only be attempted by a surgeon, and which is always better than leaving the part to burst. After it is open, a poultice, in all considerable cases, is to be applied for a day or two; after which, a plaster of basilicon may be applied.

If an abscess is deep seated, and we neglect to open it at the proper time, the *absorbents* gradually recover strength, if the habit is good, and taking up the matter will raise a considerable fever, or other unpleasant symptoms.

I once met with a case of this kind in a boy, who had a large abscess formed in his arm pit; finding him labouring under considerable fever, and the tumour unpleasantly hard about its circumference, I bled him, and a large quantity of distinct pus was floating in the blood.

I also met another case of abscess in the thigh, where the abscess, for want of opening, had nearly destroyed a boy of good constitution; but before I saw him it had terminated in a growing fleshy tumour, which was of considerable size. These cases should be a caution to all timid, or careless people, to take good advice, and never object to opening, when thought advisable by men of experience, otherwise severe, and irremediable consequences may follow.

With a due regard to the local applications above recommended, we must carefully bear in mind that there is a certain point, or force in inflammation, necessary for suppuration; and excess of force or action, either local or general, will as certainly terminate in gangrene or mortification, as where the force or action is below the suppurating point. And hence it follows, that we must attend to the general system, and if there be too much action, as manifested by fever, severe chills, excessive pain, or an absence of it, with considerable extension of the swelling, we should bleed, purge, and use general means for reducing action; and this course is often absolutely necessary after gangrene, or incipient mortification has supervened.

If the patient is of weakly habit, intemperate, convalescent from fever, &c. we must evacuate with great caution, if at all; more generally we must support the patient with light but nourishing food; a little good wine, bark, elixir vitriol, &c.

But in both these opposite states of the body, we will sometimes be disappointed in our wishes, and gangrene occurs, or we may often meet with cases which have been mismanaged, and have, actually, terminated in mortification.

## SECTION II.—SUBSECTION 1.

### *Of Mortification.*

In entering on mortification, I must remind the reader, that I have elsewhere observed, that all our diseases are

but twofold, that is, morbid, or peccant action, is accompanied either with an excess, or defection of excitement, and is to be arrested or removed by infusing an additional impetus into the blood and nerves; or, what is much more common, by abstracting stimuli, and thus lessening the impetuosity of those things. If inflammation has resisted the usual remedies employed for scattering or repelling it, or those used with a view of effecting suppuration, or if cases are found thus advanced, to this fatal and last stage of mortification, we must in some measure vary the treatment.

This species of inflammation is to be known by the absence of the usual throbbing, an increased heat and burning in the part, by a dirty ill-looking surface, blisters extending some distance around on the skin, which was sound before, and often by livid edges, or a dark coloured circumference, from which the skin peels off. When these symptoms occur, we ought to apply blisters entirely around the limb, but not immediately upon the sore, and at the same time, apply the carrot poultice, and repeat every two hours, washing the part clean once or twice a day with mild soapsuds, or milk and water, as the case is more or less inflammatory, if there is a raw surface: a perseverance in the use of this poultice, and washing, with a repetition of the blisters if necessary, are our only hope, as external remedies.

But we are carefully to attend to the general system and if there is well grounded belief, that the patient is labouring under inflammatory fever, we should purge gently, or bleed, give small doses of ipecacuanha and camphor, to excite slight nausea, and a mild perspiration; cooling drinks, with cremor tartar, or a little nitre, may be given, but all sudden evacuations are to be avoided; for, by a sudden prostration, we may invite the gangrenous action throughout the blood vessels; a low diet, and rest, and quietness, are by no means to be neglected.

In the opposite state of the system, we are to use the same outward applications; or, perhaps, the addition of washing the sore twice a day, with a strong decoction of bark, applied in a tepid state. But internally we are to

use bark, snakeroot tea, wine, opium, a light but generous diet, and elixir vitriol; remembering that the bark can never be useful in these cases, unless it is used largely, as two or four ounces or more, per day.

If our remedies succeed, a distinct line of separation will be discovered about the edges, in part, this gradually spreads round, and healthy pus is deposited between the sound and unsound part; or rather, the vessels of the part are lowered, or raised in their action, as the case may be, to the suppurating point, and pouring out healthy pus cast off the dead, or mortified part.

A part gangrened, or in the first stage of mortification, may recover, but mortification is always actual death of the part, and must be thrown off; after which we are to treat the case as a common ulcer, remembering that the excitability of the part, is mostly of such a nature as to require pretty stimulant dressings, as the soapsuds; and basilicon, mixed with some spirit of turpentine.

### SUBSECTION 2.

### *Of Mortification in the Mouth.*

Here some difficulty occurs from the impracticability of applying our usual remedies, we should reduce the patient reasonably, if necessary, and then give the bark largely, the more the better, in general. The mouth should be frequently rinsed with water containing a little salt of tartar, and gargled constantly with a thin paste of raw carrots, or the expressed juice, mixed with a portion of good yeast; and if the disease passes through the cheek a blister should be applied.

### SUBSECTION 3.

### *Of Mortification in the Toes.*

This occurs in aged persons, or those of very bad habits, especially in cold weather, and is to be treated by simply giving pretty large, and repeated anodynes every

few hours, and washing with tepid soapsuds, and mild poultices, applied tepid and repeated every few hours.

## SECTION III.

### *Of Psoas Abscess.*

This is so called from its being formed in the psoas muscle, very large and powerful muscles which arise from the inside of the back, on either side, and passing along the loins they go out over the bones of the pelvis, and are inserted into the thigh bone. This disorder is probably induced by a bruise, strain, &c. of the back; or it may proceed from other causes, which produce abscesses in other parts of the body. It commences with tension, and pain of the loins, the pain soon extends up about the back and down to the thigh, and mostly, there is some difficulty of standing erect. These symptoms are often taken for affections of the kidneys, and hence the necessity of getting good advice early, in those cases, or bleeding, and reducing the body by all the usual means, particularly purging, and low diet, and rest. At the same time, deep scarifications and cups on the back of the loins, are to be used, provided the patient has not access to a skilful practitioner. For, if to the above symptoms be added, considerable chills and heats, and a dull throbbing pain, we are to apprehend suppuration will take place, and matter forming it will fall down about the seat, or into the thigh, and must be let out, or serious consequences will ensue. Therefore, wherever any considerable affection of this kind occurs, disclose your situation at once. Dr. Rush mentions a case of a young lady of great respectability and worth, who perished in consequence of concealing this disease, through a sense of shame, till all hope of recovery was past.

## SECTION IV.

### *Of Common Phlegmon, or Bile.*

These occur sometimes in habits apparently good, but where they are numerous, or frequently returning, we are always to suspect some defection in the habit, and should recommend the use of occasional purges, the use of cremor tartar and sulphur, with mucilaginous drinks; and a diet suited to the case; generally a vegetable diet, but in weakly or depraved habits, a nourishing but light diet: avoid harsh, fat, or high seasoned food: mostly a milk diet will be proper, and if the stomach is weak, a little seasoning of ginger, horseradish, or other pleasant aromaticks should be mixed with it. As a local application, nothing, in general, will answer better than the bread and milk poultice, and when they are tardy, some onion may be added, and if still more tardy, discontinue the poultice, and use a gum plaster, or honey and flower, or sugar and soap, &c.

## SECTION V.

### *Inflammation, and Bealing of the Breast, or Mamma.*

By a timely application of discutients, as cold lead water, or sal. ammoniack in vinegar and water, we will often succeed in healthy women, if early applied to, in repelling inflammation. But in general, there is such a chillness attends these cases, that these remedies can neither be applied with propriety, or prospect of success, here, bathing the part with the steam of hot vinegar; rubbing for a length of time with warm oil; or applying warm dry salt, together, with bleeding, purging, cooling diet and drinks, rest, &c. unless a considerable debility or depravity of habit forbid these evacuations, in which case we must use mild diaphoreticks, as nitre and camphor, opium and ipecacuanha, &c.

If suppuration advances, nothing will answer better than the bread and milk poultice, and to poor persons

who cannot well procure this, well mashed potatoes, or mush with flaxseed, lily roots, or elm bark will answer equally well; and as soon as matter is formed it must be let out by a puncture, with a lancet; the poultice may be changed in a day or two afterwards, for the common basilicon, taking care, to keep the breast warm by a covering of tow, or wool, or a few folds of flannel.

Should ulcers form and not heal kindly; take about four ounces of water, or near a gill, and add to it one tea spoonful of honey, and to this, half a dram of calomel, shake well every time before using, which is to be done by injecting into each opening or ulcer, a small syringeful of it once a day. This I recommend from considerable experience of its universal innocence, and great success in my practice.

## SECTION VI.

### *Of Inflammation of the Nipples.*

This is sometimes a very troublesome and painful affection; in slight cases, it will often be sufficient to wash the part clean with milk and water, before the child sucks, and afterwards, or when it has sucked, with a weak solution of borax in rose water, or in common spring water.

If this does not succeed, nipple glasses, or *medicated* wax caps should be worn; these are made by mixing some ground armenian bole, with the melted wax, and pouring this into a tea cup until it rises about three fourths of an inch from the bottom, into this a smooth piece of wood the size of the nipple, is to be put while it is cooling, and forced near to the bottom; when the wax is taken out, a small hole may be made through, which will suffer the milk, which weeps out to pass away.

With the use of the nipple glasses, or caps, the wash of borax, is to be continued; if this does not succeed in a few days, wash with French brandy, or mix equal parts of very clear lime water and oil of almonds; apply this as soon as the child has sucked, or every few hours;

and before it sucks, the nipple should be washed, which will promote the healing of the parts; but neither of these articles, recommended, will injure the child.

With due cleanliness, and in gross or full habits, an occasional dose of physick, and a reasonable diet, avoiding much heating articles of food, or drink, and keeping the bosom reasonably, but by no means too warm, will generally answer every purpose.

And, I beg leave to admonish patients of this kind, not to be too ready to adopt the advice of officious, or anxious persons, who, often with much willingness, but little judgment in inflammation of the breast, undertake to prescribe. I have seen many bad consequences from random applications, either wrong in their nature, or too frequently changed.

## SECTION VII.

### *Of Deep seated Inflammation of the Finger, or Felon.*

This is a most painful and tedious kind of disorder; mostly, it is seated in the periosteum, or, perhaps, in the bone itself: this constitutes the worst kind of felon, and it is especially apt to attack the joints. But there are slighter cases which are seated in the muscle, or cellular substance of the part. All these cases are extremely painful, owing, in great part, to the high degree of sensibility which the fingers possess; but, perhaps, it is often augmented by the thickness and strength of the skin. When the pain seems deep seated, or about the joint, we may, in general, prognosticate unfavourably.

The finger affected should be held in spirit of turpentine, as hot as it can be borne, or spirit of wine, or for want of these, hot water. In heating these inflammable articles, care must be taken not to set them on fire. If the spirit of wine, whiskey, or turpentine, is put into a vial, and this stopped, loosely, with a rag, and then put into cold water; the whole being now put over the fire, may be heated without danger; want of care in this matter, might, by a sudden flash, materially injure the face or eyes. If these articles do not succeed, the best thing

we can do is to cut down, at one stroke, to the bone, with a sharp knife; but a surgeon will always do this most easily.

If these remedies are ineffectual, or neglected, suppuration will progress, and will in the main, be more or less tedious, as the disease lies deep or shallow. When we find suppuration unavoidable, it must, in all cases, be promoted by the mildest fomentations and poultices, and nothing will answer this purpose better than bathing the part, for half an hour, in warm milk and water, at every renewal of the poultice, which ought to be every two or three hours. And the patient may always, with great advantage, take full anodynes, morning and evening; if they interrupt sleep, the patient should be bled, and take a purge. This mild treatment will answer our wishes more completely than any more heating articles, which are often applied, and often to the great injury of the patient, by increasing the pain, and sometimes occasions the loss of a finger or joint.

## SECTION VIII.

### *Of Stonebruises, and of Bloodbiles.*

Stonebruises are a little bloody bile seated in the sole of the foot, and are, perhaps, seldom found, except in those who go barefooted. It is extremely painful, and owing to the thickness of the skin, is very tedious. The best treatment is to soak the foot well in warm water, and then pare down as close as possible, and then a poultice of bread and milk may be applied as usual. When the presence of matter is ascertained, by some abatement of the pain and prominence, and softness of the part, an incision should be made, but this need never be large; a poultice should be continued a day or two, and then a plaster of basilicon will answer. Great care is necessary to keep the dirt from getting into the sore.

*Bloodbiles*, as they are called, are, perhaps, nothing but common biles, which, by corroding some of the small blood-vessels, fill the cavity with a mixture of blood

and matter, or a stroke which ruptures a small vessel, may be followed by a bealing, and the quantity of blood *extravasated* cannot be changed into pus, but acquires a dark appearance. These, however, cannot always be distinguished, nor need the treatment be different from that of common biles. But in general, after they are opened, they require more stimulant dressings, as the basilicon, containing a little ground red precipitate, or a little ground savin leaves.

## SECTION IX.

## *Inflammation from the Bite of Poisonous Animals.*

### SUBSECTION 1.

### *Bite of the Viper.*

I shall, here, first speak of the bite of our serpents; and also, of those insects which can annoy us by their stings, particularly when they unite, and thus inflict a considerable injury.

*The viper* is found in this country; but they are neither numerous nor particularly vicious. I believe it is now pretty well ascertained, in England, that oil used with freedom, is a principal, and often the only remedy necessary. Sucking the part bitten immediately, with the mouth, is also strongly recommended; and it is said to be free from all risk to the operator, especially if he use the precaution of rinsing his mouth frequently with oil. A mild emetick is also recommended; and washing the part with alkaline washes, together with the free use of vinegar.

### SUBSECTION 2.

### *Bite of the Rattlesnake and Copperhead.*

Although these are different snakes, they are about equally poisonous, making allowance for size and strength of the rattlesnake; and the same remedies will

answer, equally well, in all cases. But after much reflection, I am much at a loss to lay down the best treatment. I have seen several cases of bites by the copperhead, but none by the rattlesnake till sometime after the accident. At one time the juice of plaintain and horehound was much celebrated; and was first prescribed by a negro of Carolina. He gave a spoonful of the expressed juice of these herbs, mixed, and repeated it a few times; a leaf of tobacco was applied to the wound. Alkalies outwardly applied, and taken in solution by the mouth, has been recommended. Scarifying the part has been practised. Drawing with small cupping glasses is advisable, after having made an incision into every mark of the tooth, through the skin, but it ought not to be made deeper. If we omit to cut through the skin, by its swelling, it may so completely close the punctures, made by the teeth, as to prevent the suction from reaching the poison. If such glasses are not to be had, a hen may be set with the naked fundament upon the part; and, I have been credibly informed, this has succeeded well, and that several hens have been thus killed in one case, which seems to raise the belief that the poison was thus forcibly extracted. But from what I have heard from various cases of snake bites, I imagine the plentiful use of warm oil is the best remedy; and perhaps nice fresh butter or lard would answer equally well.

I cannot undertake to reconcile the common report of the innocence or harmlessness of the poison of the rattlesnake, with the fact that the late Dr. Barton of Philadelphia, nearly lost his life by tasting the poison, very largely diluted with water. But I think myself clearly justifiable in cautioning persons from such a practice; a wine-glass, or small cup or an air pump, when either can be procured, will answer; for any sore about the mouth, or any accidental biting of the tongue, &c. might prove fatal.

The Indians are said to be successful in treating cases of this kind. I can neither deny, nor support this report. I have seen one case of a bite, in the hand, which was treated by their mode; the suppuration which fol-

lowed was tedious and severe; extending to the periosteum, and bone; but the patient stated that the acute pain, and fever, had been less severe than common. What they used I know not, but the hand and arm was made to sweat considerably.

Warm oil has been recommended for exciting sweating in cases of fever, and it is probable that brisk frictions with warm oil, over the whole limb on which the bite was inflicted, would be a principal remedy. In all the cases which I have seen of persons who had been bitten by the rattlesnake, severe, tardy, and painful, suppurations continued some time, bearing a strong resemblance to scrofulous suppurations. Active stimulants are best suited to these cases, as fomentations of the stramonium or Jamestown weed, and the basilicon, rendered more active by adding a little ground red precipitate, or the savin oil, or savin leaves ground fine.

SUBSECTION 3.

## *Of the Stings of Insects.*

These are inflicted on us in this country, by the common honey bee, the humblebee, hornet, wasp, yellow jacket, musketoes, &c. In general, violent pain succeeds the stings of all these, except the musketoe, but danger never succeeds unless a number unite in this liliputian warfare, and under these circumstances, even the musketoes become what the fellow called *galley-nippers*, who for a wager, had undertaken to brave these little warriours, and who lost his stake by his opponent applying a bite of fire, without his knowledge, on which he sprung up and cried out a *galley-nipper*, by Jehu! If, then, these insects sometimes become *galley-nippers* in earnest, from their number, or happening to unsheath their powerful swords in a tender part, we are sometimes in need of relief. The application of salt and water, applied cold, will answer a good purpose; or strong cold vinegar may be applied: if these do not succeed, rub the part well with warm sweet oil. And in bad habits, if little ulcers succeed, wash the part with brandy; with a strong solution

of lead; or apply some stimulant oil, as British, Columbian, or seneka oil.

## SECTION X.

### *Of Mineral and Vegetable Poisons.*

The success of remedies in cases of poison, will, generally, be in proportion to the earliness of their application, and, therefore, every person ought to know what is to be done on these occasions, which often arise accidentally in children, and others, by taking arsenick which has been set for rats, flies, &c. also from cobalt, which is set for fly poison, and contains arsenick, as its active part.

The attention of medical men has been much directed towards finding particular specificks for poisons, but, little success has attended their efforts, and all that is known, on the subject is of no value. It may be remarked, however, that vinegar which has been generally recommended for vegetable poisons, would be dangerous in the mineral; and I have strong doubts about its efficacy in cases of vegetable poison. All mineral poisons become active only so far as they are opened in their texture, or oxydated by acids, or oxygen, and, therefore, acids are to be carefully avoided.

In all cases where it is known poison was swallowed, we should, if possible, instantly, give a dose of white vitriol, as from ten grains to twenty, every five or ten minutes; and to adults from thirty to fifty grains. Then, with all possible speed, give large quantities of sweet milk and oil, or melted fat, or, for want of milk, warm water; as soon as possible, let a muscilage of slippery elm bark, or linseed be prepared, and given in large quantities; these, in general, are better than oil; but always require time for their preparation, which is well occupied by the free use of milk, or warm water with oils or fat.

If no vomit is at hand, oil and milk, or warm water, are to be forced down, largely, and rapidly, and if the patient does not vomit immediately, put the finger or a

feather into the throat, and thus provoke vomiting. The patient, especially if he has swallowed arsenick, or other minerals, must continue the mucilaginous drinks till the stomach has recovered its healthy state. The bowels ought, in all cases, to be opened with mild, or purgative injections, as the case may require.

If fainting occurs, of an alarming appearance, throw cold water over the patient; and I think this would be advisable in all severe cases of narcotick poisons, as opium, stramonium or Jamestown weed, nightshade, and ardent spirits.

Many accidents arise from children's eating the seeds of the stramonium; thousands of families suffer their houses to be surrounded with this dangerous poison, without ever cautioning their children to avoid it. Many others are found who are in the habit of dosing their children with laudanum, or Godfrey's cordial, and leaving it in the reach of children, of which they unwarily take an overdose. I have met with cases of this kind, where the mother, or others, have been disingenious, or weak, or silly enough, to conceal these things from the physician, till after a recovery.

Let it be a matter of importance, with all families, to keep the stramonium, the nightshade, opium or laudanum, from the reach of children; or carefully impress on their minds, the danger attending the swallowing of these articles. And let arsenick, and fly poison, be touched with great caution: I have seen many deplorable cases of accidents, from mistakes with these articles, which had been set for the rats.

In all cases of severe pain of the stomach of healthy children, or sudden extreme sickness or violent delirium, we are to suspect poison, and if there be any doubt of the fact, with all possible speed get a physician, or on stronger conviction, administer the remedies mentioned in this section. In addition to the danger of fatal mistakes, which may occur from setting poison for rats, an awful opportunity is hereby given to evil minded persons, should any be about you, to do mischief and cover it under pretence of mistake.

# OF THE DISEASES OF WOMEN.

## SECTION I.

### *Introductory Remarks.*

IT is my design here to speak, first, briefly of the principal peculiarity of the female constitution; secondly, of their diseases; thirdly, of pregnancy; fourthly, of parturient women.

The general delicacy of structure in the female system, must be familiar to every person; it may not be amiss, however, to point out a few of the most striking. Their limbs are better rounded, their skins are softer and smoother, their bodies are smaller, their whole body is less firm, than that of man; and, while a certain combination of these forms female bodily perfection, true feminine excellence and beauty exists in the mind, and the face divine.

What charms? what *power?* arise from the proper government of the female face. Here lies all true beauty and excellence, not, indeed, in the regularity of features, but the operations of the soul within. We are certainly, much inclined to admire the regular well formed features, which are, usually, denominated pretty or beautiful. But let not vanity attach to these pretty features; *she* is a proud jade, of a low character, and would ever humble the female, by dipping the face in poison, which shall wholly banish from it that holy and bright mirror, which shone in the face of Moses after conversing with his Maker. Here the mind, in a manner partaking of its heavenly beautitude, wrought up the features of a *man* to such a state of beauty and perfection, that the vulgar or wicked eye could not behold it, without pain: and least of all in the train of observers, of this heavenly face,

was, probably, what the world terms beauty. For, this beauty of face was wholly different from *common beauty*, and would have shone with equal splendour over the face of age, and was especially calculated to humble the vanity of *common beauty*, because it was calculated to equalise, and to mock to scorn the boastings of the proudest models of clay, while the homely exterior rose to its destined elevation. This narration is so impressive and so strikingly calculated to show the real nature of beauty, that I shall quote the three last verses of this chapter of Exodus.

"And *till* Moses had done speaking with them, he put a veil on his face.

"But when Moses went in before the Lord to speak with him, he took the veil off, until he came out. And he came out and spake unto the children of Israel *that* which he was commanded.

"And the children of Israel saw the face of Moses, that the skin of Moses' face shone: and Moses put the veil upon his face again, until he went in to speak with Him."

Here, then, we have a strong case of divine perfection and beauty, which may be associated with the organs of life; and, although we are not to expect so high a display of it in this life, we are justifiable in the belief, that dignity of soul is ever a type, or resemblance of this excellence; and that genuine beauty is that angelick serenity and steady lustre of face, which flows from inward workings of the mind. And, it may be worthy remark, here, that common beauty is characterized by so much of a *sameness*, that it loses much of its apparent value, from that circumstance; while genuine beauty, flowing from virtue and other divine perfections, has a progressive quality of improvement, which renders it more and more beautiful; and as it progresses in the contemplation and discovery of the supreme fountain, shall become more and more sensible of the little comparative value of bodily exterior, and of the unalterable greatness, goodness, and mercy, of that Being from whom every creature receives *being*, and whose face shall ever be veiled, for He has said, "Thou canst not

see my face: for there shall no man see me and live." Thus it would appear that to see the divine perfection would produce extinction, and that, as the creature shall become more intelligent, the great SUPREME will recede more and more, by the splendour of his immeasurable wisdom, and perfections.

I hope I shall be pardoned for carrying my illustration a little further; and I wish to call the attention of the reader, again, to the circumstances attending the case of Moses: "he put the veil upon his face:" here we may suppose, not only, that such was the vast serenity and dignity of his countenance, that it would have humbled the beholders in so great a degree as to have destroyed, or have materially impaired their faculties of mind, but, also so strongly impressed on his mind an increase of the divine nature, that it would have exposed the weakness and corruption of his kindred to have seen them when he was thus clothed with this additional mental power, arising from so striking a display of Deity, and would probably have given him future pain; and hence, he was veiled till his mind had fallen to its regular human state or condition.

I hope it will be perceived that these observations on beauty, are intended to impress on the female mind, or rather the mind which is associated with the female economy, that while feminine beauty consists here, in good part, in cleanliness, reasonable dress, &c. that permanent worldly beauty consists, principally, in a temper, and actions, corresponding with real excellence, *which knows no sex*. What value is there in the butterfly's gaudy dress? these ephemeral tinsels, like the flower of the morn, are cut down at eve! But if *these* are the idols of the female heart, or if *these* come at the expense of virtue! I shudder at the thought.

Let me, then, admonish the female to abhor the thoughtless, the wicked practice of *tight lacing*, for the improvement of the shape; for common sense, religion, and your relation to this world, forbid this practice: neither do you gain one advantage from it; for I do aver, without fear of contradiction, that many homely women have reciprocated with their husbands the utmost felicity,

compatible with this life, who, in the common acceptation of the word, were really homely; and I can point at once to the family of our immortal Washington. Where, or what, were the charms which captivated the hand, the heart, the very soul of this great man? Was it a woman squeezed thin as the reed, or was it the woman all sensibility of show, or of vanity? No, no; it was the eye which sparkled with virtue, and with that serene and lovely spark of Deity, which, nurtured and cherished within, displays the index in the expressive eye! In this heavenly organ, which says, to every language, cease to speak of me, for thou art *dumb*, Washington read the movements of the soul.

And let it not be forgotten, that this kindred eye was suited to the choice which his judgment approved; while the shallow tinsel covering the empty or vicious mind, or even the refined mind without energy of body to give action to the living sparkler, will ever be most likely to captivate the empty beau, whose discernment is as shallow as his flatteries are temporary; for so soon as the exterior charms are gone, what he took for gold is found to be but tinsel! And the days of age are days of heaviness! while, of all others, the days of age are the most happy to those whose souls, as it were, are fed by the same oil—the smooth and silvery flames of life unite, while Deity, smiling propitiously on the happy union, spreads over the evening of their days the kindling *electron*, to lengthen out the flame of life, and gradually leads to that happy condition where naught is fashioned by hands, and where distinction of sex is unknown.

I have said, your relation to the world required your avoiding this unwise custom; if it be asked, "whose concern is it, if I injure myself; I am the sufferer, and if I choose to run the risk who has a right to object?" I answer, that this language can only be just, on the supposition that the consequences are confined to yourself; but have you ideas of becoming a mother, and of entailing misery on your offspring? if you view this lightly in anticipation, its realization will be doubly severe, and the idea that you, by the follies of your youth, rendered your child miserable, or have brought it into the world to suffer

and to die, will wring your heart with the most poignant grief, and shade the hair of your head with the silvery frost ere the season come; or may, in the morn or noon of your life, lead you to that gulf of poison, where consumption on downy wings wafts her seeds, and finding the kindred soil in your *little, impoverished, confined bosom*, there she plants the deadly seed; and while your soul ardently desires the converse of kindred or friends, this cruel foe of the female, lops off at every stroke another thread! and soon closes your eyes from the vanity of tinsel, and the cutting and galling machines, which you have proudly, vainly worn, in defiance of friendly admonitions.

Oh! mothers, how long will you tolerate this slow method of suicide? rise up in your real nature; clothe your minds with the vestments of angels, and as you yield up the *nectar*, from y ur *warm bosom*, instil into your male child an abhorrence to murder, in the form of duelling, and of intemperance; and into the female, an abhorrence to the vicious practice of tight lacing; then shall ye discharge the most sacred duties of mothers, and while you enjoy much felicity here, from the reciprocated affection of your daughter, whose heart dilates, unconfined, to a proper size, and fills the woman, not with undue sensibility and irritability, but with the big, good, feminine heart, which can enjoy itself, and impart to the man of her choice felicity and happiness, never known where a forbidding constitutional debility is predominant; you may then close your eyes on the world, in the belief that you have performed one of the greatest works towards the maintenance of health, to your posterity; and may be greeted, at the *final call*, with the cheering voice of the host of heaven.

## SECTION II.

### *Of the Menses.*

I pass on to speak of that peculiar habit which so strikingly distinguishes the female, and on the regularity of which their health in some measure depends, from

years of discretion, till the evening of life, I mean the menses. As the means which have been pointed out, in various parts of this work, for the promotion or maintenance of health, is equally suited to the female; and as temperance, regularity and activity, will alone infuse health, I shall proceed to point out, the different periods at which this discharge requires particular attention; and then speak of it in the diseased state.

In speaking of those interesting periods, I think proper to premise, that in general a great errour prevails in supposing health is maintained, only, by this secretion of the menses; and that when it is disordered, we have nothing to do but procure its return, and health follows of course. This is an errour, for many women who menstruate tolerably regular, are unhealthy; and many during acute and other diseases menstruate without any manifest advantage, or injury from it.

It must be admitted, that this discharge is of vast importance to the female; and where it is long absent, or irregular, the health is bad; but the truth is, that some disorder generally precedes these irregularities; and thus the disordered menses is not the cause of the disease, but the disease is the cause of this obstruction, or irregularity. So that we are to direct our attention to the state of the system, and prescribe according to symptoms; and the menses return as a matter of course.

This errour respecting the female habit may be compared to the notions of the ignorant, about appetite when sick; all their lamentations are about eating, and they are ever pestering the physician for something to restore the power or desire of eating; not knowing, or stopping to reflect, that when the disease is removed, appetite returns as a matter of course. So with the females, when their menses are disordered, they stop not to inquire the cause, or to reflect that they are diseased, and that when this disease is removed, the secretion being a natural condition of the healthy woman, comes again when health returns, with as much certainty, and under precisely similar circumstances, as the appetite of the case above represented.

This view of the case is of vast importance, and should be a caution to females, not to take the rash advice of old women, who under the sanctified appearance of age give advice, often unsafe, because predicated on false views, or rather without any view at all, except it be that of wishing success; and it is a lamentable fact, that those who are the least competent, are the most willing to advise; and incalculable mischief is done to females, by the mistaken notion of *forcing* the menses.

All the usual remedies are of a heating nature, or what *they* call *forcing*, and it must be evident, that if a woman is labouring under inflammatory diseases, which are most common, these heating articles must do immense mischief: consumptions, and other fatal diseases, are the consequences.

Let me then admonish the female, that, under all circumstances, she is to pay especial regard to her general health, and in ninety-nine cases of an hundred it would be better if she paid no regard whatever to her menses, as a part of her disease.

If you have an inflammatory disease, it will be most speedily and safely removed by the usual means, as bleeding, purging, low diet, &c.

If you are affected with chronick debility, or with low disease, tonicks and stimulants, as bark, iron, exercise, generous but light diet, &c. will restore the tone of body, and in either case, as health returns, the menses comes as a matter of course.

I have long been so sensible of *this true state* of the case, and also that this trifling secretion once a month, when fully established, operates principally on the uterine system; and by giving health, and a proper degree of excitement there, contributes, indirectly, to the welfare of the general system, that for several years of an extensive practice, I paid no more attention in acute diseases to the menses, than I did to the appetite for food, for I was well convinced from observation, that of whatever importance the regular recurrence of the menses may be to women, that it is only to be regulated or controlled, by due attention to the usual means for promoting health, when health is present, and in disease, by

examining into the symptoms, and founding our indications of cure, on them.

## SECTION III.

### *Of the Appearance, and Disappearance of the Menses.*

The commencement of the menses, which occurs from the thirteenth to the seventeenth year usually, and which ceases from about the fortieth to the fiftieth year, are periods which are supposed to be particularly interesting. That this change operates very powerfully on the system, at both these periods, is very certain and well known; nor is there any wonder in this. The irritability of the system, which arises from a new action, of which the whole economy partakes, and keeps up a kind of fever, is always a critical time of life, and requires a most scrupulous attention; not, however, to *nostrums;* but to greater regularity in whatever concerns the affairs of life. All rash exposures to cold, long dabbling in cold water, indulgence in trashy vegetables, violent fatigue, hearty meals of harsh food, rash drinks of cold water, or the use of ardent spirits, are to be carefully avoided. Warm clothing, regular sleep, reasonable diet and exercise, and open bowels are some of the principal means for promoting health; and it may be added, that at these periods women should view themselves, in some measure, as invalids entitled to a little indulgence from all the more severe duties of life; remembering always to avoid too much indulgence; for to want exercise, &c. in a reasonable degree, is an *extreme* to be avoided with as much care, as the opposite excess: and if such persons are taken sick they are to be treated as such, without any particular regard to their condition, as respects the menses.

# OF A DISEASED STATE OF THE MENSES.

## SECTION I.—SUBSECTION 1.

### *Of Painful Menstruation.*

THE disorder of this secretion may be treated of,

1st. As *Painful.*
2d. *Reduced* in quantity.
3d. *Excessive*, and
4th. *Retained.*

I shall speak of them in the order in which they have been enumerated.

Painful menstruation, as far as my observations enable me to judge, is always accompanied either with a deficiency of this secretion, or it is accompanied with the formation of a membrane, or skin-like substance, which is discharged at the usual periods; in this last case the menses are sometimes deficient, but at other times it is copious. These different conditions do not call for any particular difference in the treatment, being but a different grade of the same disease.

This disorder of the menses is, perhaps, always an inflammatory disease; but as the inflammation is chronick or habitual, we are not to expect to remove it by any sudden application of the usual remedies for inflammation, as bleeding, active purging, &c. On the contrary, use gentle evacuations, during the spells of pain, and in the intervals endeavour to raise the system above this low grade of inflammatory action, by means of stimulants of a particular kind: these are, principally, such as are found most useful in chronick rheumatism; and hence, there is grounds for believing, that this disease partakes of the rheumatick condition.

I believe, with the great Denman, that no woman in the habit of forming this membrane, will conceive; and also, that unmarried women or virgins, are liable to this disease; but it seems to have escaped the notice of this acute observer, that in a great majority of cases of this affection, in the unmarried state, that a change of their condition is one of the most effectual means for its removal. The formation of this membrane is a distressing malady in all cases, but is particularly so with the unmarried; because severe *uterine* pains attend, and, frequently, partake so much of the bearing down pains, and other symptoms resembling labour, that unjust suspicions are often, thereby, excited: indeed, I have met with a few cases so strongly resembling abortions, that I was led strongly to suspect young ladies, of high respectability, until my doubts were cleared away, by the recurrence of these symptoms, at the usual times or periods of menstruation. And I am led, here, to mention that such has been the violence of the pain, itching and distress, that ill nature or ignorance might have supposed some violence had been committed, with a view of procuring abortion: and further, this membrane being detached, but in part, may fall down and close up the mouth of the uterus; the *menstrual vessels* go on to secrete a fluid, which accumulating till the uterus is distended, a violent set of symptoms are thus excited; and the abdominal muscles being brought into vigorous action, forces down the contents of the uterus, with a force or violence, which may not only raise suspicions, but may, unquestionably, lacerate the *hymen:* and hence we may call in question the opinion of Denman when he says, "the *hymen* is found generally, if not always, in virgins;" and when he says, "the hymen is peculiar to the human species, from which circumstance a moral writer might draw inferences favourable to the estimation of chastity in women."

I am not going to call in question, the propriety of considering this a condition which characterizes the virgin, in general; and therefore, is always a strong ground of suspicion when wanting; but to lay this down as an infallible criterion, by which we are to consign a woman

to infamy, is unwise, unjust, and ill founded. Because nature, in her occasional formation of *lusus naturæ*, adds supernumerary parts in some cases, but withholds them in others; and in both cases, her sportive, or vicious freaks invade every part of the body; and if she sometimes forms the hymen so strong, as not only to be a sufficient and absolute bar against unchastity, but so as to prevent the escape of the menses and thereby excites most distressing complaints, calculated to raise suspicions, till the real nature of the case is known: is it not a fair inference, that the opposite, or a very thin hymen, sometimes exists, and that the merest trifle may deprive the virtuous woman of this common mark of chastity? But more especially when disease, such as that above described, happens to be associated with a weak hymen, who would risk their reputation on this mark of chastity? Women have been born, as I have seen, with one mamma, without arms; human creatures are born with strong characters of the hermaphrodite condition, and after all this, is woman to be condemned for want of the hymen? I have long thought it a good rule in taking evidence, to appreciate *that which is related*, more by the general character of the testifier, than the consideration of an oath, where the character was notoriously bad: so, in cases of judging the female, we are always to give great weight to the general deportment and character, nor venture hastily to condemn, on premises which will sometimes be found ill grounded. Upon the whole, this mark of chastity is to be looked for almost universally, and requires all the weight of good character, and of other circumstances, to support the character: natural defection may, generally, have the testimony of a mother. But humanity pleads here for the orphan! I shall conclude by making this further remark; we are beset by *fallibility* and *defection*, of various kinds; correct deportment in all the various duties of life, forms the character; and let this be the test: if we have doubts, *time* will remove them; then let us beware lest we condemn the spotless soul of the virgin for bodily *defection;* which she can mostly control, but can never form.

SUBSECTION 2.

## *Of the Treatment of Painful Menstruation.*

In cases of painful menstruation, the following course, persisted in for a sufficient length of time, has mostly answered my wishes. In the spells of pain, and especially as soon as it occurs, bleed either in the arm or foot, and, if the symptoms are severe, we may take a pretty large quantity, or we may repeat the next day. Take a portion of castor oil, or rhubarb, with a few grains of calomel. Use emollient glysters twice a day, and if the pains of the uterus are severe, but more especially if the formation of skiny substances, are known to take place, milk and water, warmed, are to be thrown very frequently into the vagina, with a new clean apparatus formed of the bladder, &c. in the usual way; and the pipe ought sometimes to be entered into the mouth of the uterus, and the milk and water injected into its cavity. The mouth of the uterus will readily be discovered, by feeling with the finger, as it lies loose in the vagina; at its lower rounded smooth end, an opening can easily and distinctly be felt. I esteem the free and constant use of these glysters, and injections into the uterus, of primary importance. Sometimes benefit is obtained from sitting over hot water, or bitter herbs boiled in water, &c.; but in general, they should be avoided, as they predispose strongly to taking cold. If the pains continue beyond the third or fourth day, notwithstanding these remedies, together with the use of a low diet, mild tepid drinks, and rest: anodynes are now to be used, and carried as far as may be necessary for subduing the pain; the opium, or laudanum, should be combined with a little ipecacuanha, or a double quantity of sweet spirit of nitre given with laudanum, that is, mix about ten drops of laudanum with twenty of spirit of nitre, and take this every three or four hours as the case may require.

In the intervals, between the times of the menses or pain, at which time it is no uncommon thing for the patient to enjoy good health, active measures should be pur-

sued to remove that peculiar condition, or *diathesis*, which keeps up the disease, and I know of no habit which requires a greater sameness of treatment.

The milder cases will yield to the use of the volatile tincture of guaiacum, taken in doses of one or two tea spoonfuls, twice a day, in a little sweet milk. If the case yields not to this remedy, and due attention to the bowels, we must alternate the use of the tincture, with the use of calomel and opium: a pill containing two or three grains of calomel and half or a whole grain of opium, may be taken at bed time; and so soon as the slightest soreness of the gums is perceived, we must desist and resume the tincture, allowing a day or two for the mercury to wear off, and thus continue to use these medicines, alternately, till we subdue the disease. In cases attended with marked constitutional debility, we should use the iron pills, in conjunction with the tincture; not, however, omitting the mercury, unless there be well-grounded evidence of scrofula, which should ever be a bar to the use of mercury.

But I do not recollect one case of this disease, which required the use of chalybeates. The tincture of guaiacum is a principal remedy, but in inveterate cases, and especially in the married state, I would advise the use of mercury, and am well convinced it will sometimes remove barrenness, which may be owing to this morbid condition of the uterus. I have made it a rule, for the last years of my practice, to recommend matrimony in obstinate cases; and although the disease returned for a term or two, they have generally conceived, which effectually destroyed this habit.

In all cases of this kind, a diet reasonably good is necessary: all vegetable trash should be avoided: spirits, spices, fatigue, passions of the mind, indolence, are to be avoided. A milk diet, with light animal food in moderation, the use of boiled wholesome vegetables, as potatoes, onions, rice, turnips, and good fruit, fresh or dried; horseradish, a little garlick and mustard, a little whole mustard seed, now and then, will be the most suitable in general. In full habits, a diet somewhat more absteminous will be necessary. Exercise, adapted to the

strength, is to be constantly pursued, and the cold bath may be useful in cases accompanied with direct debility.

## SECTION II.

### *Of a too sparing condition of the Menses.*

We meet with two very opposite states of the system, which must be attended to in prescribing in those cases; and it has been remarked, in the sections treating on menstruation, that these derangements of the *uterine purgations* are the consequence, mostly, of some previous disease. The two opposite states alluded to above, are, first, those accompanied with a pale leucophlegmatick look, and an evident want of power or energy of the whole body, together with a bloated, or lax state of the limbs; and with vapours and indigestion. The other is accompanied with most of the above symptoms, in a less degree, but attended with a florid complexion, and a feverish disposition, which is readily augmented by fatigue, full diet, and such like.

In the first of these conditions, we are to endeavour to rouse the languid action, by tonicks, and particularly by chalybeates. The muriated tincture of iron is a valuable medicine here; but, I have seen great benefit from the use of the iron pills, and common bitters. Bark and elixir vitriol are also valuable articles, electrical shocks may be used occasionally, passed through the region of the uterus.

If these remedies prove ineffectual, the use of common madder may be alternated with them: half a dram, two or three times a day: or the pills of calomel and opium, may be given for a few days, now and then, and these succeeded by the use of good bitters, as gentian, columbo, or the bark; or iron, elixir vitriol, &c.

A pretty generous but light diet is to be used, and exercise, proportioned to the strength, must be persevered in, avoiding fatigue. Riding on horseback will generally be suitable. A glass of good wine, will be proper, now and then, and it is essential that the bowels be

kept open; aloes and calomel will answer best for this purpose, in general.

It may also be remarked, that a gentle emetick, or purgative, previous to entering on the tonicks, and also once in two or three weeks, will be useful in freeing the system from retentions, which may be present, from the sluggish state of the vessels and glands of the body.

In the second condition, with the florid face and feverish habit, we are to use a diet somewhat reduced, but not too low; wine and spirits are to be avoided; exercise to be recommended; occasional small bleedings, and aloetick purges; cremor tartar and nitre; small doses of ipecacuanha and nitre; an emetick, &c. are to be used till the system is a little reduced, when the use of bark, and elixir vitriol, bitters, &c. with the occasional use of calomel, will generally answer our wishes, by due perseverance; for it must be remembered, that chronick diseases, of which character this partakes, are, in general, only to be removed by a pursuit of some regular course.

## SECTION III.

### *Of the State of Excessive Menstruation.*

This disorder may either be excessive in quantity at the usual periods; or from its too long continuance; and also from a too frequent recurrence of this discharge. But a distinction of more practical importance, is, that all these varieties may proceed from opposite conditions of the body. They may arise from a laxity, or want of tone; or they may proceed from fulness of habit, or from a disordered state of the uterine vessels, in particular: and both these states of the uterus, and its appendages may be of that laxity; or its opposite state of plethora, or fulness, or increased action.

The indications of cure in these cases, are to be founded on the state of the system: if there be debility and laxity of the habit, such means are to be used, as are calculated to give strength and tone to the system, as bitters, elixir vitriol; and, in the spells, opiates with a lit-

tle white vitriol may be taken, and rest must be enjoined. The application of cloths wrung out of cold vinegar, applied once or twice a day, will answer a good purpose. These cases in general, will not bear iron. But I think the bark, mixed with about half its quantity of cremor tartar, and some mild aromatick, as a little alspice, or cloves, is one of the best tonicks we can give in the intervals.

When it arises from plethora or fulness, we must bleed and purge moderately, give occasional emeticks; but if the health is not much affected in the intervals: we may in general, confine our attention to the spells of the discharge, and here, we should bleed, purge, give nauseating doses of ipecacuanha, and if these do not succeed, we may now apply cold bathing to the pubes, and abdomen; give opium and nitre. In the intervals cremor tartar, taken pretty freely, will in general answer a good purpose. But in many cases, regular exercise, sleep, diet, temperance in drinking, &c. will restore the health; for in most cases it arises from irregularity in some of these things, or from inattention to dressing suitably warm: and to pay more attention will often be sufficient to banish the disease.

## SECTION IV.

### *Of Retention, or total Absence of the Menses.*

This may be reckoned, in some measure, as of two kinds, such as sometimes occur in women who have menstruated, but afterwards, from some disease, it has been checked; or such females as go beyond the usual term of its appearance.

In all these cases, we are to pay especial regard to the general health; while that is good, we should by no means interfere; for we may much more easily do mischief than good. It will be advisable, however, in general, for such females to view themselves as invalids, in some degree, and therefore it behooves them to observe unusual care, and avoid all excess or irregularity. If disease come on, they are to treat it according to the

symptoms, which in full habits will consist of moderate evacuations by bleeding, purging, &c.: and in the opposite or low state of the system, iron, bark, elixir vitriol, and other tonick or strengthening remedies, &c.

## SECTION V.

### *Of the final Cessation of the Menses.*

Many women are under great apprehensions about the period of the final cessation of the menses: and I verily believe they suffer more harm from their groundless apprehensions, than from the disorder. They seem to forget, that, it is as natural an operation of the body, for the menses to cease at a certain period of life, as it is for them to exist at another period.

I have said, in section third of this chapter on the diseases of women, that such women are invalids generally; but let it be remembered, that they are not to tamper with medicine without cause, nor are they to view every disease, with which they are attacked, as proceeding from this cause, which is too often the case, and leads to improper views, and prescriptions; because they are always founded on false notions about this supposed diseased state of the menses.

And they had better, in general, direct their attention to the state of the menses only when it is excessive, or painful; in these cases, rest, mild glysters, and a moderate bleeding, in full habits, will answer every purpose; in weakly persons, rest, glysters, and a few anodynes, will answer every reasonable expectation.

If they are otherwise diseased, medicines, &c. are to be used according to the nature and state of the disorder; and here, in all severe cases, a physician of experience should be called in.

# OF PREGNANT WOMEN.

## SECTION I.

### *Introductory Remarks.*

TO describe all the diseases which may occur in the state of pregnancy, in child-bed, &c. with the various means necessary for their removal, and convey the necessary anatomical knowledge, belongs most properly to books on midwifery, and requires room which cannot be bestowed on it in this work. I therefore shall but briefly mention some of the peculiarities of the pregnant woman, and endeavour to correct a few errours which prevail, pretty generally, respecting their condition. There have been warm disputes tending to prove, or disprove, the idea of pregnancy being a state of disease; but here, as in most other things, human actions are carried to extremes.

One set would have a woman all disease from conception to the completion of her parturient term, while another would argue that so far from pregnancy being a disease, such women are, in general, more healthy and exempt from disease on this account; and that a woman left to herself would seldom, if ever, perish either from disease during pregnancy, or in the parturient state, unless it be from disease or accidents, which might arise independently of pregnancy.

I believe the truth lies between these two extremes. Pregnancy is not a disease, but it is a predisposition to disease, and predisposes to a peculiar set of maladies; while the woman at the same time is liable to diseases which affect them in common with other women, or mankind in general. But this predisposition is not a necessary condition of the pregnant woman, but ari-

ses from her infirmities, which often spring from refined life.

In the first edition of this work, some reflections were offered on the curse pronounced on the conception, &c. of woman, at the fall of our first parents. But, after more mature reflection, I have thought advisable to omit them in the present edition, because it is a subject which, more properly, belongs to books on midwifery.

## SECTION II.

### *On the Advantages of Exercise to Women.*

Independent of all reasoning on this subject, I think experience plainly teaches us, that pregnancy is not a disease, and it is probable that with all the strength of constitution which women do sometimes possess, there is not even any particular tendency to disease. But as we find women in general, they carry during their pregnancy such a tendency, and are also liable to many incidental disorders in the term of parturition; by which I mean, that period which begins with labour, and ends when health has been regained.

This view of the case is of vast importance, as it leads to admonish the mother, that *as the stamina*, or soundness of constitution of her daughter is established by all the usual means bestowed upon her from infancy, so will be in the main, the future hopes of her daughter.

But it is especially to be recollected, that pregnancy and parturition is to the woman entirely animal; and if she loses some of those animal advantages which the women of the forest possess, she is amply compensated for a reasonable weakness of body, by the manifold endearments and blessings of refined life. This weakness of constitution must be reasonable, or women loses all the greater blessings of life; for which all the learning and embellishments of the mind cannot compensate, and therefore in rearing these tender plants, let especial care be taken to unfold the body by sufficient exercise.

Let them use their own limbs and not those of servants; these form, if duly expanded and strengthened by use, a support for them in the hour of travail. The limbs of the latter, like the shattered reed, may sigh to the wind, but sighs avail not in the hour of trouble! nor are we rashly to call on heaven for aid. The ways and means were originally measured out to mankind, and they who neglect the means, invoke an insulted heaven in vain!

If your situation requires the avoidance of the common duties, on the part of your daughter, let walking, dancing, and riding, be enjoined as an indispensable duty. And rather forego some of the softer delicacies, or extreme refinements than risk the health of your posterity.

And it will be found in general, that the jolly girl who can crack the whip, and mount the prancing but safe horse; leap the ditch; or drive the carriage, &c. will not only be more acceptable to the man of sense, but the very consciousness of her own strength, will paint her cheeks with the bloom of health; while the woman, all sensibility or refinement, conscious of bodily weakness, startles at her own pale face, and as she applies paint for weakness, spoils the work with her own tears!

## SECTION III.

## *Diseases of Gestation, and of the usual Remedies.*

### SUBSECTION 1.

### *Of the Diseases of the early Months, &c.*

It may with truth be said, that most of the diseases with which pregnant women are sometimes affected, occur at all other periods of life: but there are a few disorders which are evidently the consequence of an increased irritability of habit, and which arise from the stimulus of the *active uterus*. There is, however, no necessity for distinguishing these from those which are more incidental; for I have elsewhere endeavoured to maintain

that they are all incidental, as respects the woman of complete animal powers.

The most usual disorders which attend the early months, are sickness at stomach and vomiting; heartburn; irregularity of the bowels; longings; swellings, and pain in the breasts; hysterick fits; wrong position of the womb.

### SUBSECTION 2.

### *Sickness and Vomiting of Pregnant Women.*

This arises sometimes in very opposite habits: in those of good habit, if there be a feverishness, or flushing of the face, or bleeding at the nose, with much straining to vomit, and general evidence of fulness, we should bleed, use a light vegetable diet, and the most cooling drinks, and keep the bowels open with the mildest purgatives or injections. When these symptoms occur in reduced habits, attended with languor, and a disposition to sweat, &c. a light nutritious diet, the moderate use of good wine, pleasant bitters, as bark, columbo, &c. will be advisable. If the case is obstinate, in both states of the system, unless extreme weakness forbids, a very gentle emetick of ipecacuanha will be advisable. Opiates, particularly in weakly habits, will often be found useful; or an anodyne plaster may be worn over the stomach. Exercise, accommodated to the circumstances of the case, is never to be neglected.

### SUBSECTION 3.

### *Heartburn of Pregnant Women.*

This disease is common at every period of pregnancy; but as it often occurs early, I have placed it here. If attended with costiveness, magnesia and rhubarb will mostly answer our wishes; a little milk and lime water, or a few peach kernels; a little soda water; calcined magnesia; or a little nice gum arabick dissolved in wa-

ter, and made tart with lemon acid and sugar, and taken in small quantities occasionally, will be found useful.

### SUBSECTION 4.

### *Irregularity of the Bowels of Pregnant Women.*

The most usual state of the bowels, when disordered in the early months, is a looseness. If it is accompanied with sick stomach, a gentle emetick of ipecacuanha should be taken: and the foulness which accumulates from an increased action or excitement of the bowels, should be removed by the use of magnesia and rhubarb, or best castor oil, or the epsom salts.

It these do not succeed, there would still be no safety in using opiates, or astringents, unless the habit is reduced; and in this case they are indispensably necessary. The use of glysters of starch and water will answer a good puspose, where there is much heat and pain in the bowels; and if the habit is reduced, laudanum should be given in the starch glysters; and this will be the best mode of administering opiates.

### SUBSECTION 5.

### *Unnatural Desires or Longings of Pregnant Women.*

Longings have been a source of much confusion and diversity of opinion; some arguing that they might even influence the welfare of the child; others denying any possibility of such influence, while many have been wavering between these opposite opinions, and of course have no settled opinion about it.

I think it highly probable, as suggested by the celebrated Denman, that the first opinion, or that which holds that even the child was liable to suffer from this longing, arose from good nature or humanity, at a time when the female was degraded, and held the place of the servant, instead of that of the wife of equality. And was kindly intended to relieve them of a part of the toils which unpolished or unenlightened man is known to exert over the female in every country.

But these causes have ceased to operate, generally, in our country. It is time to banish such unfounded opinions from every female mind; for it is not only an errour as commonly viewed, but leads often to mischief, by impressing the mind with anxieties injurious to health. Hence it may be said, longings lead to disease, because they disturb the mind; and a disordered mind will prey upon the health, whether arising from real or imaginary evils.

Experience warrants fully the belief, that longings can never injure the mother, or child; on the contrary, an indulgence or gratification of such desires is highly detrimental, and should be viewed as a disease of the stomach.

The woman nearly in a state of nature, probably knows nothing about these longings, and when they occur in civilized life, they call for the aid of medicine, like every other disease. It may be remembered, however, that in some rare cases where the patient is much debilitated, appetites seemingly somewhat extravagant, are to be indulged reasonably, but in no greater degree on account of the pregnant state, than in any other condition of the diseased body; and therefore, the pregnant woman who otherwise enjoys health, should curb every unnatural or unreasonable propensity.

A gentle emetick, or a few doses of epsom salts, or rhubarb und megnesia, will generally, with temperate diet, relieve those cravings. I am clearly of opinion, that the increased irritability of habit which attends pregnancy, calls for, and strongly claims indulgence in every thing relating to life, but, the golden rule here is *moderation*.

### SUBSECTION 6.

### *Swellings, and Pain in the Breasts of Pregnant Women.*

A remarkable sympathy or connexion exists between the breasts and uterus; and, in particular, all the natural and healthy operations of the impregnated uterus are

felt in the mammæ; pain and swelling is generally present at an early state of pregnancy, but seldom require any thing more than leaving the breasts room to dilate freely; and living a little abstemiously, carefully avoiding stays, &c. A little warm oil may be rubbed into the breasts, once or twice a day, if the pain is considerable; or if still more severe, a bleeding and a cooling purge or two, may be necessary.

### SUBSECTION 7.

### *Hysterick Fits, and Faintings of Pregnant Women.*

These sometimes occur in the early months in irritable habits: if they arise from the irritation of the distending uterus, they are seldom if ever attended with any danger. They are mostly temporary, but if severe, remedies must be applied, suited to that condition of the system, which happens to be present, for these disorders may arise in opposite conditions of the system.

If the habit is full, we must advise bleeding, and relieve congestions of the bowels, by cooling physick or glysters.

If the habit is weakly and irritable, opiates, with due attention to the bowels, will answer; or other antispasmodicks, as assafœtida, ether, &c. may be used.

Particular attention is to be paid to the mind, and every reasonable allowance made for its increased irritability, but let no weak minded woman claim to herself undue allowance, in this respect; prudence here, is almost every thing, and therefore, every prudent woman, while she receives indulgence, is to make it her constant study, to reciprocate the favours of good nature; and by endeavouring to please others, she can never fail to please herself.

SUBSECTION 8.

## *Wrong Position of the Womb.*

About the fourth month, the womb begins to rise from its situation in the pelvis, and to mount slowly into the abdomen. If it happens to lose its proper position, so that its longest diameter presses on the *rectum* and bladder, unpleasant symptoms are excited, as bearing down of the womb, *tenesmus*, inflammation of the bladder, obstructed urine, and obstructions of the bowels.

If these symptoms become troublesome during the fourth month, or a little sooner or later, the patient can in general determine, by feeling with the fingers, whether the uterus is wedged or confined in the pelvis: if it is, rest, in time, will often alone remove the complaint; but if it has advanced, the case becomes critical, and requires advice.

The womb is to be replaced, by gentle pressure upward, and the patient to keep pretty much in a horizontal position. But sometimes the uterus is not easily raised, and the case becomes urgent from the confinement of the uterus, &c. in this case the *catheter* is to be introduced, to draw off the water, and glysters must be given, to open the bowels; and if the symptoms notwithstanding run high, we are by all means to bleed, enjoin a low diet, and then give gentle anodynes: but this case is mentioned most, with a view to put the woman upon her guard; and when it occurs, the best advice should be obtained without delay.

## SECTION IV.

## *Of the Diseases of the Latter Months, &c.*

### SUBSECTION 1.

### *Of Costiveness, &c. of Pregnant Women.*

I shall here speak briefly, of some of the most common diseases which trouble women, in the latter months of pregnancy. These are costiveness; piles; swellings of the legs; pains in the back, &c.; cough, and difficult breathing; cramps; colick-pains; suppression of urine, and incontinence of urine.

It is probably true, that pregnant women are less injured by costiveness, than in any other condition of the body, and in general, if no inconvenience is experienced from it, they may leave the case to nature, observing every necessary regularity. But if inconvenience seems to arise from it, injections, or epsom salt, or castor oil, should be taken to remove it.

Reasonable exercise in general, with a vegetable diet, and the reasonable use of ripe fruit, will be found useful, provided no extreme debility of the constitution forbids; if this be the case, a light thin diet, consisting a good deal of fresh animal food, will answer a good purpose.

### SUBSECTION 2.

### *Piles, or Hemorrhoids.*

This is a common complaint in the latter months, but no particular difference is necessary between this disease in the term of pregnancy, than at other times: the reader is referred to the article on this disease.

SUBSECTION 3.

### *Swellings of Legs, Thighs, and Belly, of Pregnant Women.*

These swellings are only particularly entitled to notice, when they become considerable.

If they occur in delicate habits, rest, frequent gentle rubbings with a soft flesh-brush, or smooth flannel, are principal remedies, but still exercise is by no means to be wholly avoided; the bowels are to be kept open, and the diet suited to the circumstances of the case.

If there is a fulness, with pain, we should bleed moderately, give a gentle purge, and enjoin a low diet; and accommodate the exercise to the strength of the patient, not forgetting that moderate exercise is indispensable in all cases where it can be borne.

SUBSECTION 4.

### *Pains in the Back, Belly, &c.*

These arise from the pressure of the distended and heavy uterus, and will yield to occasional small bleedings; suitable diet; open bowels; and opiates, regulated according to the constitution of the patient. It is especially to be recollected by such patients, that they should change their positions frequently, as well during the night as during the day; and, in general, they should avoid much stooping.

SUBSECTION 5.

### *Of Cough and Difficulty of Breathing.*

These are complaints which are not often removable by any means till after delivery, when they will cease of course. They arise from the confinement of the chest, and this confinement is occasioned by the uterus, which now distends the whole abdomen, so as to press power-

fully upwards, and thus confines the *diaphram*, and the viscera of the chest.

If the difficulty of breathing is great, occasional bleedings, with low diet, in full habits, will have a good effect, but in reduced habits we must bleed with caution; mild opiates, combined with sweet spirits of nitre, may have a good effect in these cases. For the cough, the same remedies as are recommended for the difficult breathing, will usually answer. It is especially necessary in these cases, for the patient to breathe a wholesome air; their bed-rooms should be airy; they should sleep alone, avoid curtains about the bed, and in the day carefully avoid crowded or sultry places. Reasonable exercise, with a diet as low as can reasonably be borne, may be expected to have a salutary effect.

### SUBSECTION 6.

### *Cramps of Pregnant Women.*

These sometimes occur in the legs, thighs, &c. in the latter months; and especially at night. This affection must be treated on general principles: bleeding; laxatives; low diet, followed by opiates, may be used in full or good habits. In opposite habits, rubbing the parts with opodeldock, or ether and laudanum; and the use of opiates, and a spoonful of whole mustard seed, taken in molasses at night, together with a reasonable diet, will seldom fail to remove this severe complaint. Exercise and dry rubbings frequently repeated, must not be omitted.

### SUBSECTION 7.

### *Colick-Pains of Pregnant Women.*

These sometimes are severe, and resemble, in a good degree, the pains of labour. They may arise from the irritation occasioned by the *uterus* confining the viscera, but are often the consequence of eating unsuitable diet, or costiveness may have a share in its production. If

costiveness attend, this is carefully to be removed, but if the symptoms are urgent, opiates are to be administered freely; if fever occurs or is present, bleed. Glysters are to be given occasionally, while any tendency to these pains continues, and especial care is to be paid to the diet, and drinks, which are to be plain, and taken more frequently than usual, but upon the whole, the diet should be sparing.

If the colicky pains are obstinate, and we are not well satisfied the bowels are completely opened, an examination must be had of the *rectum;* this can be done by introducing a finger into the *vagina,* to ascertain whether there be not indurated feces confined in the *rectum.* For we are assured by Denman, that a retention of the feces sometimes occurs even where the bowels seem to be open, which may be owing to a narrow passage, which permits the thin feces to pass without removing the more hardened part. If such balls or feces are found on feeling, they must be removed by the finger, passed into the vagina, or a smooth instrument, in form of a scoop, must be passed up the rectum to bring down the confined matter, otherwise fatal consequences may occur from mortification. Purgatives are by no means to be given if we are aware of the existence of this complaint. They may in general be removed by taking a tube about twice the length of the usual ivory glyster pipes, and passing it carefully and gently through the feces, which can be felt, and as we pass among it with the pipe, let the usual contents of an injection be passed up. By repeating this a few times we will probably generally succeed, but great caution is necessary not to excite any pain, or use any violence.

## SUBSECTION 8.

### *Of Suppression of Urine.*

Little can be done in this affection till the woman is delivered, when it will cease, provided it has not been improperly treated. All that should be done in these cases is to endeavour carefully to evacuate the urine by

laying down, and pressing up the weight of the belly, as often as a desire to pass urine occurs. If this will not succeed, a catheter should be used as often as necessary, and in general this instrument may be used without hazard by females of reasonable discernment. But it would be best, in all such cases, to get the best advice.

### SUBSECTION 9.

### *Of Incontinence of Urine.*

This mostly arises from neglecting the case of suppression, and is to be removed by the same means. When this cannot be effected, the patient may be rendered more comfortable by preserving dryness of her under clothes, by wearing a large sponge, or several folds of flannel, which will require frequent removal.

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## OF PARTURIENT WOMEN.

### SECTION I.

### *Introductory Remarks.*

AMPLE instructions for parturient women are only to be expected in systems of midwifery; I shall, therefore, but briefly, point out a few errours which prevail, and conclude with a few general instructions.

Incalculable mischief arises from *superstition* in all the affairs of mankind; but when it operates on the mind of the parturient woman, it is doubly cruel and destructive; because, in refined life, they are always brought low, and require all our kindest attentions to support the trying hour of *travail*.

Superstition may be defined thus: a propensity of the mind to acknowledge things represented by others, without due caution in requiring the *data*, or grounds, on which things, or reports, are founded: hence, this lazy, low-bred jade, blind and vicious, is maintained by two propensities of the mind; and both of these propensities are vicious in their nature. The first of these propensities is a vain desire to obtain credit for superiour sagacity; and this begets another propensity in the mind, which is a desire to hide our weakness or ignorance; and so powerful is this propensity, that few ignorant persons can veil their ignorance in silence; on the contrary, in proportion to their ignorance, so will they be more loquacious; and as the most common thinker wishes to avoid detection in his sayings, they are ever anxious to propagate those kind of notions which are difficult to detect; otherwise they have to dread, not only a discovery of their ignorance, but are brought under the imputation of falsehood.

The other propensity is that lazy habit, too common, of admitting reports or sayings without examining the grounds on which they are predicated; and it is vicious, because as rational creatures we owe it to ourselves, to society, and to the Creator, to exercise our reasoning powers; and a first or leading aim in ratiocination is to reject such things as ought to be accompanied with facts, unless those facts are obvious; and, in the second place, those things which admit not of demonstration require all the force of long experience, or the most careful examination of their results.

A destroying monster has gone forth to slay *parturient women*, under the name of LEAP YEAR. And, reader, can you hesitate to believe, that an impression of this kind may and has done vast mischief, although it is wholly imaginary. Thus, some *would-be-wise* person starts an idea that leap years are fatal to parturient women; a pregnant woman anticipates the fatal blow at the end of her pregnancy, and the constant impression of fear seriously impairs the constitution; and as she was weak enough to give up her mind to superstition, without due examination, she often views things, the most

common, as ominous, till every breath of wind, or sound at night, rings the alarm, until she, like the frightened boy pursued at night by ghosts, at every accession of speed is pierced with new horrours, and feels the grasp of the pursuer at every spring. Every energy of the animal power are under heavy contributions in the case of the boy, and at length he arrives exhausted at his home, and congratulates himself on the happy escape from the man without a head, &c. But lo! the light of morn dispels his fears, and retracing the road of terrours, he meets a stump! a bush! a rock! and finds, indeed, *it* was without a head. And that he has acted a part which would have called forth plaudits for his speed, but which disgraced the weak mind.

Let the pregnant woman spurn from her confidence the weak, who would thus ignominiously set her mind to fly from point to point, like the frightened boy, but with less hope of escape. The boy runs for home, and hope supports the trembling frame; but alas! whence shall weeping woman derive her hope?—Like the unanchored ship amid the troubled waves, she is loaded with despair! This is a species of fear which pursues its victim by night, and in the light of day; but the light of reason dispels the gloom, and brings conviction to the mind that this report is founded on ignorance, and ought to suffuse the face of the *busy tattler* with shame, for propagating so cruel, and so unwise, and impious a tale.

I shall advance but two positions to clear away this demon, of human creation.

1. Nothing is more invariably true, than that the ways of providence are inscrutable, and particularly veiled in that kind of mystery, which prevents mankind from prying into futurity, and we are even expressly told, we are not to look for signs and wonders. This alone makes man's abode here tolerable, for, if the Deity had allowed that we should foresee events, an entire new order of things must arise, or man soon would perish under the load of anxiety which he might anticipate.

2. All the supposed mystery of a leap-year's influence falls prostrate before the simple fact, that it is wholly ar-

tificial, and established by the ingenuity of man. Time, as respects created bodies, runs from beginning to its termination, and as respects this world, the various parts of it have days, and seasons, regulated by their situations, as respects latitude, longitude, &c.: and the world existed for thousands of years, before mankind discovered the convenience of dividing time, so as to square their account of it once in four years. But people have been found making these periods of different lengths, thus we may have two days at the end of eight years, or three days at twelve years, or we may even go on until we add an additional month; so that there can be nothing in this notion of *leap years*, for they are arbitrary divisions of time, made by modern astronomers.

There are many other things which are held as ominous, but which would crouch before the test of reason. But all of them may exert a baneful influence, by working on the imagination, for here to imagine, is to admit, and to admit, is to bring about the consequences, of such admission, whether the fancy is founded on false or true premises.

Let me remind the pregnant and parturient woman, that Revelation pointedly discloses the protection of the SUPREME over the widow, and the orphan; and it is said "suffer little children to come unto me, for of such is the kingdom of heaven." And shall we believe that, that merciful God who protects the widow and the orphan, and whose kingdom fosters "little children," will forsake the pregnant or parturient woman.

At each addition to the flock of little children a Saviour smiles, and a virtuous woman who is the instrument of this increasing flock, of immortals, while she walks in that becoming humility to the divine laws which is required of all, may derive fortitude from the circumstance that she is under double protection, first she may reasonably look for equal protection herself, and more especial protection for the child of her womb. While she walks then in the narrow path of virtue, let her feel full confidence that she is especially protected; and if a neighbour sinks away at such a time, it can have no connexion with her.

From the commencement of life to old age, we are all liable to death; when or where it is to happen has been kindly concealed. Let us then be prepared, and without fear, or forebodings, discharge the duties assigned us; for it is both unwise and impious to apprehend danger when it is not actually present.

## SECTION II—SUBSECTION 1.

### *Of the diseases of Parturient Women.*

I come now to mention a few of the diseases which sometimes accompany parturition, and to suggest a few cautions and remedies. A woman may approach the parturient bed without apprehension, for it is a natural process, and the same protecting power which brought themselves into being, will sustain the approaching child and its mother. But to lose confidence, and hope, in the hour of *travail*, is to incur danger, for fear often begets evils, which it created.

## SUBSECTION 2.

### *Of Chills.*

Considerable chills often accompany the first symptoms of labour, these are best let alone; or if severe, a little weak warm tea may be taken. But wine, spirits, &c. which are often taken at such a time, are extremely pernicious; they may lead to inflammation of the uterus, to fevers, and many other evils.

## SUBSECTION 3.

### *Of Afterpains.*

Almost every female midwife, and especially the ignorant, are provided with remedies for *afterpains;* and often give heating cordials which do much mischief. Nothing is necessary but to keep the bowels open, with mild injections, or best castor oil, or rhubarb with a little

senna and coriander seeds; and as often as the pains are severe, take twenty-five to thirty-five drops of equal parts of sweet spirit of nitre and laudanum.

### SUBSECTION 4.

### *Of Puerperal Fever.*

If fever comes on before the third day, or after milk is formed in the breasts; or if it at any time runs higher than we may reasonably expect from the milk fever, but more especially, if it is accompanied with soreness, or constant pain in the lower part of the belly, the best advice should be got. If advice is not to be had, in reasonable time, we should bleed and repeat according to the violence and obstinacy of the pain and fever; cooling drinks, mild purges, and cooling powders of nitre and cremor tartar should be taken.

The diet must be very low, and free admission of air allowed, and strict attention to cleanliness by frequent changes of clothes, &c.

*For inflammation of the breasts,* or sore nipples, see the article on inflammation.

### SUBSECTION 5.

### *Of Vomiting.*

Vomiting often attends labour: in general it is not attended with danger, and requires nothing but a little chamomile, or nice green tea, to empty the stomach. If it becomes severe, a few drops of hartshorn may be taken, and in weakly habits a few drops of laudanum.

## SECTION III.

### *Concluding Advice to Parturient Women.*

Let it always be remembered, that prevention is better than cure, and therefore, it is a matter of the utmost importance to procure the advice and assistance of the

most skilful. A good deal of diversity of opinion prevails respecting our choice of men, or women, midwives, but this is an inquiry without reason, for the question is not of what sex is the practitioner, but what are their qualifications?

It is a lamentable fact that women midwives in general, commence practice without any instruction, and what is worse, few women of intelligence, or standing in society, will engage in this practice, for it is really viewed as mean and only worthy the attention of the meanest and most ignorant.

Strange infatuation, that in an enlightened country, the life of the MOTHER, and of the HEIR, is committed to the hands of ignorance! It is no uncommon thing for the kind husband to watch the sick bed of his wife, and while he freely calls in two or more physicians, to her assistance, still feels all the tortures of anxiety; yet when that same lovely woman is about to take the bed of *travail*, and has her child's life in some measure hazarded with her own, that same husband commits all to the care of some old woman, who is not only, perhaps, the most ignorant woman in the neighbourhood, but often nearly blind, and unhandy from age: and what is worse, mostly feels hostile to practitioners of superiour judgment, and will often make the most daring efforts in order to expedite, lest they may be thought unskilful, or some other practitioner called in.

It seems strange how so important an affair should have become so degraded in the eyes of the publick. A woman of respectability would disdain the name of granny, for female practitioners are held in equal contempt with the servant. A little reflection will convince us that this is all right, and that the ignominy is not attached to the profession, but to the *professor*. No wonder a granny is held as a low member of society, for the term granny is synonymous with poverty, and with ignorance.

Reader, from actual experience I can most truly say, I have seen such ignorance, daring adventure, actual mischief, &c. that, when I survey in imagination, over the face of this immense country, the danger, the suffering, and the actual destruction of our lovely females, and of

our infants, my eyes grow dim, and my heart swims in sorrow, and I might truly exclaim, oh! that mine head was a fountain of water, and my eyes a flood of tears, that I might weep day and night, for the slain of the daughters of my country.

A detail of what I have seen in country practice, would sicken the feeling mind; few can imagine the danger and injury which our women and infants suffer.

In the lower ranks of life I can readily suppose that some repugnance is felt against male practitioners, but where the mind has been enlightened, and where none but men of good character and of education, would be employed, such feelings can have no share in the things which conspire to keep up objections to men accoucheurs.

After much reflection, I am clearly of opinion, it is in good measure owing to meanness; an old crippled woman can be got for a dollar or two; the doctor will charge from five to twenty. What a saving? the wife of your bosom once in a year, or mostly every second year, subjects you to this expense. And is it so, that for the paltry consideration of a few dollars, you will subject a wife, and a mother too, to the care of stupidity, often blended with the most daring temerity.

But I forbear: each one must know best his reasons for countenancing this cruel degrading practice. I beg leave, however, to admonish every man who regards the welfare of his wife and offspring, to make it a matter of conscience to admit none to the parturient chamber but practitioners of probity and of experience.

And it is the height of folly, to suppose an old woman is qualified to take charge of the health and life of your wife and child, because she is a mother: common cases of midwifery afford no instruction; and, therefore, a woman might have seen scores of children born, and be wholly incompetent to the management of the slightest deviation from the most common cases.

Let it not be supposed, from these remarks, that I view child-bearing as so very dangerous as to call for any particular skill in general; on the contrary, assistance is seldom necessary, and it is by doing too much, that ignorant persons do most injury.

Accidents do sometimes occur, and very often the merest trifle is turned into a state the most dangerous, in the hands of ignorance. What anxiety! what pain! what fear might be prevented by employing the most enlightened and experienced practitioners in all parturient cases. What hope! what fortitude! and what power consequential of this hope and fortitude! may suffering woman derive from the presence of a practitioner of rectitude, of humanity, and of experience! The mind supported by this honourable confidence, carries the tortured body through the troubled waves, and if ideas of danger would assail her trembling heart, she drops her anchor at every *swell*. The means are present, if heaven bless them, for what more can she wish? How different is the case of her who is committed to the care of ignorance! Here, the heart trembles at every pause, and the suffering woman, as one without hope, looks out for approaching danger, and should it be announced, what must be her suffering!

Imagine a woman tortured, reduced and feeble, who has been brought thus low in the hands of ignorance, abruptly told she must send for the doctor; and what may we not suppose her anguish, more especially if she be a mother. What anxiety, what danger might have been saved by having called in a practitioner of judgment at first!

Oh! that some meek spirit would hover over the land, and with all the powers of love, invite every man and woman to unite, wherever honourable love exists, in revising and correcting this cruel custom of our country. Shall the American boast of the fair women of his country, while they are thus neglected? Rise as sons of liberty, and weave the shield! I plead for your mothers! sisters! and daughters! shield them from suffering! guard them from ignorant midwives!

It remains to offer a few words of advice respecting the necessary preparation, and of the most suitable management, during the child-bed state.

Great exertions are made by people, in the country, to procure cordials; wine, rum, spirits, whiskey, together with cheese, cinnamon, nutmeg, &c. as though they

intended to worship at the shrine of Bacchus. Would that there was half the anxiety about getting good advice, that there is about procuring these unnecessary stores.

Every housekeeper must be supposed capable of entertaining his acquaintances; but I feel full confidence in saying, it would be vastly better if spirituous drink was used with a more sparing hand, on these occasions. To the parturient women they are seldom necessary, or even safe. Such women are always more or less feverish, particularly till after the breasts are filled with milk. Although the weakness, under which they labour, is of a direct kind, still, such is the irritability and disposition to fever, that cordials can seldom be used. So soon as the milk fever is over, a diet reasonably nutritious will generally be allowable; but spirits, or cordial drinks, impart no sustenance, and will, in all cases, excite more or less fever.

Much errour is practised in keeping such women too warm: their apartments should never be warmer than they are accustomed to when well, and when feverish, their rooms ought to be cooler. Besides this practice of heating rooms too much, women in the country generally have too much clothing on: it is not uncommon for them to get to bed with as much clothes on as they usually wear; the injury arising from this source is immense, and therefore every effort ought to be made to banish it.

It would be well if those things were kept more private; as things now stand, every woman of slight acquaintance, expects to be invited to the feast, and much fatigue to the patient is often the consequence; besides, the visiters never come without news, and often of such a character as to do serious injury to the patient. It would be a good rule if none but a particular friend or two were admitted to the room of the patient, until she is able to sit up without fatigue.

Diseases of parturient women generally proceed from mismanagement; and as the system is always considerably reduced, it is always necessary to use the utmost expedition in getting good advice, as soon as any thing

amiss is discovered; and as men of medical skill are now to be found in every part of our country, the only advice absolutely necessary here, is to admonish them to beware of quacks, whether men or women, and conform strictly to the advice of those known to be competent.

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# OF DISEASES OF THE FEMALE.

## SECTION I.

### *Of Inflammation of the Uterus.*

THE reader, by turning to the observations on inflammation of the other viscera, and especially to my general observations on visceral inflammation, will be prepared to prescribe in cases of inflammation of the womb. This disease is sometimes met with in all the different conditions of woman.

It is known by pain in the lower part of the belly; extreme soreness is felt from feeling over the region of the uterus; there are considerable chills and flashes of heat; distress of countenance; a hard weak pulse; vomiting; frequent inclination to go to stool; obstruction of urine; and, in severe cases, delirium; and sometimes a discharge of acrid fluids from the uterus.

This inflammation is to be removed by bleeding, cooling mild purges, as rochelle salts, or epsom salts, or phosphat of soda, or best cold-drawn castor oil, emollient glysters; cooling mixtures of nitre, cremor tartar, &c.: always remembering, that we must regulate the strength and repetition of these remedies according to the strength of constitution, &c. The lowest possible diet, and cooling drinks, are indispensably necessary during active inflammation of the womb. And this treat-

ment applies to the parturient woman equally well as in other conditions of life.

## SECTION II.

### *Of the Prolapsus Uteri, or falling down of the Womb.*

This disagreeable complaint is often the consequence of too severe labour of females, such as too much standing, lifting, &c. It may also arise from whatever relaxes the body. There is, perhaps, no more common cause of this disorder than too early exertion after lying-in. It is not uncommon, where this disease is suffered to run on, for the uterus to be protruded without the *labia*. In relaxed habits especial care is to be paid to the general system, and every useful means for invigorating the body is to be pursued; much stooping, or straining, is carefully to be avoided, but reasonable exercise is never to be omitted. Costiveness is to be carefully avoided; this indeed, is sometimes the cause of the prolapsus. The bowels should be kept regular; the habits in general, must be temperate; mild astringent injections should be frequently used, of weak solutions of sugar lead in water, infusions of bark, or oak bark with a little alum; but if any considerable inflammation and pain are present, these articles must not be used; the patient should be bled, use emollient glysters, and foment the prolapsed part frequently with warm milk and water.

As soon as these symptoms of inflammation and pain are removed, by the above means, together with rest, the patient should resume the astringent washes, and other means for strengthening the parts affected, as well as the whole system.

Should all those things prove ineffectual, by applying to men of judgment, an instrument called a pessary may be had, which will render the patient more comfortable, by keeping up the parts.

## SECTION III.

### *Of the Chlorosis, or Green Sickness.*

This disease affects, principally, young women, and the unmarried are most subject to it. It is known by a bad colour, a dead-like whiteness in the face and other parts; great lassitude and heaviness; swelling of the face and ankles; tension, and weariness of the feet and legs; difficult respiration, or rather a panting after exercise; palpitation of the heart; pain in the head; feverishness; drowsiness; an unusual appetite for some kind of trash, as clay, chalk, coals, salt, sugar, &c. and generally a suppression of the menses. When the case is inveterate, yellowish or dark greenish splotches, which have the appearance of bruises, are found on the legs in particular; and with *hemorrhages* from the nose, and tender gums, give the disease some resemblance to scurvy.

The following treatment will generally succeed. Give a purge, and the following is probably best—rhubarb and jalap, each ten grains, calomel and aloes, each five grains, make eight pills, give five of these, and if they do not operate pretty well, give the remainder in four or six hours. The next day, give one scruple of ipecacuanha, and whether it operates or not, drink freely of weak sage or ground ivy tea; always, however, leaving the medicine about an hour on the stomach if it does not vomit, before you begin to drink. The next day put two grains of tartar emetick into a pint of water, take one or two spoonfuls of this, as the stomach will bear, in the morning and evening: this should be used five or six days. During all the above time the patient should take a mild anodyne every night; for this purpose take opium four grains, ipecacuanha six grains, make eight pills, and take one of these each night.

After using the above five or six days, commence with the following, and continue it until the strength, &c. is well restored. Take iron filings and assafœtida each one dram, flour or crumb of bread enough to make the

mass tough enough for pills; make sixty-four: two to be taken morning and evening, drinking after each half a wine glass of bitters of gentian, columbo, orange peel, &c. steeped in water and a little spirit of some kind, to prevent its souring: about a gill of spirits, or good old whiskey to a quart of water, will answer this purpose; about a dram of salt tartar or soda, may be added to a quart: this should always be strained after standing two or three days. The patient must carefully avoid all unnatural food, and live on a light nourishing diet. Cold water will be the best drink: spirits, much spices, or greasy food, must be avoided, as well as too much sour articles, as pickles, vinegar, &c. Exercise must never be omitted in this disease.

## SECTION IV.

### *Of the Fluor Albus.*

A simple fluor albus unaccompanied with some serious affection of the *uterus*, is known by these symptoms, a discharge from the *vagina* of a whitish or yellowish mucous, sometimes becoming greenish, and having an ill smell; this, however, is often the consequence of neglect, or want of cleanliness. These symptoms are accompanied with paleness of the face, severe pains in the back, loss of appetite, swelling of the legs and eyelids. For this disease, precisely the same treatment as recommended in the preceding article will answer, but should be aided by injections of milk and water, often repeated; and if these do not succeed, a little sugar lead may be added to water, and used in the same way; but these injections into the vagina should be very weak, half a dram of sugar lead to a pint of water will be a proper strength, and it should be used tepid. Where the symptoms have run high from want of frequent washing of the part affected, or other causes, bleeding once or more will be necessary, with the constant use of the milk and water injections into the *vagina*, and at the same time glysters, of the emollient kind, must be used frequently; sitting over a warm bath will also be advisable in severe

cases. As soon as the symptoms abate, the iron pills, &c. recommended for chlorosis, should be used with exercise accommodated to the patient's strength: the cold bath may also be used to advantage. Much stooping, or working over the fire will not suit such women.

Gross or fat women are often troubled with a milder kind of this disease, which requires nothing but exercise, and great attention to cleanliness; for it is often in some measure constitutional, and cannot be removed. The warm balsams, as copaiba, &c. have been found useful in debilitated habits. Tincture cantharides is also a valuable medicine; twenty or thirty drops may be given twice a day: if strangury come on, omit the medicine till this symptom wears off, and then begin again.

## OF THE DISEASES OF CHILDREN.

### SECTION I.

### *Introductory Remarks.*

IT is in works on the diseases of women and children only, that full directions can be expected for those diseases. I shall therefore but very briefly, point out a few cautions, for the management of new born infants, and beg leave to refer the reader to works on the complaints of women and children.

1. The new born infant should never be washed with spirits, nothing but warm water should be applied, nor is it material whether all the scurf comes off at the first washing. It is vastly better to leave a considerable portion of it, than to fret the very tender skin by the harsh rubbing, which is often practised.

2. Much injury is done infants by giving them harsh articles, with a view of carrying off the *meconium;* things

the most discordant are crammed down their throats, as soon as they fall into the hands of ignorant midwives. It is very seldom any thing is necessary for this purpose, the child should be put to its mother's breast as soon as practicable, and this will generally answer every purpose. If the *meconium* is tardy in coming away, mix equal parts of sweet milk and boiling water, sweeten this well with sugar, and give a few tea spoonfuls every now and then, and if this does not succeed, a little warm water should be given as a glyster. Never give purgatives or other doubtful articles, without good advice.

3. Much injury is done children by keeping them too warm, and also by exposing them to too much light; sore eyes, fevers, &c. are usual consequences of mismanagement in those things.

4. It should be made an invariable rule to wash children once every day, all over; the water should be tepid at first, but in a few days it ought to be cold: this will not only tend to invigorate the body, but is indispensably necessary for the purpose of keeping the skin sound; and it is also necessary that their clothes be changed every day, at least their cap and linen, and their *clean cloths* should be frequently changed; this is not only necessary as a means for preventing what is called scalding, &c. but the practice of suffering children to remain wet disposes them to rickets and other diseases.

5. Children who have the breast of the mother, or of a healthy nurse whose milk is fresh, that is, one that lay-in about the time of the mother, should not be fed; the milk of a healthy woman is quite sufficient, and the only article which is really suited to the stomach of tender infancy.

6. Where the breast is not to be had from accidental circumstances, milk with a little sugar should be their only diet for the first few days, or even weeks; afterwards, a little flour may be boiled in their milk. The milk ought to be reduced a little, for some time, by mixing it with water; for the human milk, which suits them best, contains less cheese and butter, but more sugary

matter than cow's milk; so that, by adding water, we lessen the quantity of cheese and butter, which are too heavy for the infantile stomach, and by adding sugar, in reasonable quantity, we have a mixture strongly resembling human milk.

Vast injury is done infants by overfeeding them, and more especially by giving articles too gross for their digestive powers.

## SECTION II.

### *Of common Griping of Children.*

Children are much disposed to gripings, but doubtless in a majority of cases, this affliction proceeds from mismanagement, overfeeding, keeping them too warm, or suffering them to remain wet, are the most usual causes of gripings; the first by suffering a kind of fermentation to take place in the stomach, from the inability of the stomach to digest, more than a certain quantity of wholesome food, and from an inability to digest gross articles at all, fills the bowels and stomach with sharp wind. The two latter, that is keeping them too warm, or suffering them to remain wet, by relaxing the general system, destroys the tone of the stomach.

Where due attention is paid to the management of children, in regimenous matters, they will seldom require medicine, for the removal of gripings.

But no degree of prudence, or skill, can prevent this complaint from troubling some children; even here, we are not rashly to fly to medicine. The following will often succeed: take pure water two ounces, oil of mint, or fennel, or anise one drop, soda ten grains; of this, one or more tea spoonfuls may be given whenever the pains are severe. If this does not succeed, give a little rhubarb and magnesia, or an emollient glyster.

In extreme cases, a little Godfrey's cordial, or a few drops of equal parts of spirits nitre, and laudanum, may be given; but opiates are to be given sparingly, and it will generally, be better to suffer them to cry reasonably, than to give opium to lull them to rest; this is too

often done solely with a view of getting rid of their noise: such conduct is highly reprehensible. To conclude, I have no doubt but a free use of opiates, or cordials, generally, not only very materially impairs the strength, and disposes to scrofula, foulness of the skin, &c.; but, that it really often materially impairs the faculties of the mind. I think I have seen one well marked case of deplorable epilepsy, from the abuse of opium and cordials.

Let it be a matter of conscience, to use the proper attention to dress, exercise, food, &c. of your child, and if obstinate griping troubles it, get good advice.

## SECTION III.

### *Of the Yellow Gum.*

This disorder is characterized by a yellowness of the skin, and of the white of the eyes. European authors speak of it, as being frequently a dangerous disease.

I am inclined to believe, it is neither common nor dangerous, in the United States. But I have seen many cases of it in one neighbourhood: in Somerset county, Pennsylvania, this disease is very common, but I have never seen it attended with danger. It has been supposed that this yellowness of the skin is owing to mechanical obstruction of the biliary ducts, but these notions are probably ill founded; it is much more likely, that the liver either secretes the bile in undue quantity, or of a vitiated quality; or what I think still more probable, this affection of the skin is owing to inflammation of the skin or liver; for in all the cases of yellow gum which I have seen, the discoloration occurred a few days after birth, and always followed tedious labours.

We should never give medicine for this disorder, unless the child be really sick, when it will mostly answer every purpose to open the bowels with castor oil, if it can be had very nice, if not, rhubarb and magnesia will answer; and a gentle emetick of ipecacuanha should

be given: these remedies with the daily use of the tepid bath, will generally answer; but if the symptoms of fever, pain, or distress of any kind continue, the best advice should be obtained, for authors of much respectability tell us this disease is sometimes dangerous.

## SECTION IV.

### *Of the Red Gum.*

The red gum is a disease which affects the skin of infants, and resembles measles much in its appearance. The eruption appears in little red pimples, which rise up so as to be felt, and these prominences sometimes appear yellowish; but, in some cases the eruption is confined to particular parts of the body. It is seldom attended with much fever, or distress, unless augmented by mismanagement.

There is no doubt with me, but this affection is almost universally the consequence of surfeits from feeding children too much; from wet; or from keeping infants too warm, or not changing their clothes as often as is necessary.

A faithful use of the tepid, or cold bath, according to the manner in which the child has been managed, will seldom fail to remove this disease of the skin; if fever comes on, the bowels ought to be opened with the mildest purgatives, or glysters. But children thus affected, are liable to other diseases, so that in all cases where any considerable indisposition occurs, get advice, for in all cases, much is gained by early application to the skilful.

## SECTION V.

### *Of Inflammation, or Soreness of the Eyes.*

This is mostly owing to exposing infants too much to the light; we should carefully shade the eyes of young infants from the light; but let us not, in doing this, deprive them of free exposure to air, as is often practised.

Let their rooms be well aired; but never suffer a strong light to shine into their eyes, for the first two or three weeks.

Never be induced by any authority, however respectable, to apply washes of sugar lead, and such like, to the eyes of infants. Bathe them very frequently with warm milk and water; and if the case is obstinate, blindfold the eyes, by applying very clean rags wet with milk and water; and apply a small blister to the back of the neck; give a little cooling physick, and let the nurse be a little abstemious for a few days.

If they do not mend, under this treatment, apply cold spring water, or nice rose water. If this inflammation occurs in children a little advanced in life, we should pay a scrupulous attention to the nonnaturals; for where this affection of the eyes arises from a relaxed habit, which is sometimes the case, no local applications can avail; our only hope is in invigorating the general system, by all the usual means for that purpose, among which, exercise in the open air, holds an important share.

## SECTION VI.

### *Of the Aphthæ, or Thrush.*

The thrush is a common disease in nurseries, where children are overfed, but whatever tends to relax the general system will tend to produce this affection; for it is probably always accompanied with, if not actually caused by, indigestion.

It is known by the appearance of little whitish, or whey-coloured blisters, on the lips, in the mouth, throat, &c.; and it is excessively painful, and will bleed from the act of sucking, or from attempts at washing the mouth. It is often attended with fever and other distressing symptoms, as nausea, &c.

In bad habits, where a too cordial diet, and a too warm regimen, has brought on the disease, these blisters sometimes terminate in mortification.

No rude attempts at washing the mouth with rags, &c. should ever be made; for, by the violence used, you increase the inflammation, and thus add to the foulness of the mouth, and aggravate the disease.

It will generally be sufficient, in these cases, to give an emetick of ipecacuanha or white vitriol; then open the bowels with rhubarb, or its syrup. At the same time, let the following mixture be put frequently into the mouth, in portions of one or more tea spoonfuls every now and then. Take soda one scruple, water two ounces, dissolve the soda in the water, and then add two tea spoonfuls of honey; mix the whole well together.

These cases are, however, sometimes extremely dangerous, partaking of the character of angina maligna, or ulcerous sore throat; so that, in all cases attended with serious indisposition, the best advice should be obtained.

## SECTION VII.

### *Of Convulsions of Children.*

From some peculiarity in the constitution of children, they are subject to convulsions from a variety of causes; among these may be enumerated irritation of the stomach or bowels, from indigestion; injuries of the head, or other parts; even cuts, burns, injuries from pins, &c.; the sudden revulsion of eruptive disorders, particularly where that sinking in of the eruption is occasioned by too warm a regimen.

Smallpox, measles, and other fevers, lead to convulsions; so does teething, violent frights, &c. From this variety of causes of convulsions, it must be evident much judgment is necessary to enable us to distinguish or discover the cause, and adapt a suitable treatment; more especially when we recollect that convulsions are always dangerous; death, crippling, or epilepsy, are often the consequences of convulsions: with what care, then, should we endeavour to avert these dreadful consequences by getting good advice!

In all cases of sudden convulsions, the child should be stripped and examined whether no wound exists, for

even the pricking of a pin may be the cause. If the habit is good, we should bleed pretty freely, and if the cause is unknown, or if there is any suspicions of poison, as James Town weed, spirits, &c. an emetick of white vitriol, or ipecacuanha, should be given.

Should the convulsions still continue, or, in reduced habits, at first, give stimulant glysters till the bowels are freely opened, then put the patient into the warm bath; but while those things are transacting, get a practitioner of judgment, as much skill is often necessary on these occasions.

## SECTION VIII.

### *Of the Cholera Infantum, or Summer Disease.*

This disease of children is principally found in cities, and it is said, by Dr. Rush, to affect infants principally from the first or second week, till the end of the second year of their age. And, according to Rush, it occurs in Philadelphia about the first of June, but something earlier in the Southern states.

Its most severe symptoms are violent sickness, and vomiting; purging; high fever. The discharges by stool and vomiting, are mostly, a yellowish green, but lienterick symptoms often attend, as slimy stools, and the passing the food undigested, or they are quite watery, &c. The patient is extremely restless, tossing and drawing up the feet, and throwing back the head; the pulse is generally soon found very weak; and the fever which attends is remittent in its character, and is mostly highest in the evenings; delirium, and even mania are sometimes present. The belly is generally swoln, the countenance languid, and distressed; the eyes are open during sleep. There is great thirst; considerable emaciation takes place; the stools are mostly extremely fetid.

Many more distressing symptoms sometimes attend this distressing and mortal complaint.

A first consideration, in these cases, is to get the patient into the country; and if circumstances do not admit of their removal, they should be carried out daily du-

ring good weather, once or oftener. In all cases, as soon as any serious vomiting occurs during the season of this disease, a gentle emetick of ipecacuanha should be given, the bowels should be opened with glysters, containing a very little rochelle salts; and as soon as the bowels are opened, or rather as soon as the injection has come away, give mild anodynes, and the following formula will generally answer a good purpose: Take soda half a dram, water two ounces, oil cinnamon, or mint, two drops, dissolve the soda in the water, and give from half a tea spoonful, to three or four, according to the age of the patient; and with the first dose, and every two or three hours afterwards if necessary, give a common small dose of laudanum.

Soda water highly impregnated with fixed air, should be given, nice toast and water, or linseed tea, or slippery elm water, will be suitable drinks, in the early state of the disease. When the case is somewhat advanced, dewberry tea, or chamomile in cold infusion, or best wine and water, may be given.

The diet ought in general to be light and nutritious, as well toasted bread with milk, sago, animal jellies, a little ripe fruit, small quantities of rich broth, or where the stomach will not retain these articles, glysters should be given, of weak mutton, or other light broth, three or four times every twenty-four hours.

This disease sometimes terminates in recovery or death in two or three days, in other cases it continues off and on, for as many weeks and even months.

I suspect the most usual cause of this disease is over-eating, and this may be the case where very little is eaten, owing to the relaxed state of the stomach, and the general system, from the debilitating tendency of the warm season. This debility or languor of the stomach, and general system, may often be prevented, by taking weakly children, frequently into the country; by the moderate use of good old wine, and of a little salt meat, or salted fish; by avoiding much trashy vegetables, or much sweetmeats. A reasonable use of ripe fruit is always necessary, but is easily carried to excess with delicate children.

This disease is usually very mortal in cities; and calls for much skill when protracted, for a more deplorable case can hardly be met with than the last stage of this disease, where it has continued long; the body becomes so emaciated as to cause the bones to cut the skin, hickcup, convulsions, sore mouth, &c. render the case sometimes truly distressing.

Although the cholera infantum is most common, and most dangerous in our cities, cases of it are to be met with every season, in country practice. It is known in many places by the name of "summer purging;" I have generally succeeded in these cases by giving a gentle emetick, opening the bowels with mild purges, as senna and manna with a little cremor tartar; and after these evacuations, a mixture of soda and water, with some essential oil, and occasional doses of laudanum and sweet spirits of nitre. But in a majority of cases, a single dose of the senna, &c. and afterwards the soda mixture would check the complaint. In inveterate cases where the patient was reduced, a mixture of magnesia, oil anise, sugar and water, would generally answer.

The same diet and drinks should be used as above mentioned. Let it be carefully remembered in all violent cases of cholera infantum, that evacuations are never necessary, except they are used before the debility is considerable; on the contrary, they would be attended with the utmost hazard, and therefore where there are doubts, a physician should be consulted. If none is to be had in reasonable time, we may give the soda mixture with laudanum, not only without risk, but with considerable prospect of success. It has been supposed the teething of children renders this disease more severe, but we derive little advantage from a knowledge of this fact. I have given as my opinion, that the health of the teeth depends especially on the general health, so that it would seem to follow, that we can only aid the infant in cutting its teeth by proper attention to the usual means, for invigorating the general system.

It may be remembered, that by the careful management of those means, we not only promote more easy

teething, but the same means are the most certain preventives from cholera infantum.

Children in general, are kept too much confined in warm rooms, they are rendered delicate by too much nursing, by which they are kept from using their own limbs; they are indulged in too much sweetmeats; they use too little milk, too much coffee, and fresh meat, and cheese; they should never pass a day in the warm season without a little salted meat, or fish; but these articles must be used sparingly, or by exciting thirst they will do much mischief, for nothing is worse than oppressing the stomach with too much watery liquids. Lastly, in all cases of cholera infantum, I would advise the exhibition of a glyster or two, of tepid or cool water and starch; and if this simple remedy is used as soon as any symptoms of this disease appears, it will often check it in its forming state; and this same remedy ought always, to be used in cases where a child passes twenty-four hours without a stool, in the warm weather.

## SECTION IX.

### *Of the Vaccina, or Cowpox.*

A period of nearly twenty years has now elapsed since the illustrious Jenner, discovered the prophylactick powers of this disease. And like a noble philosopher and christian, he made every endeavour to convey this mighty blessing, not only to his nation, but to a world; the savage, the heathen, in short, mankind was the family to which Jenner ardently wished to bestow this heavenly *Ægis*.

How wondrous strange that parents, guardians, &c. should still foolishly or wickedly neglect to secure those under their care, from the dreadful horrours, and sufferings of smallpox. The countenance of the christian and of the savage, through every land, has been made to smile and to acknowledge the goodness of the giver, and still shameless wretches are found, who regardless of every obligation which they owe their children and society; and regardless of the certainty of the preventive powers

of this mild disease, known to be so, by long experience, suffer their children to run every hazard, for the paltry consideration of saving a few shillings.

Many people formerly made a pretence of pious submission to the will of heaven, in suffering their children to take the smallpox naturally, because some little risk attended the inoculation, for that disease, but as there is no possible danger attends the vaccina, there is not the shadow of an excuse.

We have a strong manifestation here of the proneness or liability of mankind to run into excess; and a little reflection will convince us that this is one of the principal sources of our troubles and wrongs to each other. No sooner had the humane discoverer, of this preventive, and after him, humane physicians in every country, used all their eloquence and persuasion, to procure conviction, and the adoption of this preventive, than they were assailed by opposition the most intemperate; this led to a necessity for making this preventive cheap, and easily accessible to the poor, and the consequence of this was, that the people soon view this as really worth little or nothing.

And many considering even a dollar or two too much, undertook to vaccinate their own people: but I beg leave to tell all such that this is extreme meanness.

What, though I have several children, or a score of slaves, who have not had this disease, can I with any kind of propriety, go to the patient of the physician, and actually infringe on his rights? shame could cloud the face of every man who would act thus meanly, where a physician is to be had. This preventive is wanted but once during life, and the expense is a trifle; besides, it cannot with any appearance of truth, or probability, be maintained that there is not a considerable degree of judgment, founded on experience, necessary to enable us to decide with any certainty, in doubtful cases, which are ever liable to occur from the most trifling accidental causes.

Was it not a physician to whom this blessing was revealed? was it not the physicians who brought it here, and maintain it among you, by preserving the infection;

and has it ever been a source of profit to them. It is true, a few practitioners made a little when there was a vast number of patients, but compared with the benefit which they distributed, the amount was nothing. But, as things now stand, no physician in the country can possibly vaccinate for a dollar or two, without actual loss of time; and even in town, the value of the things is so vastly great, and so decidedly belongs to medical men, that the usual fees ought at least to be doubled.

Notwithstanding I am so decidedly of opinion, that this disease should be left to the physician, I am still clearly of opinion, that every person should make it their business to be well acquainted with its character, for the following reasons.

1. Persons in the country may have to do with strangers; who under pretence of being physicians, may impose on the publick, and deceive the unfortunate patient.

2. Men of ample experience are sometimes remiss in their attention, and woful consequences sometimes arise from their neglect.

3. This disease can only be known by its outward appearance; and if the pock is accidentally injured by scratching, &c. the physician of skill, and with every attention may be perplexed and put to much trouble: thus on the morning of the eighth day, a beautiful pock exists on the arm, a few minutes before the practitioner arrives it is torn off, how is he to decide?

In all these cases, a proper knowledge of the appearance of the disease, by those who nurse, will enable themselves and the vaccinator, with much greater certainty to decide, and if imposition is attempted to be practised by strangers, it may often be detected.

This pock has these appearances: on the third day the part where the infection was inserted, resembles a fleabite; by the sixth, it resembles a pretty little pearl, being pearl coloured, and perfectly circular in its circumference, boldly elevated at its edge, and filled with a limpid fluid, and depressed in the middle, where there is a little dark spot. If two punctures were made by the lancet, or if an incision was made, the pock will be oval, but the dint in the middle, and prominent edge are always present.

By the eighth day, the pock is considerably larger, is more elevated, and the part a little swoln, and slightly red, and there is considerable hardness extending pretty deep into the arm. On the tenth, there is a little brownish yellow circle, which looks speckled, and is called *areola;* and from this on the same day, is spread a beautiful red colour of the skin, for a considerable distance around, called the efflorescence. By the twelfth day this has nearly disappeared, and the pock being pretty much dried, looks yellowish, but there never is any yellow pus through the whole disease. The scab soon becomes brown, or mahogany coloured, and by the eighteenth, it may often be removed.

About the fourth day a slight feverishness is felt, and a more considerable one in a few cases, particularly in adults, about the seventh, eighth, or ninth day; about this time there is considerable swelling and soreness under the arm.

Persons who will make it their business to examine carefully a few cases of cowpox, cannot easily be at a loss to distinguish it afterwards; and it is most clearly the duty of every person to have such knowledge. I have, more than once, visited children on the eighth day, and neither father nor mother could tell even whether the operation had succeeded, and where the pock had been rubbed; this was sometimes a source of much trouble and anxiety.

No child should be suffered to pass the second or third month without being vaccinated.

It may be necessary to observe, that there is considerable variety in the progress of the pock, in a few cases, some running their course more slowly, and some more rapidly, than according to the course above pointed out. There are also some cases where little or none of the areola or efflorescence is present; and in the coloured skin we cannot perceive it. But the elevated edge, the dint in the middle, the limpidness of the fluid within, and the brownness and regularity of the scab, are always present, and sufficiently distinguish this from every other eruption. A single pock is sufficient.

SECTION X.

## *Of Milk Blotches, or Crusta Lactea.*

Eruptions of this kind occur in gross children, and seem to proceed from some defect in the milk of the nurse. I think it is highly probable overfeeding has a considerable share in its production in many cases.

This disease is not dangerous nor is it apt to penetrate so far as to occasion marks, generally speaking; but it is sometimes excessively troublesome, and if neglected, or improperly treated, may become dangerous, and liable to leave unpleasant marks.

It is known by a whitish or dusky eruption in large scabs, affecting the forehead, head and face, but also found sometimes over the body. This affection, like many others, has been viewed, by some physicians, as salutary: but this is an unfortunate errour for the poor little sufferers.

Like disease in every other form, it is an enemy, and ought to be removed as far as in our power. I am constrained to observe, that it is probable that these old notions of the salutary nature of many diseases arose, in the first instance, from motives really base. Thus, in the infancy of medical science, when physicians and patients were ever looking for specificks, the former were likely to be brought under the imputation of being ignorant or unskilful, because many diseases, in spite of all their efforts, continued for weeks, and even months.

This was vexatious to the patient, and humbling to the doctor; and as it was much easier to propagate false notions than to cure their patients, nothing could so admirably answer their purpose as to persuade the patient that his disease was salutary. The credulous patient would groan, sweat, and might die, hugging up this phantom, and the doctor, who was, perhaps, more ignorant than the patient, got much credit for his wonderful knowledge in finding diseases he could not cure, were salutary, and therefore patiently to be borne.

The motive was, I have no doubt, originally a base one; but the publick having no means of refuting it, and the majority of the faculty falling in with it without reflecting for themselves, the first motive was soon lost sight of, more especially as men were soon found who undertook to defend these notions by reasonings; and such were the times, that, however sophistical, any thing in the form of reasoning was held almost as sacred. I have in my library a book printed in the year 1552, called the "Boke of Secretes," which is marvellously marvellous.

I hope I shall be pardoned for this digression; for I think this the most destructive of all errours, in the practice of medicine, in the present day: and this is the last opportunity I shall have, in this work, to speak of it. I now return to my subject.

The cure for crusta lactea is, in good measure, to be looked for from a change of the nurse, when perfectly convenient, when not, the parent or nurse should live, as much as her health will admit of, on a vegetable and milk diet. But the infant, if it has been fed, should be stinted in some measure in its food, or the food should be rendered thinner and lighter; and animal food should be wholly withheld for some time, unless it be a very little salted meat, during the warm season.

The bowels should be kept reasonably laxative, by the use of cremor tartar and sulphur, or magnesia and rhubarb. The tepid, or cold bath, should be used daily; and occasional washing with the mildest castile soap will be useful; but other washes, or drying applications, should never be used without advice.

## SECTION XI.

### *Of Teething, or Cutting Teeth.*

There has been much diversity of opinion respecting the process of teething. Some practitioners and nurses attributed almost all the diseases of children to the irritation, &c. arising from the cutting of the teeth; while another set argue, because it is a natural process it can-

not reasonably be supposed to be attended with pain, or disturbance to the animal economy. Both these extremes are probably wrong; and the truth most likely is, that children, nearly in a state of nature, are not much affected by the coming of the teeth; but in civilized life, where our infants so evidently come into the world with an infirm constitution, how can we reasonably suppose they will not be affected with pain and other consequences from this piercing of the gums by the teeth?

Children somewhat advanced in life, are subject to considerable pain in cutting their teeth. But after much reflection and considerable experience, I am clearly of opinion the majority of the publick attribute much more to the teething of their children than is consistent with truth. I believe that most cases of diseased bowels and of convulsions, &c. which are attributed to the teeth, are occasioned by overfeeding, which produces colicky affections of the stomach and bowels.

Upon the whole, I think it is pretty evident the process of cutting teeth depends on the general health, and therefore it is only by strict attention to the nonnaturals, &c. that we can aid them through this necessary process. And I would advise parents not to indulge their infants with hard substances to bite upon; nothing but a crust of bread ought to be used for this purpose; for even oris root, wax candles, elastick gum, &c. will, by constant use, harden the gums quite as much as harder substances.

About the fourth month, often later, two teeth appear in the lower jaw, in front; and pretty soon thereafter, two more appear in the upper jaw, the others gradually succeed; so that, by the end of the second year, children have often ten teeth in either jaw.

In cutting these, some children suffer considerably; but little can be done, except endeavouring to invigorate the constitution. Cutting of the gums is seldom necessary; if they are cut early, the incision will heal, and render the gums more callous; if we delay it till the teeth are nearly through, the worst is mostly over, and the cutting with an instrument is unnecessary. The gums should never be cut without good advice.

Lastly. If a child is sick, we must be governed by the symptoms present, whether they are cutting teeth or not. I am well convinced children are often injured by inattention to this rule; thus, if a child is supposed to be affected with worms, or troubled by its teeth, the whole attention is directed to this supposed cause; and, perhaps, in a majority of cases, the disease is from a cause wholly different; so that, in our prescriptions, we are to be governed by symptoms, and prescribe for those present, while we, at the same time, carefully endeavour to find out the cause; but alas! how often is this hidden, and even mistaken!

# DISPENSATORY, OR MATERIA MEDICA.

## SECTION I.

### *List of Medicines.*

IN this list all articles will be found, which are to be kept as permanent medicines, and the properties of each is pointed out. The reader will also observe, that every word printed in italicks, either shows that the receipt for preparing the article, will be found under the word so marked, or that something important will be found under that head.

Aloes—*purgative*—laxative—emmenagogue.
Alum—*antihemorrhagick*—restringent.
Ammoniacum—stimulant expectorant.
Arsenick—tonick, in form of Fowler's solution—caustick.
Assafœtida—diffusible stimulant, in form of tincture—antispasmodick in form of *tincture, glyster,* and in substance.
Armenian Bole (or Red Bole)—*external astringent,* in form of ointment.
Balsam Copaiba—stimulant alterative—stimulant diuretick.
Balsam Peru—antispasmodick—stimulant expectorant.
Balsam Tolu—stimulant expectorant—external stimulant.
Bark Peruvian—*tonick—diffusible stimulant,* in form of tincture, and also the tincture combined with ether.
Benzoin—expectorant—*anodyne,* in form of paregorick.
Balm, the herb—*cooling diaphoretick*—mild stimulant drink.
Bismuth, white oxyd of—tonick—carminative antacid.
Bitters, pleasant herbs and roots—tonick, in form of cold infusion, tea or powder.

Borax—external astringent.
Burdock—stimulant alterative.
Calomel—purgative—stimulant alterative—emmenagogue.
Camphor—*diffusible stimulant*, in form of spirit—stimulant diaphoretick, in form of powder.
Canella Alba—aromatick, but used conjoined with aloes only.
Cantharides—*diffusible stimulant*—blistering, in form of *ointment*.
Carduus—tonick in form of infusion, cold or warm.
Chamomile—stimulant diaphoretick—cooling diaphoretick, in form of very weak tea acidulated—tonick.
Cinnamon—aromatick, antemetick, stimulant.
Castor Oil—purgative.
Cherry Bark (wild)—tonick.
*Cephalick Snuff.*
Caustick, Common.
Caustick, Lunar.
Centaury—tonick.
Corrosive Sublimate—*stimulant alterative*—blistering, in form of *ointment*.
Contrayerva—stimulant diaphoretick—sudorifick.
Cremor Tartar—laxative—evacuant alterative.
Cloves—in powder of bark, tonick and aromatick.
Cuprum Ammoniacum—tonick.
Dewberry, root, and leaves—astringent, or *restringent*.
Diachylon—used as a strengthening plaster, spread upon leather.
Dogwood—*tonick*.
Elm, Slippery—alterative—expectorant—nutrient—and used in diluent drink—also diuretick—dietetick.
Ether, Vitriolick—diffusible stimulant—antispasmodick.
Extract of Bark—tonick.
Extract of Hemlock—*stimulant alterative*.
Gamboge—purgative.
Garlick—diffusible stimulant—antispasmodick—vermifuge.
Ginger—stimulant, aromatick, dietetick.
Gentian—tonick.

Ground Ivy—*cooling diaphoretick*, acidulated—mild stimulant drink.

Gum Arabick—diuretick—*medicinal nutrient*—diluent in drink.

Guaiacum—*stimulant alterative*, in substance, and in form of tincture—emmenagogue.

Hartshorn, Spirits of—diffusible stimulant—expectorant.

Hellebore—errhine, in form of *cephalick snuff*—for itch in *ointment*.

Heira Picra—purgative—laxative.

Horehound—tonick and pectoral, and, therefore, only proper in coughs, &c. of some standing.

Iceland Moss—restringent—dietetick, or medicinal nutrient—mild tonick.

Iron Filings—tonick—vermifuge—emmenagogue.

Iron Rust—tonick—vermifuge—emmenagogue—*stimulant alterative*, in form of muriated tincture.

Ipecacuanha—emetick—*sudorifick*, in form of Dover's powder—stimulant diaphoretick, with nitre—evacuant alterative, with sal. nitre—febrifuge.

Hog's Lard—used in most ointments.

Sugar Lead—antihemorrhagick—antispasmodick—external astringent, in form of *lead water*—ophthalmick.

White Lead—*external astringent*, in form of ointment.

Laudanum—diffusible stimulant—*antispasmodick*—antihemorrhagick—anodyne—restringent.

Lime water—*restringent*—external astringent—antacid lithontriptick—antemetick with milk.

Liquorice—expectorant.

Lavender, compound spirit of—diffusible stimulant—antispasmodick.

Magnesia—laxative—lithontriptick—antacid.

Magnesia Calcined—antacid—*laxative*.

Madder—emmenagogue.

Manna—laxative—*purgative*.

Mallows, March—refrigerant diuretick—*medicinal nutrient*—diluent, in drink.

Mercurial Pills—stimulant alterative.

Mercurial Ointment—*stimulant alterative*, in acute diseases; sometimes highly stimulant—ophthalmick in venereal inflammation.

Mezereon—stimulant alterative.
Mustard—external stimulant—stimulant alterative—antispasmodick---emmenagogue.
Myrrh—stimulant alterative—external stimulant, and astringent, applied to languid sores, or carious bone.
Nitre Sal.—refrigerant diuretick—cooling diaphoretick—*febrifuge*, in form of powder, and mixture—evacuant alterative with ipecacuanha.
Nitre, Sweet Spirit of—antispasmodick—stimulant diaphoretick—stimulant diuretick—febrifuge, in small doses.
Nitrick Acid—tonick.
Oil Cinnamon—good for toothach, aromatick, antemetick.
Oil Savin—external stimulant, in *ointment*.
Oil Spearmint—antemetick—carminative stimulant.
Oil Peppermint, mostly mixed with spirits wine, and called essence of peppermint—stimulant diaphoretick—diffusible stimulant—carminative stimulant.
Oil Pennyroyal—emmenagogue—powerful stimulant diaphoretick, in form of weak tea.
Oil Amber—antispasmodick—diffusible stimulant.
Oil Anise—aromatick—carminative stimulant.
Oil Fennel—aromatick—carminative stimulant, used in Godfrey's cordial as an anodyne.
Oil Almonds—emollient—ophthalmick.
Oil Linseed, cold-drawn—external astringent with lime water, good for burns—supposed to be expectorant.
Oil, Sweet, or Olive—emollient—external astringent, in form of liniment with lead.
Oil, Wormseed—vermifuge—stimulant.
Oak Bark—tonick—restringent—external astringent.
Opium solid—diffusible stimulant—antispasmodick—*anodyne* antihemorrhagick—restringent.
Orange Peel—tonick—slightly aromatick.
Oris Root—used for children who are teething; perfume in *dentifrice*.

*Ointments.*

Pennyroyal. See the Oil of.
Paregorick—expectorant—anodyne.
Precipitate, Red; used in *ointment* for itch, and languid or foul sores.

Precipitate, white; used in *ointment*, for itch and herpetick eruptions.
Pink, Carolina, or Worm—vermifuge—slightly narcotick.
Pitch, Burgundy—stimulant plaster, on leather, for hooping cough, &c.
Poke—stimulant alterative.
Pine Knot Shavings—stimulant alterative.
Prickly Ash Bark—stimulant alterative.
Prickly Ash Berries—powerful stimulant, used in tincture for toothach.
Poppies—emollient, and anodyne, used in form of bath.
Quicksilver.—See mercurial pills, and ointment.
Quasia Wood—tonick.
Rhubarb—purgative—laxative.
Rue Juice—antispasmodick—vermifuge.
Rose Water—ophthalmick—slightly astringent; leaves restringent.
Rosin, White, or common; used in stimulant or drawing *ointment*.
Sago—medicinal nutrient.
Salts, Glauber—purgative—*evacuant alterative*, in *Kuhn's powders*.
Sal. Epsom—purgative; said to allay colicky pains.
Sal. Rochelle—purgative; in general preferable to Glauber's salts.
Sal. Tartar—carminative antacid—febrifuge in saline mixture—*refrigerant diuretick*—lithontriptick.
Sal. Soda—the same as sal. tartar, but less offensive to the taste.
Saffron, English—stimulant diaphoretick—cordial.
Sassafras Bark—stimulant alterative—aromatick.
Sarsaparilla—stimulant alterative, properties weak and doubtful.
Senna—purgative.
Snakeroot, Virginian—sudorifick—tonick—stimulant diaphoretick, in form of weak tea.
Snakeroot, Seneka—expectorant—stimulant diaphoretick.

Squills—expectorant, combined with sal. nitre or calomel, or both, also in form of syrup—*diuretick* in vinegar.

Spanish flies—see cantharides.

Sweet spirit of nitre—see nitre, spirit of.

Savin—see oil of.

Sulphur flowers of—*laxative*—evacuant alterative—used for itch, in form of *ointment.*

Tartar Emetick—emetick—febrifuge—diaphoretick—evacuant alterative, in form of Kuhn's powders.

Turpentine, spirits—stimulant diuretick—*diffusible stimulant,* used as an external stimulant in ointments.

Tartar vitriolated—used in Dover's powder.

Uva ursi—restringent—tonick lithontriptick.

Vitriol, blue—astringent in bleeding from the nose—escharotick.

Vitriol, white—emetick—restringent—antihemorrhagick.

Valerian—antispasmodick—slightly tonick.

Vitriolick acid—*tonick*—restringent—carminative antacid.

Wax, white and yellow—used in *ointments.*

Wine—cordial—diffusible stimulant—stimulant alterative.

Wormseed—vermifuge—see oil of.

Zink, flowers of—tonick—cosmetick.

Let it be observed, that, in the foregoing treatise on diseases, and also in this dispensatory, the doses mentioned are intended for persons of adult years, unless express mention is made of children.

Many attempts have been made at fixing precise doses for persons according to age, &c.; and physicians sometimes obtain credit for a studied measuring of doses, &c. But nothing can be more preposterous, nothing more unwise; and every person of good sense must be sensible, that much depends on the constitution, and on the state of the body present. Thus a dose of opium which would procure sleep at one time, would produce delirium at another, in the same person. One ounce of castor oil, or one grain of tartar emetick, will produce more effect at one time than three or four times that quantity

at another, in the same person. I have been long so sensible of this, that I have considered it a matter of great importance to divide all active medicines into two or three portions, and give them a few minutes apart, instead of giving all at once, as commonly practised. But, although I am so well convinced of the uncertainty of the effects of a given quantity of an active medicine, still I beg leave, in the most solemn manner, to caution every person from giving medicine, without making it a matter of conscience, to weigh or measure it with the greatest precision; and then, by repeating in small doses, every reasonable wish can be obtained.

As a general rule, the following table of doses will be quite sufficient; but much must always be left to the judgment of the prescriber, who alone can judge of the constitution, and state of the case:

A person from fourteen to twenty years of age, may take two-thirds of a dose intended for an adult.
From nine to fourteen, one-half.
From six to nine, one-third.
From four to six, one-fourth.
From two to four, one-sixth.
From one to two, one-tenth.
Below one year, a twelfth. A woman, generally, should take a little less than a man.

*Apothecaries' Weights.*

A pound contains twelve ounces.
An ounce—eight drams.
A dram—three scruples.
A scruple—twenty grains.

*Measure for Liquids.*

A pint contains sixteen ounces.
An ounce—eight drams.
A table spoonful is about half an ounce.
A tea spoonful is one fourth of a table spoonful.
Sixty drops make one tea spoonful.

SECTION II.—SUBSECTION 1.

## *Of Purgatives.*

These are a valuable class of medicines, and are found in abundance in both the mineral and vegetable kingdoms. I, however, have chosen to select a few of those with which I am best acquainted; and which the present practice sanctions more particularly: they will be found amply sufficient.

### *Aloes.*

Three kind of aloes are met with in the shops, distinguished by the names of Socotorine, Hepatick, and Fetid. It is only necessary to choose that which is clean and freest from smell. The socotorine is generally most agreeable. This article forms a part of almost every patent pill. Aloes is seldom given alone; it may be combined with calomel, jalap, rhubarb, and also with canella alba. It is principally given as a laxative. Dose from from two to ten grains. Aloes is supposed to operate principally on the lower intestines, and therefore is an improper laxative for persons subject to piles.

### *Calomel.*

Calomel has long maintained the character of being a valuable medicine. The illustrious Sydenham gave a scruple at a dose. In bilious diseases, in dropsy, malignant fevers, malignant sore throat, our summer diseases generally, in the croup, &c. calomel is an invaluable medicine. It is seldom given alone as a purge, but may be conjoined with jalap, rhubarb, aloes, and, in short, with almost every purgative. This medicine is a valuable one for children, and perfectly safe, provided we do not continue it long. Dr. Rush tells us several deplorable accidents followed its use with children at Philadelphia. Dose from two or three grains to twenty; five grains, combined with some other purgative, is the most usual dose.

### *Jalap.*

This is an active and valuable article. It is used principally in the form of pills or powder, but is apt to nause-

ate the stomach when given alone. It may be taken with calomel or cremor tartar. Dose from twenty to thirty grains for healthy persons. Weakly persons seldom require the use of jalap.

*Rhubarb.*

The best rhubarb is imported, and is called Turkey rhubarb. It is a mild purge, and may be combined to advantage with calomel, magnesia, &c. Dose from twenty to forty grains, in pills or powder.

*Castor Oil.*

Castor oil is a valuable purge. It should be chosen clear and light coloured, with but little smell; the best has neither much smell or taste. Dose from one to three table spoonfuls; and it may be made less offensive to the taste, by taking it on some warm liquid, as wine and water, weak toddy, coffee, or a little warm water sweetened.

*Gamboge.*

Gamboge is never given alone, but may be combined with most of the other purgatives. Where the bowels are insensible to less active articles, this is an excellent auxiliary. Much, however, depends on the grinding of it: if it is ground to a powder completely impalpable, it will seldom nauseate the stomach, or gripe, but is speedy and safe in its operation. Dose from one to five grains.

*Glauber Salts.*

Glauber salts is an excellent purgative. It operates mildly and effectually; but its unpleasant taste is a powerful objection against it, with many persons. It is supposed that it disposes to costiveness. It may be mixed with senna, manna, &c. Dose from one to three table spoonfuls. This medicine should be strained after it is dissolved, and the cleanest should be carefully sought after when buying it.

*Rochelle Salts.*

Rochelle salts is so similar to glauber salts, that it may be used in its stead. The taste is less offensive than that of salts. I think it better than salts in general, if it were only for its being cleaner; but independent of this, I can,

with confidence, recommend Rochelle salts as a most invaluable purge. Dose from six to twelve drams.

*Epsom Salts.*

Epsom salts is entirely different from glauber and rochelle salts in its constituent parts, but is nearly similar in its properties and strength. It has been supposed that this medicine allays the pain of colick, independent of its purgative operation. It has more of the bitter, and less saltish taste than Glauber's salts, which is sometimes sold for it. The salts is rendered similar to it in appearance, by shaking the vessel while the common salts is chrystalizing, and thus making the chrystals smaller. Dose from six to twelve drams.

*Senna.*

Much has been said in favour of the Alexandrian senna; but from considerable experience, I feel full assurance in saying, that there is little or no difference. Choose senna that is clean and free from stalks, and you will find it answer your wishes as a mild purgative. . It is mostly combined with other articles, as salts, rhubarb, manna, &c. Its tendency to griping may be obviated by a little coriander seeds, or a few grains of soda. Dose from one to three drams in decoction.

*Manna.*

Two kinds of manna are met with in the shops, called flake, and manna in sorts. This medicine is never given alone to adults, but to very young children it is sometimes given, dissolved in warm water; for this purpose a dram may be dissolved, and a few tea spoonfuls given every hour till it operates. Manna is said to be adulterated by adding sugar and a little of some active purgative, as scammony, &c. and therefore we should endeavour to procure that which has been tried, before we give it to tender infants.

*Heira Picra.*

Heira picra may be made by mixing four ounces of best aloes with one ounce of cannella alba; both these articles should be well ground, separately. This medicine is used principally, dissolved in spirits of some kind, and is an useful purgative or laxative, for persons in the decline of life, but should not be touched by young per-

sons, more espesially when dissolved in spirits. Heira picra may be mixed in the proportion of an ounce to a quart of good rye whiskey or rum. Dose from a half to two table spoonfuls, observing to shake the bottle before pouring out.

*Tincture of Rhubarb and Senna.*

Tincture of rhubarb and senna may be made thus: take rhubarb in coarse powder two ounces, senna a little bruised one ounce, ginger two drams, proof spirits one pint. Dose from one to three table spoonfuls. It is a valuable purgative for the aged, or persons intemperate in the use of ardent spirits; but should never be given to people of any other description. It should be strained, after infusing eight or ten days.

*Purging Pills.*

Jalap, twenty-five grains, } Moisten with a little mo-
Calomel, five grains. } lasses, thin paste, or water, and make eight pills; take five, and if they do not purge the patient in two or three hours, take the remainder. When they operate, drink weak sage, green, or balm tea, or thin gruel.

*Purging Pills with Aloes.*

Jalap and Rhubarb, each ten grains, } Grind the aloes,
Calomel and aloes, each five grains. } and mix with the other ingredients, and make eight pills, as above directed: they are to be taken as the purging pills above.

*Purging Pills with Gamboge.*

Jalap, twenty grains, } Grind the gam-
Calomel, Gamboge, each five grains. } boge with great care, as fine as possible, and then mix and make eight pills, which are to be taken as the above purging pills: these are an active and useful purgative for persons of athletick habits.

*Purging Infusion.*

Senna, Rhubarb root, each one dram, } Pour a pint of
Salts and Manna, each two drams. } boiling water on the ingredients, keep it at the fire half an hour; take from half to a whole tea cupful, every two hours, till it operates freely. Weak tea, or thin gruel, may be drank; or persons free from fever may use weak chicken water.

*Infusion of Senna.*

Senna, three drams,
Cremor Tartar, one dram,
Coriander seeds, half a dram.
} Infuse in a pint of boiling water, and take from half to a whole tea cupful every hour or two till it operates; it may be sweetened with sugar or manna.

SUBSECTION 2.

## *Of Laxatives.*

Laxatives are so similar to purgatives, that I have placed them in the same section; but as the former are used with different intentions from that of purgatives, I have thought best to place laxatives by themselves. It is true, many articles may be used with propriety either as purgatives or laxatives, but there are many others which are only suited to one intention; thus, sulphur, cremor tartar, &c. are laxatives. Calomel, jalap, senna, &c. are purgatives. A laxative, strictly speaking, is an article not only mild in its operation, but ought to be such as may be used for a length of time with safety, and I have had regard to this circumstance in selecting.

*Cremor Tartar.*

Cremor tartar is an excellent laxative. It may be taken in doses of from one to three tea spoonfuls, in molasses, or made into a paste with sugar and water; or two drams put into a pint of boiling water, and taken in doses of a wine glass, and it may be sweetened with brown sugar. This article should never be put into any metalick vessel.

*Flowers of Sulphur.*

Flowers of sulphur is a useful and safe article, and is particularly proper for the gouty or rheumatick. It may be taken in molasses or syrup, in doses of from one to four tea spoonfuls. It may be combined to advantage with cremor tartar. This article should be chosen free from acid taste.

*Magnesia.*

Magnesia should be perfectly white, free from grittiness, and lighter than any other article which it resem-

bles. This, in many cases, is a very valuable laxative, but is only so where acidity abounds; for it only operates as a laxative when changed by the acid of the stomach into a neutral salt. When it is used as a laxative, it ought in general to be conjoined with rhubarb. Dose from one to three tea spoonfuls. It may be made into a thin paste with water, and a little sugar added, if desired: many persons can take it in a dry state, and this is probably the best.

*Rhubarb Root.*

Rhubarb root simply chewed, or in syrup, is a good laxative.

*Syrup of Rhubarb.*

Rhubarb in powder one ounce, } Pour a pint of boiling
Race ginger two drams. } water on the ingredients, and keep it warm half a day, then strain through a linen rag, and add ten ounces of best brown sugar. This is a good laxative for children. Dose from one to five tea spoonfuls.

*Bitter Tincture of Rhubarb.*

Rhubarb one ounce and a half, } Put the ingredients
Gentian sliced, three drams. } into a pint of good whiskey or rum, infuse a week, and strain. This is an useful laxative for persons of weak stomach, but more particularly for persons accustomed to the free use of ardent spirits. Dose from one to four table spoonfuls.

*Laxative Pills.*

Socotorine aloes,
Rhubarb and castile soap, each two drams. } Grind the aloes, then mix the whole with a little syrup, or molasses, and make seventy-two pills. This is a useful laxative for persons habitually costive, and will answer as a substitute for Anderson's, Fisher's, and other pills. Dose from one to six.

*Heira Picra.*

Heira picra is a good laxative for the aged, dissolved in spirits; one ounce may be dissolved in a quart of whiskey or rum. It ought by no means to be given to children, or young people. Dose from a half to two table spoonfuls.

*Laxative Potion.*

Salts, manna, each two drams. Dissolve in a little warm water, and take it at one dose. This is a valuable laxative, after colick, fevers, &c.

SECTION III.

## *Of Emeticks.*

A great variety of articles may be used for this purpose, but with these, as with all other articles possessing considerable activity, the safest method is to choose a few only, which are well known from long experience. The present practice gives preference to the following, and they are all articles of which I have had considerable experience; they are ipecacuanha, white vitriol, (sulphat. zink,) and antimonials. Vomits prudently used, are sometimes highly beneficial, but a frequent repetition of them, or strong vomits, may be productive of very great mischief; and, therefore, I would advise the unskilful never to tamper with emeticks: purges, particularly pills, containing a little calomel, are often better, and I can confidently assert, there is less risk of taking cold from using calomel prudently, than there is from taking vomits.

*Ipecacuanha.*

Ipecacuanha is a medicine of very great value. It may be given with safety in all cases where a vomit is necessary; for strong habits, a grain of tartar emetick may be added. Dose from one to two scruples, in two doses a few minutes apart. It is only where we wish to reduce the patient, that large draughts of warm water are necessary during the operation of vomits; in general, a little weak chamomile, sage, or very weak carduus tea, is preferable.

*White Vitriol.*

White vitriol is particularly useful as an emetick, on account of its quick operation. Where poisons have been swallowed, or in all cases where we merely wish to empty the stomach speedily, this is a valuable medicine. I have also thought it most useful, from many

trials, in agues; but where we wish to open the skin, ipecacuanha is mostly better. Dose from one to two, or even three scruples dissolved in a little warm water

*Antimonial Wine.*

Antimonial wine is a useful emetick in cases of sudden attacks of croup, erysipelas, &c. and may be given in most cases with safety to children, or adults, of good constitution, but should never be given to weakly children or adults. This article is made by dissolving two scruples of tartar emetick, in two ounces of warm water, and then adding it to a pint of Lisbon wine. Dose from half to two table spoonfuls at two or three doses, taken a few minutes apart.

*Tartar Emetick*

Is seldom used as an emetick by cautious experienced physicians; but to labouring people, of gross strong habits, it may be given sometimes to advantage; but upon the whole I am convinced the practice of medicine would lose nothing by laying aside full doses of tartar as a vomit. Dose from two to six grains, in three or four doses a few minutes apart. Where this medicine is necessary or advisable as a vomit, warm water should be drank freely.

*Emetick Powder.*

Ipecacuanha, one dram, } Rub these ingredients well
Calomel, half a dram. } together, and put it into a vial. This will be found a valuable medicine in croup, malignant sore throat, &c. Dose from thirty to forty grains: for children see table of doses.

SECTION IV.—SUBSECTION 1.

*Sudorificks.*

A great number of articles have long since been selected from the vegetable, animal, and mineral kingdoms, and used as sudorificks, or as things having a tendency to cause sweating. But, perhaps, no class of medicines are more uncertain in their operation, for much depends on the state of the system at the time they are given. Still, however, by knowing the state suited to

such medicines, we can administer them with considerable certainty. Let it be remembered, that where there is much fever, or where an inflammatory diathesis is present, sudorificks should not be given, for in this state of the body, bleeding, purging, cool drinks, cool air, and abstinence, will open the skin, and bring on a gentle perspiration, or even sweating, while common sudorificks are sure to increase the fever; but when the body is somewhat reduced, or in diseases of feeble action, as low typhus, or typhoid fevers, or in all febrile diseases after suitable depletion, or reduction of the patient, sudorificks or diaphoreticks are useful, and often indispensable. In chronick inflammation, as in chronick rheumatism, vibrating gout, sudorificks may often be used to advantage.

*Virginian Snakeroot.*

This is a useful sudorifick in all low fevers, or at the close of malignant diseases. It may be used in all cases where we wish to soften the skin, while we at the same time intend to support the tone of the solids in a slight degree. It is often given with advantage conjoined with bark, or nitrous, or camphor powders. This article is destroyed by boiling, or by long standing; therefore but very small quantities of tea should be made at once, and this should be put into boiling water and closely covered. It may be ground fine, and mixed with bark or other bitters; but the powder should not be kept; it soon loses its properties.

*Dover's Powder.*

Ipecacuanha, Opium, each one part, } The driest opi-
Vitriolated Tartar, eight parts. } um should be chosen, and the greatest possible pains taken to grind the mass to a completely fine powder. This is probably the best sudorifick known. Dose from eight to twenty grains, and the patient should avoid drink for an hour or two after taking it; then large quantities of cremor tartar whey, milk whey, wine whey, &c. accordingly as the disease is viewed as being more or less inflammatory are to be taken.

*Contrayerva.*

Contrayerva root may be used as snakeroot, in tea, or decoction. It may also be given to advantage in doses of about from twenty to thirty grains, ground fine, and mixed with an equal quantity of prepared chalk. This is a useful medicine in low fevers.

*Seneka Snakeroot.*

Seneka snakeroot is generally given in decoction: two drams may be boiled for some time in half a pint of water. Dose one or two table spoonfuls. This is a useful medicine for children in the close of croup. Children are to take it in doses of one or two tea spoonfuls, frequently repeated.

SUBSECTION 2.

## *Stimulant Diaphoreticks.*

Stimulant diaphoreticks are very little different from sudorificks. Some articles, however, in this class are more heating when given with freedom, some less so, while others may be used with either intention, as we make the doses stronger or weaker. Most of the articles set down as stimulants are better suited for exciting a slight moisture on the skin than for sweating; and this is only to be expected of them after the body is reduced by more active evacuants.

*Camphor Powder.*

Camphor half a dram, } Grind the camphor with a few
Sal. nitre one dram. } drops of spirit of wine, or whiskey; rub till nearly dry; then add the nitre; when well ground, make six powders. Dose one powder, every two, three, or four hours, in water, or weak snakeroot tea.

*Diaphoretick Powders.*

Sal. nitre one dram, } Grind fine and make eight
Ipecacuanha one scruple. } powders. Dose one powder every three or four hours.

*Sweet Spirit of Nitre.*

Spirit of nitre is a mild diaphoretick, but is two stimulant during an inflammatory diathesis. Dose from twenty drops to two tea spoonfuls. This medicine, combined with laudanum in equal parts, is a valuable diaphoretick and anodyne, in low cases of fever, and in many nervous diseases.

Contrayerva, weak,
Snakeroot, Virg. weak,
Chamomile, weak,
Peppermint, weak,
Pennyroyal, very weak,
Valerian, weak,
Saffron, very weak,

These are to be used in the form of teas, and we are to endeavour to regulate them to the disease, as it is more or less inflammatory; in general they ought to be very weak; for if we wish to stimulate, more active articles should be chosen. They should be made by pouring on boiling water, and but small quantities at a time.

*Spirit of Hartshorn.*

Spirit of hartshorn is a warm diaphoretick, and only admissible where the disease is of a low grade, or has lost its inflammatory force. Dose from five to twenty-five drops, in cool water.

SUBSECTION 3.

*Cooling Diaphoreticks.*

Cooling or refrigerant diaphoreticks, are articles which may always be given in diseases of moderate or middling grade, and in delicate habits, in most diseases from the first, even in inflammatory diseases. These are articles which promote perspiration, by lessening heat, or morbid action. And it may be proper here to observe, that all evacuants, as bleeding, purging, &c. as well as cool air, cool weak drinks, are always followed by diaphoresis, or a moist skin, provided they are carried far enough, and, therefore, in inflammatory diseases are the best diaphoreticks.

*Sal. Nitre.*

Sal. nitre, taken in doses of from five to twenty grains, is cooling and diaphoretick. It may be given with a double portion of cremor tartar, for the same purpose.

*Nitrous Mixture.*

Sal. nitre, two drams,
Vinegar, two table spoonfuls,
Sugar, or sugar candy, half an ounce.
Water, fresh and cool, 12 table spoonfuls.

} Rub the nitre and sugar in a mortar, and then add the liquids. Dose, a table spoonful every two hours.

*Cremor Tartar.*

Cremor tartar, two drams,
Boiling water, a pint.

} This is a useful cooling medicine, very mild, and when a little sugar is added, is a pleasant diaphoretick. Dose, a wine glass frequently. This article must be kept in an earthen, or glass vessel.

*Spirit Mindererus.*

Best vinegar three parts,
Spirit hartshorn one part.

} Mix in small quantities, and give from one to three tea spoonfuls, once in every two or three hours. This is a valuable medicine, and may be given early, even in inflammatory diseases; in those of the typhoid grade, it is generally highly beneficial.

Balm tea, very weak,
Ground ivy tea, very weak,
Elder blossom tea, weak,
Chamomile tea, very weak.

} These should be taken largely, but must be made very weak, and taken tepid, or cool, and acidulated with a little lemon juice, or vinegar, or they will stimulate.

SECTION V.

## *Expectorants.*

Expectorants are medicines supposed to operate on the viscera of the chest, but their effects depend much on the state of the system, so that what would be expectorant in one case, might prove injurious in another disease of a different grade. But, however much we may be at a loss to explain, or understand, the manner of

operation, still long experience establishes the fact, that some articles when properly adapted to the condition of body present, do promote expectoration or spitting, and thus relieve the lungs of a part of effusions into them. We find articles in this class very different, as to stimulant properties, but, I have thought proper to place them all under one head. It may be observed, that the most stimulant are placed first, and their stimulant properties diminish downwards. Where there is evidence of much inflammation we are not to use stimulant expectorants; in this condition of the system, bleeding, and other active evacuants, are the best expectorants.

*Squills.*

Squills may be given in powder, ground with a little sal. nitre; from half a grain to three grains, repeated every few hours; or a grain or two of calomel may be given with the squills in obstinate cases of pneumonia.

*Stramonium, or James Town Weed.*

This article smoked in a pipe, as people use tobacco, is a powerful expectorant, in cases of confirmed asthma.

Balsam Peru, } These are warm expectorants, and
Balsam Tolu. } sometimes useful in old coughs, or affections of the breast, without active inflammation. Dose from ten to thirty drops on a little sugar. The tolu is often dry or in form of a resin; in this state it may be taken in pills from three to twenty grains the dose.

*Ammoniacum.*

Ammoniack, a gum-resin, is a good expectorant. Dose from ten to thirty grains: or it may be dissolved in vinegar, and taken diluted with a little water.

*Spirit Hartshorn.*

Spirit of hartshorn may be given as a stimulant expectorant, in doses of from five to twenty-five drops, in cool water.

*Syrup of Squills.*

Steep half an ounce of squills in half a pint of good vinegar, and two spoonfuls of spirit, or whiskey. Let it steep four days, then strain, and add to the strained liquor, half a pound of loaf sugar. This is a useful expectorant, for children. Dose for adults, from two to five tea spoonfuls.

*Paregorick.*

Paregorick elixir is expectorant, and anodyne, in doses of from one to three tea spoonfuls.

*Seneka Snakeroot.*

One or two drams of Seneka root, boiled for a few minutes in half a pint of water, is an expectorant. Dose from two to six tea spoonfuls.

*March Mallows.*

March mallows, either in simple tea, or sweetened with honey, or sugar candy, and taken tepid or warm, is a mild expectorant.

Slippery elm bark,
Flaxseed tea,
Liquorice root tea, with a little nitre in it.

} These are all mild expectorants. The elm may be used by simply mixing a little of the ground bark in water, and it may be rendered pleasant by adding a little sugar and vinegar.

Flaxseed tea should not be too slimy, neither must the seed by any means be roasted, as is practised in the country; this wholly changes the properties of it; and it is no longer expectorant. A little hysop, sage, or ground ivy, will render it more pleasant. Honey is supposed to be useful in all expectorant drinks.

## SECTION VI.—SUBSECTION 1.

### *Stimulant Diureticks.*

Horseradish is a powerful diuretick. It should be grated, and taken in vinegar; a table spoonful or more may be taken. It may be taken in its raw state grated, and rolled in a little pap, or thickened milk.

*Sweet Spirit Nitre,*

In doses of one or two tea spoonfuls, taken in cool water, is a valuable diuretick; and although considerably stimulant, when much fever is present, is, nevertheless, a mild article in cases of strangury from blisters, &c.

*Spirit Turpentine.*

Spirit turpentine, in the decline of life, and where the urinal organs are somewhat palsied, is a good stimulant

diuretick, but is inadmissible in any other condition of the body. Dose from ten to thirty drops on sugar.

*Balsam Copaiba.*

This is somewhat similar to the spirit turpentine, but is less stimulant, and being laxative, renders it a valuable medicine in a languid state of the kidneys, in gleets, fluor albus, &c.

*Vinegar of Squills.*

For the preparation of this article, see expectorants. The vinegar of squills may be given in doses of from half to one table spoonful; but, where we wish to avoid nausea, we should combine it with cinnamon. This remedy is best suited to cases somewhat chronick, as in dropsy, &c. it being considerably stimulant.

SUBSECTION 2.

## *Refrigerant, or cooling Diureticks.*

These are medicines which promote or increase the quantity of urine, without heating the body, or increasing the circulation.

*Sal. Nitre,*

Given in doses of from five to twenty grains, dissolved in cool water, or a little vinegar and sugar may be added. It may also be given in parsley or flaxseed tea.

*Saline Mixture.*

Salt tartar, or soda, one dram, dissolved in half a pint of water; then, add lemon-juice, lemon acid, or nice vinegar, gradually, till it ceases to effervesce. Dose two table spoonfuls, often repeated.

Parsley root, in tea,
March mallows tea,
All mild mucilages,
} Are mild and useful diureticks; they may be taken cool, or tepid, pretty freely.

SECTION VII.

## *Glysters, or Injections.*

Glysters are of vast importance in the practice of medicine; and many are lost by the neglect of this invalua-

ble mode of administering remedies. Were I confined to one remedy for the cure of diseases, I should choose glysters. They are not only safe, but highly useful in every disease, in its forming stage. In dysentery, and many other diseases, no physician can acquit his conscience for an omission of this remedy. Every family should have an apparatus for this purpose, and view it as a matter of the highest importance to keep it in clean complete order. The best way, in general, is to have a syringe fixed in a stool; this enables the patient to use it without assistance, and this kind of syringes are to be had for a small sum, at the apothecaries, made of pewter, and are easily connected to a bench or stool. But for children, or those who are too weak to sit up, the common instrument made of a bladder and a small ivory pipe, should always be in readiness. All heads of families should make it a matter of the greatest importance to save bladders in time of *killing*. There is no doubt, with me, but a very great number of persons are lost every year, in the country, for want of glysters; and this want arises from several causes, as the want of instruments, want of persons to administer this simple remedy, aversion to their use, and an omission on the part of physicians, arising, often, from the aversion or incapacity in the attendants, and sometimes from the want of knowing the vast importance of this remedy. In every family one or more persons should be competent to this business. Where modesty is likely to interfere, a small leather tube may be connected to the bladder and pipe, and carried under the bed-clothes by the patient. We are enabled by glysters to evacuate the contents of the bowels, to sheath and cool them, and thus allay pain and fever, to check a purging, &c. and in cases where the patient is unable to take nourishment on account of swelling of the throat, or wounds, and other causes, we may nourish the patient, and thus save life till food can be taken in the usual way. Physicians! Nurses! Parents! Let me humbly admonish you, that this is a most important matter; for I have seen many cases, in country practice, where almost any thing would have been given for a bladder which could not

be procured, and willingly would a hog, a sheep, or an ox, have been sacrificed for the bladder; but this, alas! would not answer, because the bladder must be dried. If it, then, really be a fact, that a life may be lost for want of a bladder, with how much care should we preserve them! And if they are so beneficial, why so childishly neglect their use, because, to those unaccustomed to them, they seem indelicate; but what has delicacy to do with matters which jeopardize human life?

*Emollient Glyster.*

Milk and warm water, of each from a gill to half a pint.

*Another.*

Slippery elm bark, half an ounce, in powder; infuse a few minutes in a pint, or a little less, of warm water, and strain.

*Another.*

Dissolve a table spoonful of starch in a little warm water; when mixed into a smooth paste, add a pint or a little less of warm water. All these are convenient and useful glysters, in all cases of pain and heat in the bowels, in fevers, dysentery, and many other cases.

*Cooling Glyster.*

Rub a spoonful of starch in a little cool water, then add about half a pint of cool water. This is a safe and valuable remedy in cases of inward piles, in flux, and in all purgings attended with much heat. It is a sovereign remedy in all cases of high fever in children: the quantity must be lessened: from half to a whole gill will usually answer for children.

*Purging Glyster.*

Salts one ounce, water, warmed a little, nearly a pint.

*Stimulant Purging Glyster.*

Table salt from one to three spoonfuls, dissolve in nearly a pint of water.

*Another.*

Senna half an ounce, stew it, for some time, in a pint of water, and strain through a rag.

*Laxative Glyster.*

Warm water nearly a pint, sweet oil, or nice fresh lard, or fresh butter, a spoonful, sugar or molasses, a spoonful.

*Anodyne Glyster.*

Prepare an emollient glyster, and add from thirty to sixty drops of laudanum. This will be found useful in lingering cases of flux, &c.

*Stimulant Glyster.*

Prepare a glyster of the usual quantity of water, and a spoonful or two of oil, or clean lard; to this, add one or two tea spoonfuls of spirits of turpentine. This is sometimes useful in paralytick affections, and in the comatose state of low fevers, and also in gout of the intestines attended with great prostration of strength.

*Nutrient Glysters.*

These are warm milk, broth, barley water, and such like. It will readily be perceived by the intelligent reader, that almost every article of medicine may be administered by way of glyster; and all those forms may be varied to suit each individual case. For children of from seven to ten years of age, about half the quantities will answer; for those younger or older, we must increase or diminish the quantity to suit the age, as near as may be, but except it be in the use of laudanum, turpentine and strong medicines, no great precision is necessary.

## SECTION VIII.—SUBSECTION 1.

### *Evacuant Alteratives.*

These are medicines which operate some friendly change on the body, by gradual and mild evacuations, and ought to be such as may be continued for a considerable time, with safety. In diseases of the skin, or in habits subject to biles, or piles, and in cases of chronick diseases, pretty generally, evacuant alteratives are useful. In most cases, where we wish to continue them long, mild aromaticks, or carminatives should be conjoined. Some of these medicines operate on the bowels, others on the urinal organs, and others, again on the skin, &c.

Cremor tartar, } These may be used separately, or
Flowers sulphur. } combined, in doses of from one to three tea spoonfuls in syrup or molasses. These are

safe and beneficial in all cases where evacuant alteratives are proper; but it is to be remembered, that they are inadmissible in all cases of great debility. Sulphur alone is most useful in rheumatick or gouty habits.

*Nitrous Powders.*

Sal. nitre, one dram,
Ipecacuanha, one scruple. } These articles are to be rubbed fine, and divided into eight powders. These powders are a useful evacuant alterative, in lingering fevers, but cannot be continued longer than ten or fifteen days, or they may injure the stomach; to be taken every three or four hours.

*Kuhn's Powders.*

Salts, one ounce,
Calomel, eight grains,
Tartar emetick, one grain. } Grind the salts fine, and after mixing the whole with great care, make eight powders. One or two of these may be taken daily in cool water. This medicine may safely be taken for several weeks, and is of singular efficacy in rheumatick cases, in cases of protracted gonorrhœa, &c.

*Slippery Elm,*

Taken in powder, or in mucilage made by mixing it with water, has been found useful in diseases of the skin. It may be taken in quantities of from two to four drams per day.

SUBSECTION 2.

## *Stimulant Alteratives.*

Stimulant alteratives are articles which operate on the body in a manner somewhat less evident, than evacuant alteratives; but as they are evidently different from diffusible stimulants, and also from common tonicks and astringents, we must suppose them to have a peculiar operation. They are evidently stimulants, but they seem to operate more especially on the glandular system: whether it be by simply raising the excitement of those parts, or whether they produce some specifick operation, calculated to remove disease, I shall not venture positively to determine; but I think we are warranted in saying, some of them operate by the second mode. Mercury has a specifick operation on syphilis, hemlock on glandular

scrofula; but upon the whole, it is probable, stimulant alteratives effect a change on the body, affected with chronick disease, by keeping up a gentle increase of excitement in the glands; and thereby enables them to perform the important functions of secretion, and excretion: while evacuant alteratives accomplish the same ends, by lowering undue, or a too high excitement of the glands.

*Mercury.*

Mercury is a powerful stimulant alterative, and may be given to advantage in both acute and chronick diseases; but as I have given directions in the various cases to which it is applicable when treating on diseases, I shall now proceed to mention a few mercurials, which I consider most useful and safe, as stimulant alteratives.

*Calomel.*

Calomel combined with opium, and given in small doses, is a valuable alterative.

*Corrosive Sublimate.*

Corrosive sublimate of mercury, dissolved in whiskey, or spirit, has been much celebrated as an alterative, in venereal cases. It is certainly a valuable medicine, but I suspect calomel and opium will always answer our wishes equally well. This medicine has been generally given according to the directions of Van Swieten· corrosive sublimate one grain, French brandy, or common spirit, two ounces. Dose a small table spoonful every morning and evening. I have seen this medicine continued a long time without any benefit.

*Mercurial Pills.*

Quicksilver, one dram, } Add a few
Conserve of roses, or manna, three drams. } drops of molasses, or water, and rub until no particles of the quicksilver can be discovered, by rubbing a little of the mass on white paper; then add a little powdered starch, and make forty-eight pills. Dose from two to five.

The alterative effects of all these mercurials are increased by diet drinks of sassafras, burdock, sarsaparilla, and mezereon.

*Mercurial Ointment.*

Quicksilver, half an ounce, } Rub the quick-
The best fresh hogs lard, two ounces. } silver with a little of the lard until no globules can be perceived; then

mix the whole. For inflammation of the eyes, this ointment should be fresh made; but in fevers, &c. that has age will be best. It is a dangerous, slovenly, and unnecessary method of using mercury, for persons going about; but in fevers or other cases, where the patient is confined to the house, and we wish to salivate speedily, it is a most invaluable stimulant alterative.

*Hemlock, or Cicuta.*

Hemlock is best used in the form of extract; and it is particularly to be remembered, that no two parcels of this article have equal strength; and, therefore, with new parcels, the patient must always begin with small doses, and increase them gradually. The most respectable authority advises this medicine in cases of scrofula. Dose from two grains to one dram, usually given twice a day. The extract made by boiling the juice of the plant to a thick syrup, and then adding of the powdered leaves till the mass becomes pretty solid, is the best.

*Guaiacum.*

Guaiacum, the gum resin, is a valuable stimulant alterative in many chronick diseases, but particularly in rheumatick and gouty affections, and also in some uterine affections. It may be given in substance, in doses of from twenty to forty grains.

*Tincture of Guaiacum.*

Guaiacum, one ounce,
Good whiskey, one pint,
Alspice, two drams.

} Pound the guaiacum and alspice, then infuse them in the whiskey eight days, and strain. Dose from one to three tea spoonfuls: it is most pleasant taken in milk; and where we wish it to act as a diffusible stimulant, a few drops of spirits of hartshorn may be added to each dose: this addition is sometimes useful in cases of painful menstruation.

*Muriated Tincture of Iron.*

The muriated tincture is certainly entitled to the character of a stimulant alterative; for the quantity of spirits, or etherial liquor which is formed in preparing it, being so small in a dose, we must view it as a chalybeate. Rust of iron two ounces, muriatick acid six ounces, spirits of wine three gills; digest the rust in the acid three days in a glass vessel; pour off the clear liquor,

and evaporate nearly one half, (a new earthen vessel will answer for this purpose,) then add the spirit. Dose from ten to twenty drops, two or three times a day. It is best taken in a little mild mucilage.

*Mustard.*

The whole seeds of mustard, taken in doses of from one to six tea spoonfuls, in molasses or jelly, is a useful stimulant alterative in rheumatism, gouty cramps, and other diseases.

*Myrrh.*

The character of myrrh is somewhat doubtful; but combined with assafœtida and iron, it is a mild and useful stimulant alterative. The tincture of myrrh has long been celebrated as an useful remedy in old sores, and particularly where we wish to remove caries of the bone. It, doubtless, is a good application to old languid sores; but for affections of the bones, the surgeon can remove the bone better by means of a cutting instrument. The dose of myrrh, as an alterative, is from ten to thirty or forty grains. This medicine is proper in all cases where iron is indicated.

*Balsam Copaiba.*

This balsam is a warm but mild alterative. It has been found particularly useful in cases of gleet and fluor albus; and may be given with good prospect in all cases of debility of the uterine organs. Dose from one to two tea spoonfuls twice a day, taken on sugar.

*Poke, or Garget.*

Poke berries, fully ripe, infused in whiskey or rum, and taken in doses of from half to two table spoonfuls, has been found useful in cases of rheumatism; and, according to some accounts, in scrofula also.

Mezereon Root,
Sassafras Bark,
Seneka Snakeroot,
Prickly Ash Bark,
Pine, the chips of knots,
Sarsaparilla Root,
Burdock Root,

These are all stimulant alteratives, & are used in decoctions, called diet drinks. They may be used separately, or conjoined: they may be considered more or less stimulant as they are placed in this list, the mezereon being most stimulant, and the burdock least so. They will all bear boiling to

advantage, except the sassafras, which should merely be scalded. From two drams to an ounce, of two or three of those articles, may be boiled in a quart of water to a pint, and a wine glassful taken twice a day, in all cases where alteratives are indicated; but particularly in venereal cases, foulness of the skin; and in all habits much subject to biles or ulcers, or obstinate sores. They add much to the efficacy of mercury in all chronick affections.

### *Wine.*

Good old wine is certainly alterative: but as it evidently belongs to the class of stimulants, it will be obvious that it can only be salutary for those wanting a proper tone of fibre. And experience warrants the declaration, that like all other stimulants it must be proportioned to the condition or diathesis present. Those unaccustomed to wine will probably derive much benefit from the use of it, in most diseases accompanied with chronick debility; but in all febrile diseases, and in persons of plethorick habits, it may prove highly detrimental. Upon the whole, this article can only be used with good prospect of success, by a cautious regulation as to quantity, even where it is a proper remedy. It may not be amiss to remark, that wine is always more or less nutrient, where it is judiciously used.

## SECTION IX.

## *Diffusible Stimulants.*

Diffusible stimulants are articles which act suddenly, and transiently on the living body. Where the system is deprived of its proper energies, by reason of languor or exhaustion, these are calculated to excite new or increased action. But where they are administered in plethorick or inflammatory states of the body, or when given largely, under all circumstances, by raising undue excitement, they produce indirect debility, which, if long continued, terminates in exhaustion, disease, or death. So that diffusible stimulants are only useful in general, in what are called nervous diseases; and even here we

ought to view them as palliatives. It follows, that in the administration of diffusible stimulants, we are to place our hopes of permanent relief, on mild nutrients, tonicks, exercise, cleanliness, and wholesome air. Diffusible stimulants, though invaluable, and speedy remedies, require much caution in their use; for if they exceed the proper dose, instead of imparting agreeable feelings, and a more healthy excitement; or, instead of rendering excitement more equal throughout the system, they will render it still more unequal; or, by interrupting the functions of the brainular system, they increase the disease, and tend powerfully towards death. And of all remedies, diffusible stimulants most speedily, and certainly create a habit which calls for repetition; and a still greater evil is that they soon cease to operate, with the same force, without a constant increase of the quantity. Upon the whole, to be useful or even safe, diffusible stimulants must be reserved for emergencies, and should ever be viewed as resembling the sudden and sparkling sallies of wit; for, like it they amuse us for a time, and withdrawing as suddenly as they appeared in both cases, a langour is left proportionate to the elevation. While durable stimulants, or tonicks, and mild nutrients, &c. like the slow, solemn, constant operations of the judgment, carry along the subject with that equinecessity of force, which is likely to secure the wonted vigour of mind and body.

### *Ether.*

Ether (sulphurick, or vitriolick) is a valuable medicine. Dose from twenty to sixty drops, and must always be taken in cold water. Much depends on keeping your ether well stopped; it should be stopped with great care, and kept in the coldest place you can get.

### *Compound Spirit of Lavender.*

Oil of lavender, three drams,
Oil of rosemary, one dram,
One nutmeg, grated,
Oil cinnamon, thirty drops,
Oil cloves, twenty drops,
Spirit of wine, four ounces.

Put the oils into the spirit of wine, let it infuse twenty-four hours, observing to shake it now and then. Afterwards fill up a common black bottle with proof spirits, or in other words, add

three half pints of best whiskey, or rum. Dose from twenty drops to two or three tea spoonfuls on sugar.

*Tincture Cantharides.*

Cantharides pounded, one dram, } Digest seven days,
Good whiskey or rum, one pint. } and then strain carefully through paper, (this must never be omitted.) Dose from ten drops to twenty; but in tetanus, from one to three tea spoonfuls.

*Spirit of Turpentine.*

Turpentine is seldom used in practice, but in palsy, or in cases of severe chronick rheumatism, and in gout of the lowest grade, in cases of general debility, accompanied with gleet, fluor albus, &c. this article may be given to advantage; it may also be used with good effect in some protracted cases of ague, taken just before the chill. But it must always be recollected that turpentine is a powerful stimulant, and must never be given until we are well satisfied nothing like plethora, or an inflammatory diathesis exists. Dose from twenty drops to sixty, taken on sugar, or beat up with a little raw egg.

*Essence of Peppermint.*

Essence of peppermint is a safe and valuable medicine in cases of flatulence, and pain in the stomach and bowels, arising from debility or want of tone. Dose from five to twenty-five drops on sugar.

*Tincture of Assafœtida.*

Tincture of assafœtida is a useful medicine in nervous diseases, but unless the case is attended with very considerable direct debility, we cannot expect much effect from it; the usual doses containing so little assafœtida that the spirits wine becomes the principal. Dose from twenty drops to sixty on sugar, or in water.

*Oil of Amber.*

Oil of amber is a powerful stimulant, and a valuable medicine, where we wish to stimulate powerfully. Dose from three to ten drops, taken on sugar, or administered in glysters.

*Spirit of Hartshorn.*

Spirit of hartshorn in doses of from five to twenty-five drops; in cool water, is a safe and useful diffusible stimulant, but its effects are very transient.

*Garlick.*

Garlick is most easily taken cut in small slices, or the juice may be expressed from the garlick, and mixed with a little sweet milk; the sooner it is taken after mixing the better. Dose a clove or two, or about a tea spoonful of the juice. But if we express the juice of garlick, and dry it slowly, it forms an extract so strongly resembling assafœtida, that it requires some judgment to distinguish them; for it smells like assafœtida, is whitish within, and when broken open, it soon acquires a reddish colour. I am much inclined to believe, this inspissated juice would answer every purpose that we obtain from the assafœtida.

*Tincture of Bark and Ether.*

Tincture of bark, one ounce } Mix: Dose from
Ether, two or three tea spoonfuls. } one to three tea spoonfuls. This is a valuable palliative in all habitual cases of debility of the stomach.

*Tincture of Bark.*

Bark, one ounce, } Digest one week,
Good whiskey or rum, one pint. } and then strain. Dose from two to six tea spoonfuls. This medicine is seldom necessary; where bark is necessary, it is best given in any other form.

*Laudanum.*

Laudanum is a valuable diffusible stimulant in many nervous diseases as hystericks, low fevers, &c. Dose from ten to sixty drops, repeated twice or oftener per day. For the preparation of this medicine, see antispasmodicks.

*Stramonium, or James Town Weed.*

Stramonium, according to Dr. Barton, is a valuable medicine in maniacal cases, and in epilepsy. (The leaves or seed ground to a fine powder.) Dose, commence with two or three grains, and cautiously increase the quantity to thirty or forty grains.

*Electricity.*

Electricity has been used for a long time, but, if I mistake not, it was falling into disuse till it was revived by the discovery of Galvani. Since the experiments of Volta, and others of France, electricity has been revived,

and used much in the form of galvanism, as well as in the common way. I have tried both forms in many cases of palsy, rheumatism, &c. and I can with truth declare, I never saw any marked benefit from it. And, notwithstanding the general recommendation of this remedy, I am persuaded a faithful report would convince us, that little benefit follows the use of it. I am inclined to believe that, its efficacy is principally owing to our overlooking the nature of it. It is a diffusible stimulant, and like remedies of this class is but a palliative, and always transient in its effects. If electricity ever becomes extensively useful, it must be accompanied with durable tonicks, as well as exercise, and particular attention to all the usual means for invigorating the body. I suspect chalybeates will mostly be found useful where electricity is likely to be beneficial. To conclude, it is probable that by using electricity as a diffusible stimulant only, we will derive some advantage from it. An interesting case of a diseased liver is mentioned, I think, by Darwin, in which this remedy was of singular service; but, although I have used this remedy in many cases, in which it is usually thought proper, I have never seen any well marked benefit from it.

*Camphorated Spirits.*

Camphor, half an ounce, } Dissolve the camphor
Good whiskey or rum, a pint. } in the spirit, and keep it closely stopped. This answers well as a stimulant, in some hysterical cases, and in very low fevers. Dose, from one to three tea spoonfuls; but this medicine is used mostly outwardly in strains, &c.

## SECTION X.

### *Durable Stimulants, or Tonicks.*

Incalculable advantages are derived from the use of tonicks; of this important truth, we have the most ample evidence from the experience of every writer, and also, in the practice of every day. But notwithstanding the most positive conviction of their utility, when skilfully applied, still there is proof, equally strong, of pernicious

consequences following their use, in unsuitable conditions of the body. And, although I have to acknowledge my inability to explain their mode of operation, there is no doubt on the mind of those skilled in medicine, but that they are only useful, or even safe, in cases of direct debility; that is, where there is langour or weakness, unattended by fever or general inflammation.

This important truth has been longer overlooked in cases of mortification, than in any other case; and even to the present day, physicians of respectability are found, who view the bark as a kind of specifick in cases of mortification; whereas, in gangrene or insipient mortification, nothing could be more injurious than so powerful a tonick and stimulant, where there was a great excess of excitement or action in the part inflamed; but after the inflammation is brought down, the bark becomes indispensably necessary.

It is probable, all tonicks operate principally on the stomach, and by giving tone or vigour to that important organ, exert a friendly influence over the general system; both by an improvement in the process of digestion, and also by an immediate operation upon the nervous system.

But to conclude: tonicks or durable stimulants, to be useful, must only be taken when the body is enfeebled, without fever, or without an active state of the blood vessels. In a great majority of our diseases, we must reduce the patient by evacuants of some kind, before they will bear tonicks. Persons subject to habitual diseases, mostly require mild tonicks, in the intervals of their disease, but during its paroxysm, they mostly require mild evacuants, or diffusible stimulants.

*Peruvian Bark.*

This valuable medicine has been brought to us in great variety, and I really feel some doubts, after much reflection, in giving an opinion. I believe, in general, the yellow that is well ground will be found to answer, and for the present, that which is put up by Dr. Sanford, is the best.

Many persons in the country, entertain strong prejudices against the bark, from a belief that it will stick in

the bones; nothing can be more ridiculous, for there is no likelihood of its even getting into the circulation; the truth is, that this medicine is a powerful tonick, and therefore if given in an inflammatory state of the system, like all other stimulants, it will aggravate the disease, and by the consequent excessive action, congestions are formed, which leave obstinate, or incurable rheumatick affections; but this is not the fault of the medicine, but proceeds from the abuse of it; and the same consequences would often follow the use of animal food or any other stimulant, when the body is labouring under an inflammatory diathesis. Dose, from a tea spoonful to a table spoonful taken in wine, snakeroot tea, milk, water, &c. according to circumstances; where it is used in small quantities, simply as a tonick, it is conjoined to small doses of the elixir of vitriol, to great advantage.

*Dogwood Bark.*

This is a valuable tonick, and may be substituted in many cases for the bark. It is sometimes recommended in strong decoction, but I have seldom found persons willing or able to take it in this way; it generally nauseates the stomach: but if the bark is carefully dried, and then pounded and sifted through a very fine piece of gauze, or a piece of bolting cloth, it answers (particularly when mixed with a little bark) every purpose which we can expect from the bark alone. Dose, from one to three or four tea spoonfuls.

*Elixir Vitriol.*

Elixir vitriol is a mild and invaluable tonick, and has been long used for indigestion, debilitating sweats, &c.—Dose, from five to thirty drops, diluted with two or three table spoonfuls of cool water, or it may be combined with bitter cold infusions, such as chamomile, bark, centaury, &c. It is prepared thus:

Good Whiskey or rum, one pint,
Sulphurick Acid, or oil. Vitriol, three ounces. } Drop

the acid slowly into the spirits, digest in a glass vessel a few hours, then add of cinnamon and ginger, powdered, each half an ounce; digest again for a few days, and then suffer the grounds to subside to the bottom, and pour off the clear liquor.

### *Black Oak Bark.*

This article was warmly recommended by Dr. Rousseau, of Philadelphia, a few years since. I have used it with evident advantage in several cases of intermittents. Its efficacy depends much on the fineness of the powder. Dose from one to four tea spoonfuls, or even more.

### *Nitrick Acid.*

Nitrick acid is a valuable tonick in scurvy, syphilis, and in the convalescence of most fevers; it must be diluted in a good deal of water. Dose from ten to forty drops.

### *Extract of Bark.*

Extract of bark is sometimes used instead of powdered bark, and has some advantage in the smallness of the dose; as a mild tonick, it will perhaps answer; but in intermittents and mortifications, the bark in substance can alone be trusted. Dose from five to thirty grains, in form of pills.

### *Powder of Bark.*

Bark, two ounces,
Cremor Tartar, half an ounce,
Thirty Cloves.
} Grind the cloves well with the cremor tartar, and mix the whole well together. This powder will often lay on the stomach where bark alone will not. Dose from two to six tea spoonfuls.

### *Wild Cherry Bark.*

The bark of the wild cherry tree dried, and rendered perfectly fine, is a pleasant and useful tonick in cases of consumption, &c.; and in all cases where tonicks are necessary for a length of time, this will be found a pleasant and useful change.

Quassia Wood,
Gentian Root,
Columbo Root,
Chamomile Flowers,
Carduus, the herb,
Orange Peel, Centaury.
} These are all mild and valuable tonicks; and in cases of simple debility, they will generally answer our wishes. In general they are best in the form of cold infusion, but the extract, or wine bitters made of them, are also valuable articles.

*Iron Filings and Rust.*

These are both valuable tonicks where we wish to continue such medicines for a length of time. They are more particularly useful in hypochondriacal and hysterical cases, and in a languid state of the uterine vessel. Dose from five to twenty grains, two or three times a day. The following pills will be found a good formula: Iron filings or rust two drams, myrrh, or assafœtida, one dram; make sixty-four pills, by adding a sufficiency of crumb of bread.

Physicians are found who still carelessly talk about steel, when they mean iron. This may lead to errour; for it is well known the softest iron is the best tonick this metal affords.

To have it pure, is a matter of vast importance; and can only be obtained by filing a soft piece of iron for the purpose; that from work shops is never to be trusted, as it always contains brass, or other metals.

*White Oxyd of Bismuth.*

White oxyd of bismuth, perfectly white and pure, is a valuable tonick in cases of dyspepsia. But for persons habitually dyspeptick, this article should only be used as a palliative occasionally; for it soon loses its power. Dose from two to ten grains, two or three times a day, in form of pills.

*Flowers of Zink.*

The flowers of zink have sometimes been found useful in epilepsy, and in other spasmodick diseases. Dose from one to seven grains twice a day, in form of pills.

*Cuprum Ammoniacum.*

The ammoniated copper has been recommended by Cullen and others, in cases of epilepsy. Dose from half a grain to three or four grains. This article is not much used in the present practice, but it may, with propriety, be alterated with other tonicks in cases of epilepsy.

*Fowler's Solution.*

This is a preparation of arsenick, but may be used with safety in cases of agues, or in a languid state of the body, provided we are certain nothing like plethora or inflammation is present. It forms the base of, perhaps, all ague drops. Dose from five to twenty drops, but it

should never be continued long; and in general, I would advise people not to use it without advice.

## SECTION XI.—SUBSECTION 1.

### *Astringents, or Antihemorrhagicks.*

Some men of eminence doubt whether any articles operate on the living body as astringents, and are for placing all the articles usually called astringents as common tonicks. It is probable no article can operate on the living fibre so as to produce constriction, or that kind of solidification which we see in the process of tanning leather; and further, it must be admitted that all astringents, or, in other words, all the articles which have been considered as astringents, are tonicks.

But we are equally certain that tonicks differ much in their operation on the living body; and whatever may be their mode of operation, some do certainly restrain hemorrhage, sweating, and fluxes, from the bowels, &c. while others have no such effect. I have, in the preceding article, given as my opinion, that it is probable tonicks operate on the general economy of the stomach, and thereby improve or perfect the digestion of the food, and also that they exert an immediate influence upon the nerves, and in either, or both ways, they give vigour or strength to the system, provided there is a lack of stimulus.

If this opinion be correct, we may, with tolerable certainty, conclude that tonicks, which have the property of restraining the secretions and excretions, operate more especially upon the nervous system. This conclusion derives support from the circumstance, that many of the astringents belong to the class of diffusible stimulants, which have always been supposed to operate on the nerves; and further, that they operate so speedily as to answer the intention, particularly in hemorrhages, before any additional strength or action is imparted to the general system. Lastly: However unable to explain their mode of operation, the practice of every day clearly shows that what are considered astringents, will check

excessive discharges from the body almost instantly in some cases, and in others in a gradual manner, but with equal certainty; and often too in inflammatory conditions of the body.

It is to be remembered, however, that astringents, generally speaking, are but palliatives like diffusible stimulants, and, further, that in all cases where plethora or an inflammatory diathesis is present, they must only be used upon urgent necessity, and always accompanied or succeeded by evacuations, and particularly by abstracting blood: this last remark applies to cases of hemorrhages, and, indeed, these are the only cases which require absolutely, that we continue the term astringent to some tonicks and stimulants; or perhaps, it would be well to substitute the term antihemorrhagicks. So speedily will astringents sometimes arrest hemorrhage, as common salt in bleeding from the lungs; sugar lead and opium, uterine hemorrhage, &c. that I think it a matter of the highest importance that we continue to view some tonicks, and diffusible stimulants, as having powers, in good measure, specifick in checking fluxes of blood; and, whether they operate on the living, as the most of them are known to act upon dead animal matter, (which is extremely doubtful,) is a matter of no consequence, but to lose sight of their effects, which are as evident as the effects of any other remedies, would materially injure the practice, and lead to danger, for although all astringents are either stimulants or tonicks, all these are by no means astringents or antihemorrhagicks; and hence, to stickle at viewing some tonicks as having a peculiar influence, which is more especially calculated to check bleedings for a time, till the vessels may be emptied in some degree, because we are able to say, astringents cannot act on the living as they do on the dead animal fibre, is certainly to stickle about trifles, and in the face of experience. Let us then, on the safe basis of experience, boldly administer our astringents as antihemorrhagicks in alarming cases of hemorrhages, but never forget they are palliatives, and must be assisted or followed by remedies suited to the present condition of the body.

*Common Salt.*

The unquestionable efficacy of this remedy, in checking hemorrhage from the lungs, has given rise to the liberty I take in proposing the term antihemorrhagicks, for that of astringents, for common salt cannot, strictly speaking, be viewed either as an astringent, or tonick, in the case before us, according to the common notion of astringency; but there is every appearance of this article, and several others, as opium and ipecacuanha, having antihemorrhagick effects, and therefore, I think it would be an improvement in nomenclature to substitute the term antihemorrhagicks, in many cases, for that of astringents; but as I feel much diffidence in suggesting innovation in technical language, I have continued the term astringents, and hope this explanation will excuse me for including under this head, things which are certainly antihemorrhagick, but are not astringent.

Common table salt is given to arrest bleeding from the lungs, with safety and good prospect of success in all cases, but must always be followed by suitable remedies which are more permanent, but slower in operation; these, generally, are bleeding, or nauseating articles, &c.; but in cases of well marked, direct debility, durable tonicks, rest, and mild but nutrient food. Dose from two to ten or more tea spoonfuls, taken in a dry state, nor must the patient drink immediately afterwards, or its effect will be lost.

*Laudanum, and solid Opium.*

Strong opiates are valuable antihemorrhagicks, in some cases of uterine hemorrhage, and bleeding from the bowels; but are only admissible where inflammation has not come on, which opiates will often prevent, or after inflammation has in a good measure subsided. Where we have doubts about the presence of inflammation, or where it has not made its appearance, we should combine a little sal. nitre, or a very little ipecacuanha; the first will have a tendency to cool, and the latter, by exciting nausea, will weaken the force of the heart, and thus accomplish our purpose. Dose of laudanum from ten to sixteen drops, of opium from one to three grains.

### *Sugar Lead.*

Sugar of lead may be given with safety and advantage in hemorrhages from the uterus, from the intestines, or from the stomach; but although perfectly safe in the hands of the physician, I would advise that it only be used in cases of emergency without advice. Dose from one to five grains, in form of pills, and I think it should always be combined with a fourth, a half, or a whole grain of opium, to each dose. And it must be remembered, that unless two or three doses answer our wishes, we should not repeat oftener, on the same day: three or four pills containing each two grains of the lead, and repeated every quarter, half, whole, or two hours, according to the urgency of the case, will mostly answer our purpose.

### *White Vitriol.*

White vitriol, in doses of two or three grains, combined with a fourth, or half a grain of opium, has been found a useful antihemorrhagick; where fever is present, it must be given so as to excite slight nausea. It is principally useful in hemorrhage from the bowels unattended with considerable fever.

### *Alum.*

Alum has been much used for restraining hemorrhages in general, but, since the introduction of sugar of lead, it has been less used. Where other articles are not at hand, it may be used sometimes with considerable effect. Dose from ten to twenty grains, repeated every half hour, or as the case may require. Alum may be used with good effect in agues, where the bark cannot be taken; for this purpose, it must be combined with some aromatick, as nutmeg, or cinnamon, &c.

## SUBSECTION 2.

## *Astringents, or Restringents.*

Restringents are, perhaps, all tonicks; but as all tonicks have no immediate or speedy restringent effect, there is an absolute necessity for distinguishing a few of them, under the head of restringents.

The articles placed under this head, are such as are known to lessen profluvia, or excessive discharges from the body; but being tonick, are never allowable or safe, where there is plethora, or inflammatory action. Most of them have little or no antihemorrhagick effect; those that have, are either given in smaller quantities, or at longer intervals; they are given principally for affections of the first passages.

*Dewberry Root and Leaves.*

A large handful of dewberry root fresh, and cut into pieces; or the same quantity of leaves, boiled a few minutes in a new earthen pot, with one quart of water, is a mild and useful restringent, in cases of diarrhœa, dysentery, &c. Dose a wine glass every two or three hours.

*Iceland Moss.*

Iceland moss is a valuable and mild restringent, in cases of diarrhœa, particularly that attending consumption; and on account of its nutrient, mild tonick and restringent properties, is an invaluable medicine; and, in my opinion, ought to be much more used in all cases of chronick debility. It may be boiled in water, in the proportion of an ounce to a quart of water for cases of diarrhœa: but where we wish to obtain its nutrient properties, it should be boiled in milk; in this form, it is essential that we prepare but little at once. In both forms, it may be taken in the quantities of a wine glass, occasionally.

*Uva Ursi.*

Uva Ursi, taken in the form of powder, in doses of from twenty to sixty grains, two or three times a day, is a valuable restringent, more particularly, in debilitating discharges from the urinal organs. It may also be given, with good effect, in debility of the bowels; and when taken in milk, it is slightly nutrient.

*Lime Water.*

Lime water is an useful restringent in cases of protracted diarrhœa, weakness of the urinal organs, attended with stone or gravel. It is made by moistening a well burnt piece of lime with a small quantity of water, and as soon as the lime is slacked, pour on cold water, which in bulk, would be about ten times greater than the lime, stir this well, then suffer the lime to subside, and strain

the clear liquor through common brown paper placed over a funnel; afterwards it must be carefully stopped in glass bottles, and this must be done immediately, or the lime will separate from the water. Dose from two to four ounces, frequently repeated, but like the alkalies, it will injure the stomach if long continued.

*Kino, (a Gum Resin.)*

Kino, in form of pills, or ground in water, with a little sugar, and one drop of oil of anise to each ounce of water, is a valuable restringent where we wish a speedy effect; and even in protracted cases of hemorrhage, it will be found a valuable astringent. The dose of kino, either in substance or mixture, is from five to twenty grains, twice a day. Laudanum in small doses is a valuable restringent.

Alum.
White vitriol,
Sugar lead,
Extract of logwood,
Elixir vitriol,
All pleasant bitters.

These are all safe restringents, but with the exception of the oak bark, they must be given in very small doses, and may mostly be combined with small doses of laudanum. Or require the co-operation of exercise, strict temperance, bathing, mild but nutritious diet. The sugar of lead, though perfectly safe, in small doses, as half or a whole grain, should never be continued more than a few days.

SUBSECTION 3.

## *External Astringents.*

External astringents are remedies applied in form of liniments, ointments, or embrocations, with the intention of repelling or drying up sores, of various kinds. And it must be remembered of these, that like internal astringents, they are only safe, where the body is free from any considerable fever or plethora. But in many cases, external astringents may be used before fever has come on, and thus arrest local affections before the general system is brought into sympathy. And in many slighter cases, nothing is to be apprehended from their application to weeping surfaces.

*Decoction of Oak Bark.*

The inner bark of oak is to be chipped, and a large handful boiled a few minutes in a new earthen pot, with about half a gallon of water. This may be used for washing old sores, ulcers, protracted cases of burns, and scorbutick or scrofulous ulcers; and where there is considerable debility without fever, a little alum may be added. This decoction should be used tepid.

*Lime Water.*

For preparing lime water, see subsection second, of the article on astringents. This is a valuable external astringent in all cases where we wish to dry up weeping or running sores.

*Lime Water Liniment.*

Mix equal quantities of lime water, and sweet oil or cold drawn flaxseed oil. This is generally viewed rather as an emollient, but is certainly slightly astringent, and a valuable application in cases of burns, and other painful sores.

*Liniment of Lead.*

Sweet oil one ounce, sugar lead half a dram, shake this well together. This is a valuable astringent in cases of piles, and for other painful sores, it may sometimes be applied to inflamed eyes.

*Lead Water.*

Spring water one gill, sugar of lead fifteen grains. This is a mild and useful external astringent, and may be made a little stronger or weaker, as the case may require; it will be obvious that the more lead, the more astringent the solution. It should never be applied to large raw surfaces.

*Borax.*

Borax dissolved in rose water or common water, is a valuable external astringent for sore nipples, chaps of the lips, &c. It is also a valuable article in mouth water. Dissolve half a dram in one gill of cold water.

*Ointment of White Lead.*

Bees-wax one ounce, best hogslard three ounces, melt, and while cooling, stir in six drams of the white lead ground fine. This ointment is useful in chaps, excoria-

tions, &c. and may sometimes be applied to small ulcers with advantage.

*Ointment of Calamine.*

Yellow wax two ounces, best lard six ounces, melt, and while cooling, stir in two ounces of well ground calamine, (or lapis calaminaris.) This has long been used, as a mild drying, or astringent ointment; and is similar to the celebrated Turner's cerate. It is used by applying once a day; and, in general, where it is used, mild astringent embrocations or washes, are to be used, as lime water, oak bark, &c. but there may be cases where the cerate, or ointment, will answer better, by simply washing the sore with castile soapsuds.

*Ointment of Armenian Bole.*

Red, or Armenian bole, ground fine, may be added in the proportion of half an ounce, to three ounces of lard and one ounce of wax, melted, observing to stir the whole well together till the ointment becomes stiff. This ointment is often useful in old superficial sores; but in general, the calamine ointment will answer every purpose to which this is applied.

## SECTION XII.

## *Antispasmodicks.*

Antispasmodicks, strictly speaking, are remedies which are only useful, or even safe, in cases of spasm arising from debility; being what is properly called atonick spasms; for, where spasm arises in an opposite or plethorick, or inflammatory state of the system, being what has been called tonick spasms, nothing of a stimulant quality can be admissible; here bleeding and other evacuants are the proper, and only antispasmodicks. We are, therefore, carefully to examine the case before we administer common antispasmodicks, and be satisfied the spasm present is of the atonick kind, or dependant on direct debility.

*Opium.*

Opium, in the milder spasmodick diseases, as hystericks, hypochondriasis, &c. is a valuable antispasmodick,

given in doses of, from an eighth of a grain, to a whole grain. But in cases of violent spasmodick colick, in severe contused wounds, or in tetanus, we should begin with doses of, from one to five or six grains. Its effects commence generally in a few minutes, and wear off in from two to twenty-four hours. It is to be remembered, that although opium, in proper doses, is a powerful antispasmodick, it nevertheless will produce spasms, when given in overdoses.

*Laudanum.*

Opium, half an ounce, good whiskey or rum, half a pint; cut the opium into small slices, digest about a week, and then strain. The same observations apply to laudanum as to the solid opium, with this difference, that the liquid will operate more speedily, and sooner lose its effects. Dose in mild diseases from ten to thirty drops; in violent cases from a tea spoonful to a table spoonful; it is in cases of disease from drinking cold water, Dr. Rush mentions so large a dose as a table spoonful; it is seldom safe to give more than two or three tea spoonfuls.

*Ether.*

Vitriolick ether is a powerful, and speedy, antispasmodick, and may be given in doses of, from ten drops to two or three tea spoonfuls; more than a tea spoonful is not often necessary. It must always be taken in cold water, and may be combined with laudanum to advantage. Ether must always be well stopped, and it will generally be best to pour the quantity wanted, as near as we can guess, at once into a tea spoon, for, if we suffer it to drop, it will evaporate and lose its properties. It may be well to remember, that if it is dropped near a candle it may take fire, and this getting into the vial, has, sometimes produced great alarm, and is not without danger to the by-standers.

*Compound Spirit of Lavender.*

For the preparation of compound spirit of lavender, see the section on diffusible stimulants. This is an useful antispasmodick, in low nervous diseases; but is a powerful stimulant. Dose from twenty drops to one or two tea spoonfuls.

*Assafœtida.*

Assafœtida, in form of pills, is a valuable antispasmodick, and has the advantage of opening the bowels slightly. Dose from five to twenty grains.

*Tincture of Assafœtida.*

Assafœtida six drams, good whiskey or rum, half a pint, digest about a week, and strain; this is given in doses of, from ten to fifty drops, in cases of hysterical, or other mild spasmodick diseases.

*Antispasmodick Glyster.*

Dissolve one or two drams of assafœtida, in the usual quantity of water, and administer it as a glyster; this will sometimes be found a valuable article for persons affected with asthma, hystericks, &c. and for those who cannot take assafœtida in any other form.

*Garlick.*

A clove or two of garlick sliced, and taken raw; or the expressed juice inspissated, and made into pills, is a valuable antispasmodick, in cases of hystericks, hypochondriasis and asthma, more particularly, when these diseases are of long standing, or in reduced habits. The dose of the inspissated juice may be from five to twenty grains.

*Whole Mustard Seed.*

Whole mustard taken in doses of, from half to a whole table spoonful, in molasses or thin jelly, is a valuable antispasmodick, in cases of habitual or gouty cramps in the limbs.

*Rue, the Juice.*

Rue juice, expressed from the fresh plant, and taken in doses of, from one to two tea spoonfuls, in milk, or a little mucilage, is a good antispasmodick, in hysterical cases, and in cases of spasmodick affections of the lungs.

*Wine.*

Good old madeira, sherry, or lisbon wine, sweetened in water, or made into whey with milk, is an excellent antispasmodick, in all cases of spasms of the atonick kind. But, in general, other articles are to be preferred, lest the wine lead to a bad practice of taking too much.

*Oil of Amber.*

Oil of amber is a useful antispasmodick, in cases of tetanus, and in the comatose state of low fevers. Dose from three to ten drops on sugar. This article may also be used in injections, from fifteen to twenty-five drops, may be added to a common glyster.

*Balsam Peru.*

Balsam Peru in doses of from twenty to thirty drops, on sugar, is a useful antispasmodick, in cases of lead colick. It may be combined with castor oil.

*Sweet Spirit of Nitre.*

Spirit of nitre, in doses of from one to three tea spoonfuls, is a pleasant and valuable antispasmodick, in almost every variety of spasm. It must always be taken in cold water.

*Valerian, (Sylvestris or wild.)*

Valerian, in form of powder, or in tea, is a valuable and mild antispasmodick, in hystericks, and in low fevers, St. Vitus' dance, epilepsy, &c. Dose in powder, from twenty to forty grains, in tea; half a pint of boiling water may be added to two drams of valerian. The tea must not be suffered to boil, it must be closely covered, and never suffered to stand long.

*Sugar Lead.*

Sugar of lead combined with opium, in form of pills, will be found a safe and valuable antispasmodick, in some cases of violent asthma. Sugar lead, eight grains, opium two grains, with a little crumb of bread, make four pills; give one every twenty or thirty minutes.

## SECTION XIII.—SUBSECTION 1.

### *Carminative Stimulants.*

Carminatives in general, are both diffusible stimulants, and antispasmodicks; but nevertheless differ in this, that carminatives are given exclusively with a view of expelling wind from the stomach. They seem to operate by imparting a due degree of stimulus to the languid stomach, by which this viscus is enabled to throw off sharp wind, &c. And it is to be remembered of carminatives,

that they are only admissible where the stomach is in a state of atony, for as they are stimulants of speedy operation, much mischief may arise from their use in cases of inflammation of the stomach and bowels, and also, in cases of disordered stomach attended with fever.

*Essence of Peppermint.*

Essence of peppermint is a valuable carminative, taken in doses of from five to twenty drops on sugar, or made into tea. Or tea may be made of the dried herb.

*Oil of Spear Mint.*

The oil of mint, taken on sugar, or in the form of tea, is an excellent carminative. Dose from two to six drops.

*Oil of Anise.*

The oil of anise, and of fennel, are good carminatives. Dose from one to four drops, on sugar, or mixed with a little magnesia.

*Ginger.*

Ginger given in form of strong tea, but, in small doses, as two or three table spoonfuls, is a good carminative.

*Spirit of Nitre.*

The sweet spirit of nitre is a very valuable carminative, in doses of from ten to thirty drops, in cool water.

*Saffron.*

Tea of English saffron, made weak, is a good carminative. It is to be taken in small doses.

*Soda Water.*

Soda water, highly charged with fixed air, is an excellent carminative. But this is more properly, a carminative antacid. Mild pleasant aromaticks in general, are carminative, as cinnamon, nutmeg, &c.

SUBSECTION 2.

## *Carminative Antacids.*

Carminative antacids are remedies which exert an immediate effect upon the stomach. But they operate very differently from carminative stimulants; for, instead of any immediate stimulant operation upon the economy of the stomach, they afford relief by neutralizing acid wind or

fluids, and probably also destroy fluids, &c. in the form of oxyds, which offend the stomach. And as the chymical changes among those articles, when taken into the stomach affected with acid, have a refrigerant effect, and often form mild neutral salts, which gently move the bowels, we may often give carminative antacids, even in cases of high fever, with the most happy effects; and in those general diseases of a middle grade, attended with much sickness at stomach, or pain in the stomach, they may be combined with small doses of carminative stimulants with great advantage. But active inflammation of the general system, should ever be a bar to the use of carminative stimulants.

*Soda.*

Sal. soda, or the mineral alkali, is a most invaluable antacid. Half a dram may be dissolved in ten table spoonfuls of cold water; of this a spoonful may be taken occasionally, in violent cases of cholera morbus, every few minutes. This is a useful medicine for the griping of children; for this purpose, a very small portion of oil of anise, or spearmint, may be added.

*Sal. Tartar.*

Salt of tartar may be used in all cases where antacids are necessary, but it is much more offensive to the taste; and I have long been of opinion that it would sooner injure the stomach, where it is long continued, than soda. One scruple will be found about equal to half a dram of the soda. Both these articles may be rendered more palatable, and often equally useful, by mixing a little lemon juice, or pleasant vinegar, to solutions of them, and by way of variety, a little sugar may sometimes be added. They may also be advantageously combined with essential oils, as mint, &c.

*Magnesia.*

Magnesia is less refrigerant than salt of tartar, or soda; but as it is calculated to combine with acids in the stomach, and, by such combination, to form a saline matter, which opens the bowels, it is admissible in all cases where antacids are proper; but it is never useful, unless acid be present, which causes it to pass through the bowels. Dose from one to three tea spoonfuls, in water, or

eaten in the dry state. Calcined magnesia, is the strongest antacid.

*Prepared Chalk.*

Prepared chalk is a valuable antacid, particularly for children. A few grains may be mixed with water, and the smallest possible quantity of oil of anise added, or it may be given alone, in cases of colicky affections of children. If costiveness attend its use, a little lemon juice or vinegar and sugar may be given; and if this does not open the bowels, give a purge.

*Lime Water.*

Lime water is a valuable carminative antacid in cases of dyspepsia, and many other windy affections of the stomach and bowels; but it seems more particularly suited to persons advanced in life. Dose from a spoonful to half a gill occasionally. [See restringents for the method of making it.]

*White Oxyd of Bismuth.*

The oxyd of bismuth must be chosen perfectly white. It is a most excellent antacid in cases of dyspepsia. Dose from two to ten grains twice a day.

*Elixir Vitriol.*

Elixir vitriol is, perhaps, more generally used as an antacid than any other medicine. It is more slow in its effects than most others, but may be continued longer than any one with which I am acquainted. It is a valuable tonick, while all the articles mentioned in this section are mere palliatives, and ought never to be used for any great length of time. Magnesia is somewhat of an exception to this remark.

## SECTION XIV.

## *Febrifuges.*

Febrifuges are medicines which are supposed to have some cooling, or rather a specifick effect, in cases of fever. But it may be remarked in the first place, that nothing will have much effect in cases of ardent fever, but such as produce some considerable evacuation, as bleeding, purging, vomiting, sweating, &c. And, se-

condly, it may be observed, that all remedies which have been considered febrifuge, are laxatives or diaphoreticks, or diureticks, &c.; and as the effects which usually follow diaphoreticks are only calculated to remove slight febrile diseases, we must always view febrifuges as mild auxiliaries to more powerful evacuants. And from careful observations for several years, I am well satisfied but little dependance can be put on any medicine given as a febrifuge that does not actually purge, or produce some other considerable evacuation. But in fevers of a low grade, or in other cases, after the body is somewhat reduced, by more active articles, febrifuges are valuable medicines.

*Sal. Nitre.*

Sal. nitre, or purified saltpetre, has been long and generally used as a febrifuge. It may be given in fevers in general; but if it is given in large doses, it will sicken the stomach, and if long continued, will always impair digestion. Dose from five to fifteen grains, every few hours.

*Tartar Emetick.*

Tartar emetick is a useful febrifuge in cases of common inflammatory fevers, as pleurisy, phrenitis, &c. provided sufficient evacuations are made by the use of the lancet, purges, &c. Dissolve two grains in a pint of cool water. Dose one or two table spoonfuls every few hours.

*Antimonial Wine.*

For the preparation of antimonial wine, see the article on emeticks. This is a good febrifuge, but is not essentially different from the mixture of tartar emetick. The dose being smaller, and the taste less offensive, renders it sometimes preferable to the solution.

*Ipecacuanha.*

Ipecacuanha is a valuable febrifuge in cases of fevers, &c. where we wish to lessen the action of the pulse. But it must be given so as to excite slight nausea. It may be combined with small doses of calomel or of sal. nitre. Dose from one to five grains.

*Cremor Tartar.*

Cremor tartar taken in doses of a tea spoonful or two, and repeated pretty often, so as to open the bowels, is a mild and useful febrifuge. From half, to an ounce may be taken in twenty-four hours, and it may be rendered palatable by mixing with sugar. Or a pint of boiling water may be poured on two drams of cremor tartar, and a little sugar added; of this, let the feverish patient drink freely.

*Saline Mixture.*

For the preparation of this saline mixture, see the subsection on refrigerant diureticks. It is a mild and useful febrifuge in fevers generally. Dose from half to a whole table spoonful, repeated every few hours.

*Nitrous Mixture.*

For the preparation of this article, see the subsection on cooling diaphoreticks. It is a very pleasant and useful febrifuge, and admissible in all cases where we wish to lessen febrile action. Dose a table spoonful about every two or three hours.

## SECTION XV.

## *Emmenagogues.*

Emmenagogues are medicines which are supposed to have some specifick operation over the menstrual discharges of women. But while we are compelled to admit that some articles do exert such influence, we should carefully bear in mind, that all reputed emmenagogues are powerful stimulants and therefore can only be given with safety where there is strong evidence of langour, or debility of the general system, or where periodical diseases, or chronick inflammation is present, and being of the rheumatick kind. In all these cases, emmenagogues, judiciously given, may have a good effect upon the female constitution, where the menses are absent.

*Calomel and Aloes.*

Calomel half a dram, aloes one scruple; rub the aloes fine, and make sixteen pills, adding a little crumb of bread. One of these may be taken every other evening

in chlorotick cases, or in cases of obstructed menses generally. If they purge much, an anodyne may be given on the evenings no pill is taken.

*Tincture of Guaiacum.*

For the preparation of this tincture, see subsection on stimulant alteratives. Dose from one to three tea spoonfuls. This tincture is most beneficial in cases of painful menstruation, but may be given with advantage, in all cases of obstructed menses, attended with langour or debility of habit.

*Madder.*

Though the efficacy of this article is somewhat doubtful, it is recommended by the excellent Denman, as an emmenagogue. Dose about half a dram.

*Pennyroyal.*

Pennyroyal has been used with advantage as an emmenagogue, and was lately brought into notice by Dr. Watkins, of Baltimore. It may be used in tea, or from one to five drops of the oil. It is a powerful stimulant, and only proper for persons free from fever, and only a few doses taken at the time the menses are expected.

*Mustard.*

Whole mustard seed may be taken in doses of from a half to a whole table spoonful every night going to bed, in molasses; and is often a good emmenagogue.

*Iron.*

Iron, the rust or filings, is a most valuable emmenagogue in cases of considerable debility of habit, but as it acts on the general system by its tonick properties, I must refer the reader to the section on tonicks.

## SECTION XVI.—SUBSECTION 1.

### *Lithontripticks.*

Lithontripticks are medicines which were long used under a belief that they possessed the power of dissolving calculi, or stones in the human bladder; and perhaps they are still taken by persons under similar expectations. The most ample experience however, has proved that no medicine has any such power. But there is strong

grounds for believing that those articles which have maintained their credit as lithontripticks, are either antacids or mild tonicks. And it is highly probable, constitutional debility is almost universally the cause of calculi, or stones in the bladder. I have elsewhere endeavoured to argue that gravelly complaints are often the consequence of a gouty diathesis. Now although we are not able by means of lithontripticks, to dissolve the stone, the above view of such cases, teaches us that, as acidity in the stomach, &c. is the cause of such stony collections, and that this tendency to acidity, arises from debility of habit, we have reason to believe, that by giving antacids, we can, not only prevent their increase, but further by combining tonicks with our antacids, we may wholly remove such tendency from the system, and therefore we may justly consider several articles as having lithontriptick properties. Believing as I do, that it is a matter of consequence to have a correct notion of lithontripticks, I shall briefly state their nature, as respects gravelly patients. Chronick debility disposes to acidity, acidity in some habits disposes to gravel, therefore, the indications are to obviate such a state of debility, to destroy or remove such acidity as predisposes to stone and gravel, and thereby to prevent the future increase of such a complaint. But experience amply proves that some mild tonicks have something like a specifick effect in calculous complaints; not of dissolving concretions, but they have a diuretick, or some kind of soothing power. But after all, if the above theoretick view be correct, we are always to combine the antacid, with tonick lithontripticks. All lithontripticks should be combined freely with mucilage.

### SUBSECTION 2.

### *Magnesia.*

Of all antacids magnesia is the best for gravelly patients: I have often seen the most marked advantages from it, and it may be taken, I think, with the same freedom, as to time, as was allowed by Sydenham for the

use of steel, which was to use it thirty years, and then if necessary, begin again. If it operates gently upon the bowels, it is sure to give great relief, in cases of stone and gravel, that are not advanced beyond remedy. The calcined will sometimes be necessary to alternate with the common magnesia. Dose from two to six tea spoonfuls, twice a day.

*Castile Soap.*

Castile soap, if genuine, that is, made of fresh olive oil and soda, as it ought to be, and not too old, is a most excellent lithontriptick, and may be continued for any length of time. The soda destroys the acid of the habit, while the oil defends the surface of the stomach, from the acrimony of the soda. Dose from one to four drams, taken in two or three doses per day.

*Lime Water.*

Lime water carefully made, and strained, is a valuable lithontriptick; but if long continued will injure the stomach. In general, this article should be taken along with castile soap; or, I think the best way is to alternate the lime water with the other articles, and never use it more than a few weeks at a time, and then leave a considerable interval before it is used again. Dose from half a gill to half a pint per day. For the preparation of lime water, see the second subsection on astringents.

*Sal. Tartar.*

Sal. tartar has sometimes been used as a lithontriptick, but this article can never be given for any considerable length of time, without much risk of impairing the tone of the stomach.

SUBSECTION 3.

## *Uva Ursi.*

Uva ursi is probably, one of the best tonick lithontripticks, and may be given in all cases of gravel or stone. But I think, we should always combine antacids with the uva ursi, or any other tonick lithontriptick. Dose from twenty to sixty grains, of the leaves powdered, twice a day, in a little milk.

### *Raw Coffee.*

Raw coffee has been given with good effect, in cases of gravel, &c. and as it has no immediate antacid properties, we are warranted in placing it among the tonick lithontripticks. Take a large spoonful of green coffee, well washed, and boil it for a few minutes, in a quart of water; this may be all drank in two days.

### *Wild Carrot, (the seed.)*

The wild carrot seeds have been used with good effect, in many cases of gravel, and may always be alternated with those above. Take an ounce of the seed, and boil them in a quart of water, then take the infusion in such quantities as to use it all in three days. But it is more economical to powder the seeds fine, and take from a half to a whole dram, twice a day. The coffee beans may also be used more economically, in the form of powder.

### *Iron Filings.*

Although iron cannot be said to have any immediate lithontriptick properties, still as it is one of the best tonicks, and as gravel is mostly found in debilitated habits, the iron is among the best remedies, in such habits for the gravel or stone. For this purpose the iron in form of filings, or rust, may be combined with antacid, or tonick lithontripticks, as the case may requfire; and from half to a dram of the iron per day, may be taken.

## SECTION XVII.

## *Ophthalmicks.*

Ophthalmicks are remedies applied to the eyes, in cases of inflammation, or what is commonly called sore eyes. A very great number of articles have been proposed for this purpose, and from the extreme discordance of their properties, there is little doubt but more mischief has been done the eyes than benefit. It was long ago observed, by the illustrious Cheselden, that no washes containing powders should be applied to the eyes. And as far as my opportunities enable me to judge, this opinion is correct, and of vast importance. I have observed, see inflammation of the eyes, that saline articles

ought not to be used in active inflammation of the eyes. The following ophthalmicks will generally be found to answer our wishes.

*Milk and Water.*

Take equal parts by measure, of hot water, and milk which has stood a few hours and been once skimmed. This should be made in small quantities, and may be applied to the eyes in all severe cases, either warm or cold: persons who go out should not use it warm, at least when the weather is cold. No person who has not made sufficient trial, can imagine the benefit which may generally be derived from a perseverance in this article. But I have seen many persons making a large mixture of milk and water, and washing the eyes in the same vessel for a day or two, but it should be made every two hours in warm weather, and twice a day in winter, and but a little of it should be poured out for use at each time of using.

*Saffronized Milk.*

Boil a few grains of English saffron a few minutes, in equal parts of milk and water. This may by used as above directed, for milk and water, but it may be observed, that this is a little stimulant, and will be found most useful in cases somewhat abated of their inflammation. It should always be carefully strained, and never long kept.

*Rose Water.*

Rose water is a very mild astringent, and when applied at a very early stage of ophthalmick inflammation, will often go far to prevent its progress. This article is always to be applied cold, and therefore is not proper in cases of very high inflammation.

*Lime Water Liniment.*

Best sweet oil, or oil of almonds, and lime water equal parts. This may be applied in cases of inflamed eyes, with great success, particularly in cases where washes have been used ineffectually, or where the eye lids incline to stick together. For want of good lime water, about three grains of sugar of lead may be dissolved in an ounce of oil of almonds, but this is more stimulant, and not as generally successful.

Brandy diluted with water,
Rose water with a little laudanum,
Chamomile boiled in milk, and a little laudanum,
Lead water,

Weak solutions of white vitriol, are all stimulant ophthalmicks, and are often used with advantage before inflammation has run high, but more particularly after it has assumed the chronick form. They are always dangerous where there is much pain or acute inflammation. It is to be observed of diseases of the eyes, that although the foregoing articles and many others are often highly beneficial, we are never to trust them alone in severe cases.

The most prompt use of the lancet; leeches about the eyes; blistering about the neck; or even on the eye; active cooling purges; low diet; and shunning the light, are often necessary to prevent the loss of sight.

## SECTION XVIII.

### *Anodynes.*

But few people have any correct notion of anodynes, for it is almost universally supposed, that opium is the only medicine which promotes sleep, and this it is supposed to do by some specifick property, of a soporifick quality. But the truth is, that opium in every form, is a powerful diffusible stimulant, and therefore, unless the system is suitably languid, or reduced, or at least free from inflammatory action or fever, opium instead of promoting or producing sleep, distracts the brain, and often produces delirium or total inability to sleep. So that in all diseases where there is considerable fever or fulness of habit, things quite opposite in their nature from opium, become anodyne, while opium will raise the fever, &c. and have quite an opposite effect. Here a bleeding, a purge, an emetick, or cooling drinks, accommodated to the case, will induce sleep, by lowering febrile action.

Let it be remembered then, that all remedies which are reputed anodynes are stimulants, and are only admissible where there is no acute inflammation. And further, opium

being a stimulant, and as was long since observed by Sydenham, a cordial also, we are by no means to view it as a mere soporifick; on the contrary, in all low fevers, in many cases of chronick inflammation, in recent wounds, in all painful diseases, and even in cases of delirium attending low fevers, opium becomes a most invaluable stimulant or cordial, and can be given with great benefit at all times in the day.

The common but erroneous practice of giving opium at bed time only, originated at a time when the properties of opium were not understood; and the physician who is not aware of the vast benefit which may be derived from the cordial, or stimulant properties of it, by a proper adaption of it to a reduced or irritable state of the system, is deprived of one of the greatest sources of pleasure and convenience to himself, and of incalculable advantages to his patients.

*Opium.*

The dose of pure opium is from one fourth of a grain to three or more, in very violent cases; but the most usual is about one grain, as a full anodyne. But I strongly suspect we never meet with pure opium in the shops.

The Eastern people who prepare this article, adulterate it shamefully with an extract of the poppy, and in consequence of this adulteration the dose ought, in general, to be larger than is usually recommended; for it is a fact, that where opium is given to stimulate the languid system to the sleeping point, and it falls short of that stimulus which is necessary, it will interrupt sleep, instead of inducing it. The best way is to try small doses first, and gradually increase them; but I have no hesitation in saying, after careful observation, that in consequence of the reduced quality of opium, our anodynes are generally too small.

He who is able to distinguish the proper state of the body, and the times for administering opiates, may obtain vast advantages from it, and may use it with a freedom which is not often practised; but if it is given in a wrong state of the body, or at an improper time, as in the paroxysm of a remitting or intermitting fever, &c. consequences the most dreadful may follow, and the mischief,

in all cases where it is wrongly applied, will be in proportion to the quantity given. It will be advisable, in all cases, when commencing with new parcels of opium or laudanum, to begin with small doses, lest a material difference in the quality may do injury.

*Laudanum.*

For the preparation of laudanum, see the section on antispasmodicks. This being a mere solution of opium, we are to expect the same effects from it as from solid opium, and the same observations, as to its nature and use, apply. I may remark, however, that its effects are more immediate; and the whole quantity coming into contact with the stomach at once, produce greater, but more transient effects. It seems to follow that smaller doses of laudanum must be given, and more frequently repeated.

There is no doubt on my mind but we use a great deal too much laudanum; and I am convinced many persons lose the chance which they might have of procuring sleep from anodynes, by taking laudanum instead of solid opium. To conclude, opium, as a diffusible stimulant, or antispasmodick, should always be given in the form of liquid laudanum; when it is given as an anodyne, it should, almost invariably, be given in the solid form; and in most cases of low fever, or acute disease, it should be combined with two or three grains of ipecacuanha. The universal practice of giving laudanum must certainly have arose from a lazy habit, which too many have, of giving their medicines in the most convenient form. The making of pills is some trouble; to buy laudanum of the apothecary, is much easier; but let me admonish every person, that reason supports me, and experience gives full assurance, that opium given as an anodyne must be given in a solid state, or its effects will wear off long before morning, and leave the patient in a languid, unpleasant, or dangerous state. If laudanum must be given, never omit to repeat the dose about three o'clock in the morning, provided no paroxysm of fever be then present, which would render it improper.

### *Paregorick.*

Paregorick may be made thus: opium, flowers of benzoin, each half a dram; camphor one scruple; oil of anise half a dram; good whiskey, or rum, one pint; digest ten days, and then strain. The elixir of paregorick is certainly entitled to the name of an anodyne, but is, perhaps, strictly speaking, more properly considered a stimulant expectorant. It is a valuable remedy in cases of protracted colds, in asthma at the close of its paroxysms, in hooping-cough on the decline, &c. But it being a powerful stimulant, it should by no means be trifled with, or given to persons labouring under fever. Dose from a tea spoonful to three or four.

### *Godfrey's Cordial.*

Godfrey's cordial, when properly prepared, is a weak solution of opium, salt of tartar, oil fennel, whiskey and molasses in water; and is a useful medicine in gripings of children unattended with fever, and is often useful in dysentery, old colds, declining hooping-cough, &c. But nothing can be more prejudicial than the practice, too common, of constantly dosing children with stupifying liquids. It should never be given for habitual griping; for, by keeping up a constant overstimulus in the brainular system, the constitution may be totally ruined.

### *The Common Hop.*

The hop, which we use in making beer, is supposed to have anodyne properties. It may be used by laying a small bag, containing good fresh hops, under the head of patients; but it is a remedy which I cannot recommend from actual experience.

## SECTION XIX.

## *Vermifuges.*

Vermifuges are medicines which are given with a view of destroying worms, found in the human intestines, and particularly to children. But as it is highly probable that they are not so often detrimental as has been supposed, and as all reputed vermifuges are either powerful stimulants or drastick articles, they ought to be given with

caution. And let it ever be remembered, that almost all the diseases of children are inflammatory; and, therefore, even where there is strong evidence of worms, we should reduce febrile action by evacuations, before we venture to give vermifuges, and then most of the vermifuges can be given, not only with a view of destroying worms, but as useful stimulants, when the system being reduced requires this new stimulus.

Where there is good evidence of worms injuring a child, without the presence of fever, common vermifuges may be given with safety, but we should never give more than two or three doses; and then carry it off with some pretty active purge.

*Calomel.*

Calomel may be given to children with perfect safety, provided due caution is observed. From five to ten grains, mixed with a little sugar, may be given children from two to ten years, proportioning the dose according to the constitution of the child, and to the age, &c. It should be given going to bed, and carried off in the morning with a brisk purge; remembering, however, that a little jalap, or castor oil, will answer our wishes, as the calomel has a purgative quality. I have seen more benefit from this medicine than any other vermifuge.

*Oil Wormseed.*

The oil wormseed is a valuable stimulant vermifuge. Its stimulant properties render it inadmissible in cases attended with fever. This article is to be had of the apothecaries with suitable directions, for its administration.

*Spigelia, or Pink.*

The worm pink is principally given in the form of decoction, but may be given to advantage in the form of powder, in doses of from ten grains to half a dram, according to the age of the child. It may be used in decoction; half an ounce may be boiled for some time in a pint of water, and the tea sweetened, given in the space of two days; when it should be worked off with some purgative. This article being a diffusible stimulant, and somewhat narcotick, is always dangerous during the presence of fever, but when fever has abated, is given with much success both as a vermifuge and stimulant.

### *Common Salt.*

Table salt is favourably spoken of by Dr. Rush, as a vermifuge. It may be given in doses of from one to two or three scruples, according to the age of the child, in the morning fasting; it may be dissolved in a little water, or given dry.

Wormseed, Rue, Garlick. } These are all stimulants, and therefore not proper where there is fever, they are to be boiled in milk, and given fasting.

## SECTION XX.

## *Medicinal Nutrients.*

These are articles which are calculated to obtund acrimony of the body, whether partial or general, but more particularly when seated in the stomach and bowels, while they at the same time impart a slight portion of nourishment; and this nutrient effect is to be expected of them, in all cases where the stomach is in a state to act upon them; and, it is highly probable, a state of the stomach which would not act on those mild nutrients would speedily prove destructive.

### *Slippery Elm.*

The slippery elm bark powdered fine, and dissolved in water, is a mild and agreeable nutriment, and may be rendered palatable, if necessary, by seasoning with wine, vinegar and sugar, cinnamon and sugar, or lemon juice, &c.; but where it is given for affections of the skin, it is best taken in its simple state, and in this form, it affords a valuable drink in fevers, &c. Dissolve one or two drams in a pint of cold water; this is an excellent, and nourishing drink in dysentery, and if not unpleasant to the taste, may be made stronger for such patients.

### *Gum Arabick.*

Gum arabick which has been carefully selected, so as to be pure and perfectly clean, is a pleasant and nutrient article, and beneficial in cases of skin diseases, dysenteries, stone or gravel, and when made thin, is a pleasant and useful drink in fevers; it may be rendered savou-

ry by adding a little of some pleasant herb, as balm, sage, &c.

*March Mallows.*

Mallows in form of tea is a pleasant and useful nutrient, in intestinal diseases, and in diseases of the skin. It may be used either green or dried. All these nutrients as well as several pure mucilages, will be found particularly useful in consumption, and may be used in every stage of it; and also in gout, or scrofula affecting the bladder, the kidneys or the skin.

*Iceland Moss.*

The iceland moss is a useful nutrient, and being slightly tonick also, renders it particularly beneficial in consumption and other diseases attended with chronick, or general debility. For the method of preparing and using it, see the article astringents, or restringents. I am strongly inclined to believe this moss would be useful in old cases of gravel.

*Sago.*

Though sago has usually been considered simply a light article of diet, I have thought proper to place it among the medicinals. All light nourishing articles become medicinal in some measure, in all cases of chronick debility, as well as during the convalescence after acute diseases. And from the very general use of this article, I have thought necessary to say something respecting its preparation, &c. Sago is often mouldy, and is often made of potatoes, &c. whereas the pure or genuine sago is the pith of a tree. We should endeavour to select that which is free from musty taste or smell. Sago should be washed first in hot water, then through several cold waters, and afterwards boiled till it is a perfect jelly; when removed from the fire, it may be seasoned with wine, vinegar and sugar, cinnamon, ginger, &c. according to the taste of the patient. But persons affected with fever, should never use it seasoned with wine, and it should be made an invariable rule never to keep it long.

*Toast Water.*

Toast water is a valuable medicinal nutrient, and generally grateful to the stomach. In cases of wounds, and in many acute diseases, this is the best, and should

often be the only nourishment allowed. I have generally seen such a great want of care or knowledge in preparing this article, that I think it a matter of the highest importance to admonish the reader, that although this is certainly one of the best medicinal nutrients in acute diseases, when well prepared, it nevertheless, is sometimes rendered even prejudicial by want of care. First, cut your bread thin, (which should be one or two days old) then toast it slowly, and until it is toasted through and through. Secondly, make small quantities and prepare it often: it will, however, often be advisable to keep a slice or two of the bread toasted, but it should never be put into the water till it is wanted. Thirdly, it is a matter of vast importance to avoid burning it. Most people cut off a piece of crust, and burn it hastily, this renders it rancid, rough, and in great measure destroys its nutrient properties. I consider this of so much importance, that I am confident many persons labouring under diseases of the stomach are lost for want of preparing this simple drink, in a proper manner. Where we give it as the only nourishment, the patient is to eat the toast, soaked in the water, in reasonable quantities.

*Wine Whey.*

Wine whey is a valuable medicinal nutrient in all cases of direct debility, or where there is no considerable fever; see the article on cordial drinks.

*Gruel of Wheat, or Oaten Flour.*

This is a valuable mild nutrient, and may be made by throwing one or more tea spoonfuls of flour into a vessel, then pour over it without stirring, a pint of boiling water; when it has stood a few minutes, stir and strain it through an old piece of linen. This may be seasoned where it is used as a nutrient, with sugar and vinegar, wine, cinnamon, &c. but let it ever be most carefully remembered, that by adding much seasoning we destroy the mild nutrient properties of these articles, and therefore, in general, they are to be used as plain as may be.

All mild diluent drinks are medicinal nutrients, and when made quite weak, so as to obviate any risk of stimulating, are of vast importance in cases of fever, &c.

SECTION XXI.—SUBSECTION 1.

## *Diluent Drinks.*

Diluent drinks are such as are proper in all common fevers, wounds, or in short, all cases attended with an inflammatory diathesis.

### *Milk and Water.*

Mix one third sweet milk, which has stood a few hours, and which has been skimmed once, with two parts of boiling water. Let it be taken cold or tepid, as the case may require, and never kept more than a few hours.

### *Barley Water.*

Pour boiling water on one spoonful of pearl barley, stir well, and afterwards wash through several cold waters; then boil in clean water till the barley is entirely bursted. Set it in a cool place, and when wanted, stir a table spoonful of it well into a pint of water; it must now be suffered to stand, and then pour off the thin liquor, or it may be strained through an open old piece of linen. Barley water may be used cold or tepid, but must always be used fresh.

### *Toast Water.*

For the preparation of toast and water, see the section on medicinal nutrients.

### *Milk Whey.*

Place a pint of milk near the fire till it becomes sour, and separates into curd and water; let it remain an hour or two, and then pour it into another pint of sweet skimmed milk; keep it warm till this second pint is *turned;* afterwards, strain it through a thin rag. This may be taken warm, tepid or cold, as may be thought necessary.

### *Slippery Elm Water.*

Scrape a table spoonful of slippery elm bark, green from the tree, or dissolve two or three tea spoonfuls of the dry bark pounded fine, in a pint of boiling water; beat it well with a spoon, and then strain. This may be taken cold or tepid.

*Apple Water.*

Roast a pleasant sour apple thoroughly, without burning, and mash it in a pint of cold water; this is a grateful drink where no acidity of the stomach is present.

*Tamarind Water.*

Take a table spoonful of tamarinds, pour over it a pint of boiling water; stir it well, and after letting it stand half an hour, strain. This is generally taken cool, and mostly requires a little sweetening with sugar or syrup.

*Cremor Tartar Whey.*

Heat a pint of milk which has been once skimmed; and stir into it one or two tea spoonfuls of cremor tartar. This may be taken cold or tepid.

*Thin Gruel.*

Put one heaped tea spoonful of flour, first tied up in a rag, into a suitable vessel, and pour over it a pint of boiling water. A very little salt may be added, where excessive thirst does not forbid.

*Lemonade.*

Drinks similar to lemonade, may be made by mixing a little good vinegar and sugar, or boiled cider, cremor tartar, and sugar, &c. and the lemonade itself, by mixing the juice or salt of lemon with sugar, and mixing with a considerable quantity of water. The quantity of these may be regulated in some measure according to the taste of the patient, but let it be carefully remembered, that where this drink is used as a diluent, in cases of fever, &c. it must always be very weak.

*March Mallows Tea.*

This article may be made by boiling the mallows a few minutes in water.

Flaxseed tea is made by pouring a pint of boiling water on one or two tea spoonfuls of whole flaxseed, observing to wash the seed.

SUBSECTION 2.

## *Mild Stimulant Drinks.*

Drinks slightly stimulant, are seldom necessary till the force of most of our diseases, is in some measure reduced.

But in most inflammatory diseases, as soon as they are somewhat abated, and in those of a low grade, from the commencement, they are of vast importance, and often become principal remedies. I have seen much mischief by using these kinds of drinks, either because they were a great deal too strong, or given when the patient was affected with inflammatory disease; therefore let it be remembered, that they are never to be given strong; if it is necessary to stimulate with drinks, those found under the head of cordial drinks will be found better, provided due caution is observed in accommodating them to the state of debility present.

Contrayerva,
Virginian snakeroot,
Chamomile,
Valerian,
Common imported tea,
Saffron,
Hysop,
Sage,
Balm,
Ground ivy. All these in form of very weak tea, are mild stimulant drinks.

### SUBSECTION 3.

### *Tonick Drinks.*

Tonick drinks, like tonicks in every other form, can only act as such, where there is a debility or languor of the system, which renders their use necessary; when taken too freely, or in a too feverish habit of body, they will always depress or weaken the body, by stimulating unduly.

Cold infusion of chamomile,
Carduus tea,
Centaury tea,
Bitter teas generally, and cold bitter infusions, of bark, &c. &c.
Porter,

Strong beer. These are all tonick drinks, and in cases of health or disease, where they are properly proportioned to the condition of the stomach, the two latter, that is porter and beer, are also slightly nutrient.

SUBSECTION 4.

## *Cordial Drinks.*

Cordial drinks like those of the tonick kind, are inadmissible unless we wish to stimulate, and then it is to be remembered, that they are more violent generally, in their effects, but more transient than tonick drinks.

### *Wine Whey.*

Heat a pint of new milk till it nearly boils, then throw into it from half to a whole gill of wine, strain. This article must not be kept more than twelve or fifteen hours. Wine whey is highly nutritious in debilitated habits, but in cases of dyspeptick patients, we should give magnesia, or the whey is very liable to sour on the stomach.

Wine,
Punch,
Toddy,
Brandy,
Coffee. These are all cordial drinks, and often of singular service, in cases of low fever, and debility of habit. Brandy and wine are always to be largely diluted when they are used as drink. They are sometimes necessary in their raw or undiluted state, but here we are always to view them as medicinal, and relieve the thirst of the patient, by the use of drinks more mild; most generally they should be of the tonick class. Let it ever be scrupulously observed, that cordial drinks are never proper for chronick debility, or what may be called habitual debility of constitution; in all such cases, mild tonick drinks, alternated with diluents, are most proper. In short, cordial drinks are used too much, and do much mischief, and it will always be the safest way to use the diluent or weak tonick drinks till advice can be obtained, and if this is not at hand, we should be well satisfied the debility present, is of the direct kind, and clearly

requiring a powerful stimulus. Where there is any thing like an inflammatory diathesis, cordial drinks will do immense mischief, nay, will often destroy life, spite of all remedies.

## SECTION XXII.

### *Ointments.*

#### *Basilicon.*

Hogslard, eight parts; rosin, five parts; bees wax, two parts. Melt and strain while hot, taking care to melt it over a slow fire. This ointment mixed with a portion of spirits of turpentine, is a valuable dressing for burns and other languid sores.

#### *Savin Ointment.*

Basilicon, one ounce; savin leaves ground fine, one dram. Mix on a marble slab, or smooth board. For want of savin leaves, from ten to twenty drops of oil of savin may be mixed with the basilicon.

#### *Ointment of White Precipitate.*

White precipitate of mercury, one dram; hogslard, one ounce; oil lemon, or rosemary, five drops. Rub the precipitate fine, and mix. For the itch, and other eruptions of a chronick nature.

#### *Ointment of Red Precipitate.*

Red precipitate of mercury, ground fine, one dram; hogslard, one ounce; oil lemon, or rosemary, five drops: mix. For the itch or foul sores, or ulcers, &c.

#### *Ointment of White Hellebore.*

White hellebore, ground fine, one dram; hogslard, one ounce: mix. For the itch, &c.

#### *Ointment of Sulphur.*

Flowers sulphur, two drams; hogslard, one ounce; oil lemon, or lavender, a few drops: mix. This is an infallible cure for the itch.

#### *Blistering Ointment.*

Wax, mutton suet, rosin, cantharides, equal weights. Grind the cantharides fine, and stir it into the other arti-

cles melted, and beginning to grow cold; stir well till the mass becomes stiff.

*Ointment of Corrosive Sublimate.*

Grind two scruples of corrosive sublimate of mercury, very fine, and mix on a slab of marble, or a smooth board, with one ounce of lard. It will often be necessary to increase the quantity of lard for persons of tender skin.

*Turner's Cerate.*

See the article external astringents.

*Ointment of White Lead.*

See the article external astringents.

*Ointment of Armenian Bole.*

See the subsection on external astringents.

*Simple Ointment, commonly called Healing Ointment.*

White wax, or best clean beeswax, one ounce; best hogslard, three ounces; melt. This ointment may be applied to all fresh cuts, excoriations, &c.

## SECTION XXIII.

### *Dentrifice.*

Peruvian bark, in powder, one ounce; common salt, half a dram; powdered oris root, a few grains. Dissolve the salt in as little water as possible, then pour it over the bark, and grind it a few minutes in a mortar; add the oris, and spread the powder on paper, till it is perfectly dry.

## SECTION XXIV.

### *Cephalick Snuff.*

Grind half an ounce of sage, or other pleasant herb; and add one dram of white hellebore, in very fine powder.

SECTION XXV.

## *Mouth Water, or Gargle.*

Dissolve half a dram of borax in a gill of rose water, or spring water.

*Another.*

Take one pint of sage tea, not too strong; add one table spoonful of good vinegar, and a little honey or sugar. If we add a little alum, this makes a useful mouth water, in languid sores of the mouth, or for cleansing the mouth at the close of fevers. Shumack berries boiled in water, and this sweetened a little, is a valuable mouth water.

SECTION XXVI.

## *Poultices.*

Poultices are principally used as emollients, for ripening bealings, or for promoting the formation of pus in wounds or sores, which ought to suppurate. But sometimes they are used with a view of rendering cold applications more permanent; for stimulating the feet in cases of fever; and here they are called sinapisms; and they are also used in cases of gangrene or mortification, for destroying the gangrenous ferment. Poultices for each of those purposes will be found in this section.

*Bread and Milk Poultice.*

Break as much crumb of good wheat bread, one or two days old, as will make the milk you use about the consistence of good mush; stir it constantly while boiling, and as soon as the bread is well softened, it may be removed from the fire; but before we do this, we are to add a little more milk, or bread, provided the consistence is not such as we wish. The milk should be nearly new, and the poultice should never be kept more than a few hours. It is always necessary to renew this poultice every two or three hours, where we wish to promote suppuration. It must always be sufficiently stiff to prevent its

running, and so moist as to remain wet upon the sore till it is removed, and it should be greased with a little oil, lard or butter, after it is spread on a rag.

*Indian Meal Poultice.*

This poultice is made by simply making mush in the usual way, and spreading a little grease over its surface before it is applied. The same observations apply to this as will be found respecting the bread and milk poultice. It is a valuable substitute for the bread and milk, and in general will answer equally well. I suspect it is a little more stimulant.

*Onion Poultice.*

Boil an onion very soft, then mash it well in milk or water, and thicken it with Indian meal or crumb of bread. This poultice is a stimulant, suitable for languid bealings, and will be more stimulant according to the quantity of onions it contains. It must be applied warm, and often repeated.

*Flaxseed Poultice.*

Boil some flaxseed well in water, then thicken with crumb of bread, or Indian meal. This is a valuable emollient poultice. A poultice of the white lily roots, or of the slippery elm bark, may be prepared in the same manner. And it will be found that a proper application of the emollient poultices, which have been described, will answer every purpose which we can reasonably expect from emollients.

*Slippery Elm Poultice.*

Take the green or fresh bark of the slippery elm, and scrape it fine into cold water till you have it of a proper consistence. Or, pound of the dried bark and steep it in cold water or vinegar. This is a valuable article in cases of strains, or recent inflammation, where we wish to prevent suppuration, and may be applied to the eyes with much advantage.

*Bread Poultice.*

Soak crumb of bread in lead water, and after mashing it well, apply to strains, or recent inflammation from bruises, &c. This may also be prepared with vinegar, instead of water.

*Bran Poultice.*

Mix bran and vinegar in a proportion suited to form a poultice, and apply it to strains, &c. All these cold poultices are discutients, and therefore only to be applied in recent bruises, strains, or inflammations, which we may reasonably expect to scatter.

*Stimulant Poultice, or Sinapism.*

Take one or two table spoonfuls of best flour of mustard, or well pounded mustard seed; or the same quantity of grated horseradish, with crumb of bread, or Indian meal moistened with vinegar; make a poultice. This is applied to the feet, in cases of low fevers, &c. with great advantage; and also to palsied limbs, or for rheumatism in the joints.

*Carrot Poultice*

Grate fresh carrots, and add to it about an equal weight of good yeast, mix well together. This is applied cold, in cases of gangrene or mortification, and also for cancer.

*Gum Plaster.*

Take of diachylon plaster eight parts; gum ammoniacum, galbanum, yellow wax, each one part; melt together over a slow fire. This plaster has been recommended in this work for indolent bealings, and is often useful as a defence, from the weather, in rheumatisms, &c.

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# GLOSSARY.

ABSORBENTS—Vessels which take up fluids from cavities, &c. in the human body.
Abdomen—Belly.
Alvine—Evacuations by stool.
Anima Medica—The natural healing powers.
Animal Functions—The voluntary functions of an animal.
Anus—The fundament.
Alkalies—Potash, soda, hartshorn, lime, magnesia, &c.
Aneurism—A disease of an artery, being a dilatation.
Aqua Ammonia—Spirit of hartshorn.
Asphyxia—A suspension of the heart's motion—fainting.
Ascites—Dropsy of the belly.
Arthritis Podagra—Gout of the feet.
Atonick—Relaxed, enfeebled.
Atrophy—A nervous consumption.
Auricle—A sack-like appendage of the heart, through which the blood passes from the vein into the heart.
Azote—The base of a deleterious air.
Bistoury—A surgeon's knife.
Bronchotomy—The operation of opening the windpipe.
Buboes—Swellings in the glands of the groin.
Cardialgia—Pain of the stomach seated about its upper orifice.
Carbon—The base of foul air, found in wells, cellars, and caverns, &c. It may be discovered by putting down a lighted candle, if it burns, no carbonick air is pre-

sent. But if the candle goes out, it would be death to go down, till we have destroyed this foul air, which may be done by throwing down a quantity of fire; or a quantity of unslacked lime, observing to increase the quantity till a candle will burn, which is satisfactory evidence that there is no longer any danger.

Catarrhal Affections—Colds, as cough, spitting, &c.

Calculi—Stone-like substances found in the body.

Chancers—Venereal ulcers on the penis.

Cataplasms—Stimulant applications to the feet.

Caries—Rottenness of the bones.

Catheter—An instrument for drawing off the urine.

Cephalagia Spasmodica—Sick headach.

Chyle—Thin part of nourishment taken into the circulation.

Clean Cloths—Clouts of children.

Cloatick Vault—A necessary.

Cellular Membrane—A net-like membrane which is lapped about the muscles, and other parts.

Condyle—The knob-like ends of some of the bones.

Contraindications—Something which forbids usual indications.

Diathesis—A condition of the body.

Diaphram—Partition between the belly and chest.

Dyspnœa—Difficulty of breathing.

Emporium—A place where important transactions abound.

Error Loci—Fluids wrong placed in the body.

Electron—A figurative expression meaning something subtile.

Encysted—Confined as in a bladder.

Extravasated—Out of the proper vessels of the circulation.

Fascia—A thin tendon.

Feces—Excrement—Sediment.

Fungi—Spongy lumps of flesh, similar to what is called proud flesh.

Gastrick Liquor—Natural juice of the stomach.

Galvanism—A species of electricity, obtained chymically.

Glans Penis—Extremity of the Penis, called the head.

Halitus—A vapour found in the cavities of the body while it is warm.
Hydrops Pectoris—Dropsy of the breast.
Hydrocephalus—Dropsy of the head.
Hydrocele—Dropsy of the scrotum.
Incipient—Just forming, or beginning.
Introsusception—One gut slipping into another.
Læsions—Wounds.
Lusus Naturæ—Out of natural order.
Mammæ—Female breasts.
Megrim—A painful giddiness.
Meconium—Feces of unborn infants.
Nocturnal Emissions—Loss of the seed at night.
Nostrum—A random prescription.
Onanism—Self-pollution.
Oxygen—The base of vital air, of acids, and combined with many other substances.
Olecranon—A part of the lower arm bone, and forms the hind part of the elbow.
Ossifications—Flesh or tendons changed into something like bone.
Œsophagus—the gullet.
Ovaria—Bodies resembling eggs attached to the outside of the womb.
Polypus—A disease of the nose, see index for loss of smell.
Parotid Glands—Glands about the back ends of the under jaw.
Pabulum—Support by way of nourishment.
Papillæ—Small points.
Pancreatick Juice—A liquor poured into the gut just below the stomach, and is secreted by the sweet bread.
Pandora—A heathen goddess supposed to deal out diseases.
Pelvis—Lower part of the body, formed by the bones of this part.
Periosteum—The covering of the bones; described with the ligaments.
Peritoneum—The lining of the abdomen.
Perineum—Parts between the privates and anus.
Pericardium—Purse-like sack enclosing the heart.

Phlebotomy—Common bleeding.
Pharynx—Upper orifice of the gullet.
Priapisms—Painful erections of the penis.
Primæ Viæ—Stomach and bowels.
Pubis—The lower part of the body, covered with haîr.
Prepuce—Foreskin of the penis.
Pneumonia—Inflammation of the chest.
Rectum—The lower gut, being a short straight gut.
Sanguiferous System—The blood vessels.
Sphincter—A muscle which surrounds and closes some passage.
Scarificator—An instrument used in cupping.
Scrobiculus Cordis—Pit of the breast.
Sensorium—That function of the brain which conveys sensation to the mind.
Sinapisms—Applications of mustard to the feet.
Scrotum—Sack of the privates.
Subsultus Tendinum—Twitchings of the tendons.
Sui Generis—Of itself, unlike any thing else.
Thyroid Cartilage—Part of the windpipe.
Toncils—Glandular bodies in the back and upper part of the mouth.
Typhus—A low state of fever, formerly called nervous.
Torpor—A sickly state of languor.
Typhoid—A fever a little above a typhus.
Traumatick Tetanus—Locked jaw from wounds.
Tympanites—Wind pent in the belly without the intestines.
Tracheotomy—Operation of opening the windpipe.
Tenesmus—A painful inclination but inability to stool.
Trachea—Windpipe.
Uterus—The womb.
Uvula—A part of the mouth usually called the palate.
Urethra—Water passage from the bladder outwards.
Venesection—Common bleeding.
Vertigo—A severe giddiness.
Vice Versa—Contrariwise.
Vires Naturæ Medicatrises—The natural healing powers.
Vitrious Humour—See eye, structure of.

## ERRATUM.

Page 265, line 4, for *"parapisms"* read *priapisms.*

## ADVERTISEMENT.

JOHN D. TOY, Baltimore, has just printed for the author, the first number of a series of "Lectures on Fevers in general; in which their causes, symptoms, and sanatives are reviewed. With critical observations on causes, pathology, animal life, &c. &c. By Horatio Gates Jameson, M. D. Honorary Member of the Medical Society of Maryland, and one of the Surgeons to the Baltimore Hospital."—This Lecture contains a new and ingenious classification of Fevers, and their Causes, in which the author evinces considerable reading, and a sound judgment. It is the outline of a system, which may be made useful to the Medical world; and it is to be hoped, that the Doctor will meet with sufficient encouragement from his brethren, to enable him to complete his design—which is, to publish twenty-four Lectures, of twenty-four pages each, at the price of twenty-five *cents*, a number, or four hundred and fifty cents for the whole; the numbers to appear "as circumstances shall justify."

*Portico.*

