

A treatise on the management of female complaints, and of children in early infancy ... / By Alexander Hamilton. Revised and enlarged by his son, Dr. James Hamilton.

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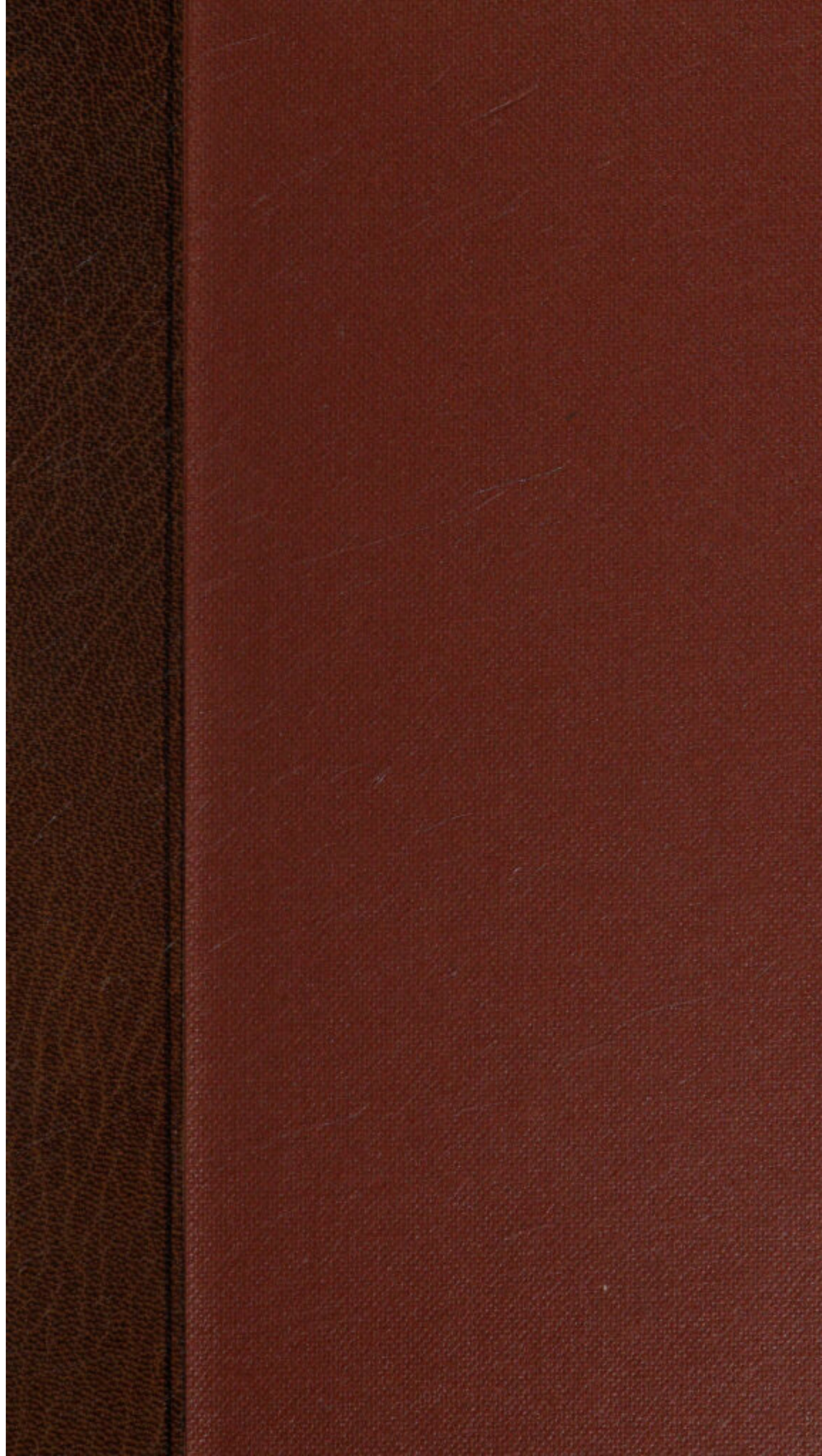
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A
TREATISE
ON THE
MANAGEMENT
OF
FEMALE COMPLAINTS,
AND OF
CHILDREN IN EARLY INFANCY.

BY *ALEXANDER HAMILTON, M. D.*
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EDINBURGH, &c.

PHILADELPHIA:
RE-PRINTED BY ARCHIBALD BARTRAM;
FOR THOMAS DOBSON, AT THE STONE HOUSE,
N^o. 41, SOUTH SECOND STREET.

.....
1806.

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THE LATEST

OF THE

MANAGEMENT

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FEMALE COMPLAINTS

AND OF

CHILDREN IN FAMILY LIFE

OF J. P. KELLY, M.D.

PROFESSOR OF MIDWINTER IN THE UNIVERSITY OF PENNSYLVANIA

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PHILADELPHIA

PRINTED AT THE UNIVERSITY OF PENNSYLVANIA

FOR THE UNIVERSITY OF PENNSYLVANIA

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1892

PREFACE.

THE author of the following pages was induced, in the year 1780, to publish for the use of Midwives, a Treatise on the Management of Female Complaints, divested of technical terms. But as he found that that Work had been pretty extensively circulated among private families, he thought it incumbent on him to alter considerably the subsequent editions.

He endeavoured to give such a description of the most ordinary complaints to which Women are liable, as should be intelligible to the attendants, or the patients themselves ; to point out the circumstances from whence the several disorders originate, for the purpose of guarding against their occurrence ; to distinguish those Cases which yield readily to the employment of simple means, from those which require complicated management, and of course the regular attendance of a Medical Practitioner ; and to detail the means for checking or retarding the progress of such cases. He added Directions for the Management of Children during early Infancy.

As the Author did not live to superintend the present edition, his Son has endeavoured, in fulfilling that duty, to accomplish as nearly as possible the favourite wish of his Father, that every subsequent impression

of the Work might be rendered better calculated for general use. With this view he has introduced several additions in the chapters relating to the Diseases of Lying-in Women, and of Children ; and in order that the general bulk of the volume might not be increased, he has left out the cases which were detailed in the former editions ; and he has also retrenched the Appendix. The following pages he therefore hopes are not only adapted to the use of Families, but are also calculated to recal to the minds of young Practitioners the Outlines of the material parts of the Editor's Lectures on the Diseases of Women and Children.

EDINBURGH, }
MAY 1st, 1804. }

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INTRODUCTION.

A SHORT sketch of the ANATOMY of the HUMAN BODY, it is presumed, will be considered a suitable introduction to the subject of the following sheets; as it will illustrate many of the remarks which must be occasionally made.

The human body is composed of certain general principles, by a combination of which the various organs necessary for the purposes of life are constructed. These have been divided into Solids and Fluids. Of these it is proper to give some account, before we attempt to explain the structure of the body.

SOLIDS. The solids consist chiefly of Nerves, Vessels, Flehy parts, Bones and their appendages, and an insensible substance, which envelopes, connects, or enters into the composition of all the other solids, called, from its structure, Cellular Substance.

NERVES.—The Nerves are white glistening cords, originating, and probably deriving their power, from the Brain, and its appendages.

The motion and sensation of the different parts of the body depend so much on the nerves, that when the principal nerve of any organ is cut through, or very much compressed, the sensation of that organ is completely destroyed, and its functions are much impaired.

Every part of the body, therefore, owes its sensibility to the nerves which it possesses.

Besides these *general* properties of the nerves, they have some *particular* powers ; for it is through their means that the actions of the senses are accomplished. Thus, on the nerves of the eye and of the nose, the senses of Seeing and Smelling depend ; for those nerves being destroyed, the senses no longer exist.

VESSELS.—The vessels of the human body are very numerous ; they are of different sizes and forms, and have different uses assigned to them. Some are intended to convey to the blood what is necessary to supply its constant waste ; others carry the blood itself to all the various parts, for the purposes of nutrition ; some prepare it for that purpose, and others distribute it in a prepared state to the different organs of the body. All the vessels may therefore be arranged under the denomination of the Absorbent, Circulatory, Secretory, and Excretory.

The *Absorbent Vessels* are extended over the surface and the cavities of the body ; they are of different sizes ; many of them are scarcely visible ; they are very strong, although so thin as to be transparent.

The absorbent vessels open on the surface of the body and of its several cavities, by extremities so small, that their structure cannot be ascertained. They are, however, capable of absorbing fluids, which they convey to a general reservoir, (to be afterwards described), and which are prevented from returning, by having, in their course, numerous valves, that allow the passage of the fluids in the direction of the general reservoir, and prevent their return.

The absorbent vessels have been divided, from the appearance of their contents, into *Lymphatics* and *Lacteals*. The Lacteals are confined to the belly ; the Lymphatics are distributed over the rest of the body.

In the course of the latter vessels, roundish bodies of a red or brown colour, larger in children than

in grown persons, called *Conglobate glands*, are found. Their functions have not yet been satisfactorily explained; therefore it is unnecessary to describe their structure minutely.

Circulatory Vessels are those which carry the blood to the different parts of the body, and return it from the same parts to its general reservoir, the HEART. Those which perform the former purpose are styled *Arteries*, and those designed for the latter, *Veins*.

The *Arteries* are thick, strong, cylindrical tubes, possessing a power of pushing forwards their contents; by which means an alternate contraction and dilatation takes place, which occasions that peculiar action, termed the *Pulse*. By this the arteries are distinguished from the veins in the living body.

The arteries terminate principally in two ways, in *Exhalents* and *Veins*.

The structure of the *Exhalent* vessels is so minute, that it is imperfectly known. Their uses, however, are evident; for they serve the important purposes of supplying a fluid which moistens all the internal parts of the body; and they assist in producing a change on the blood, by what is termed *Insensible perspiration*.

The *Veins* are considered to be reflections of the arteries. They return the blood from the different parts, and generally accompany the course of the arteries. They are so transparent, that the blood can be perceived of a bluish colour through them. They possess, like the absorbents, *valves*, which prevent the blood from turning out of its course towards the heart; and they have no pulsation. In other respects the veins resemble the arteries.

The *Secretory Vessels* are those destined for preparing from the blood the various fluids which are necessary for the preservation of the different functions of the human body.

They are merely modifications of the blood-vessels, nerves, and lymphatics, known by the name of *Glands*. Some of these are simple in their structure; for being hollow, and receiving a great quantity of blood-vessels, they seem merely adapted for the stagnation of the blood, which is either afterwards forced through an opening, by the pressure of some of the neighbouring parts, or taken up by a particular apparatus for that purpose.

The more complicated glands, although they prepare different kinds of fluids, seem all to be of the same general structure. They are of different sizes, and consist of a vast number of blood-vessels, &c. wonderfully intermixed with each other, divided into very minute branches, and formed into numerous small inequalities.

The *Excretory Vessels* proceed from these glands. Rising from innumerable small branches, they terminate in one or more trunks, and convey the prepared fluid to the parts for which it is designed.

By its vessels, therefore, the body is nourished, and its unnecessary or worn-out parts are carried off. Hence every part of the body must be supplied with vessels; though in some they are so very minute, as to be invisible.

FLESHY PARTS.—The fleshy parts of the body are divided naturally into portions of various forms, called by anatomists *Muscles*.

These are found to be composed of an amazing number of very minute threads, intermixed with blood-vessels, by which they are generally of a reddish colour, and with nerves, by which their actions are rendered obedient to the will.

The fleshy parts are destined for performing the different motions of the body; for which purpose, they are of various forms and sizes, and in various situations.

The manner in which the fleshy parts perform their actions, is by the fibres or threads of which they are composed becoming shortened.

The actions of most of the fleshy parts can be commanded by the Will; and hence are called *voluntary*. The muscles not subject to the will are those on the actions of which life depends. With a power over these the Supreme Being has not thought fit to entrust man. These muscles perform the *involuntary* actions of the body. As, however, the will is capable of increasing or diminishing some of *these actions*, a third kind of muscular power has been termed *mixed*.

BONES.—The bones are the hardest and most solid parts of the body. They determine its shape; they support and move its various parts; and they afford, by the cavities which some of them form, safe lodgement for several important organs.

The bones are insensible; they are, in the healthy state, of a whitish colour; though they have many small blood-vessels in their substance.

The appearance of the bones differs materially in their external and internal parts; for externally they are firm and solid, but internally they are hollow, and of a structure resembling sponge or honeycomb. In consequence of this texture, they are less heavy, and much more strong than if they had been solid.

The bones are connected to the fleshy parts of the body, and to one another. Although the motions of the body are performed by the *Muscles*, these cannot act without having a proper support; that, the *Bones* supply; while the *Nerves* communicate to the muscles the commands of the will.

Appendages of the Bones.—Cartilage and Ligaments may be considered as the appendages of the bones.

Cartilage, or Gristle, is a white, solid, smooth, and insensible substance, generally serving to connect the bones, and for the attachment of fleshy parts.

The *Ligaments* are white, glistening, insensible cords, differing in shape and thickness in different parts. They serve to form, in some places to strengthen, the connection of the bones; and they also afford attachment to fleshy parts, where there are deficiencies in the bones.

Connection of the Bones.—The bones are joined to each other in such a manner, that between some of them motion is allowed, while others are firmly united together. Hence the *Articulation* of bones has been divided into moveable and immoveable.

The *Moveable* Articulations are of various structures; for some are so formed as to admit of motion in every direction, some only backwards and forwards, and others from side to side.

The *Immoveable* Articulations are formed in one of two ways: The two bones are indented into each other by cavities in one corresponding with protuberances in the other; or they are fixed firmly together by means of Cartilages or Ligaments.

CELLULAR SUBSTANCE. The various soft parts of the body are connected by an insensible substance, of a loose open texture, somewhat like net-work, hence called Cellular Substance.

Every part of this substance communicates with the other; from which circumstance, air, or any fluid, having access to one part of it, may be easily extended over the whole*.

FLUIDS. The fluids of the human body may be arranged under the following classes.

1. The fluid formed by digestion, called Chyle.
2. The Blood.
3. The Fluids prepared from the Blood.

* It will occur to readers who have a previous knowledge of anatomy, that in the above description some of the solids are omitted, as the INTEGUMENTS, HAIR, and NAILS. These are referred to the description of the PARTICULAR STRUCTURE of the BODY.

CHYLE.—The chyle is a white, milky-like, sweetish fluid, without smell or any active sensible quality. By it the blood, which is continually wasting, is supplied. On a due proportion, therefore, of the chyle, the nourishment of the body must depend.

BLOOD.—The common appearance of blood is familiar to every one. When taken from a living person, as in the common operation of blood-letting, it appears at first of an uniform consistence ; but after having remained for some time at rest, it spontaneously separates into two parts, a *thin yellowish water*, and a *thick red jelly*. The former is of a saltish taste, and can be jellied by heat ; the latter is composed of red parts, and a substance which jellies whenever it is placed at rest.

The proportion of these parts to each other differs in different persons, and in the same person, according to the state of health.

From the blood all the fluids of the body (except the chyle) are prepared.

Fluids prepared from the Blood.—These are prepared from the blood in two ways : either by simple separation, or by a certain power of the preparing organs, which cannot be referred to mechanical principles.

These fluids differ materially from one another. Some are watery, some slimy, and others coagulable, or oily. They may all be comprehended under the five following classes.

I. *Watery Fluids.*—Some of these fluids are thrown off from the body, as being useless or hurtful ; and some of them are necessary for diluting the food and drink : the former are the *Urine* and *Perspirable matter* ; the latter are, the *saliva* or *spittle*, and the fluid prepared by one of the bowels, called *Pancreas*. To the watery fluids may also be referred the *Tears*.

II. *Slimy Fluids.*—The slimy or mucous fluids differ from the watery ones in being more viscid, and

from the gelatinous fluids, in not being coagulable by heat.

The slimy fluids are of a whitish colour, and are insipid to the taste. They serve to defend those organs which are adapted for the passage of air or fluids. Hence the nose, throat, &c. are constantly moistened with them.

III. *Gelatinous Fluids*.—The gelatinous fluids resemble the mucous and some of the watery ones very nearly. They are distinguished from them by their becoming jellied when exposed to heat. The fluid which is found in the stomach and intestines belongs to this class. The whole cellular substance is moistened by a thin fluid, which has been imagined to be coagulable. Wherever this fluid is not furnished, the contiguous parts of the cellular substance grow together.

The fluid in the stomach and intestines resembles in appearance the saliva, but differs much in its qualities: for it has a saltish taste, and possesses the power of curdling milk.

This fluid is certainly a principal agent of digestion; but its manner of action has not been ascertained.

IV. *Oily Fluids*.—The oily fluids consist of the *Fat*, *Suet*, *Marrow*, and *Ear-wax*.

V. *Mixed Fluids*.—There are some fluids which differ in quality from all those already enumerated, and which, therefore, cannot be properly included in any of the above classes; such are the *Milk*, the *Bile*, and the *Fluid* which lubricates all the joints of the body.

From the above slight sketch of the materials of which the human body is principally composed, it will be perceived, that the solids and fluids have a mutual dependence on each other.

Some of the solids serve to prepare and conduct the fluids; and these, in their turn, nourish the solids:

hence every part of the body must be supplied with vessels; and as these cannot perform their actions without nerves, they also must necessarily enter into the composition of every part.

The fleshy parts of the body are all immediately or remotely connected with bones or cartilages: by this they have a firm support, and are rendered capable of performing the different necessary motions.

All the various parts of the body are connected to each other by the insensible cellular substance; consequently the external form of the body depends very much on it.

These observations render it unnecessary to enumerate particularly the vessels, nerves, fleshy parts, &c. of the different organs of the body. In describing their structure, therefore, the general shape, appearance, and functions, of each part, require only to be explained, and this we now proceed to do.

THE human body may be divided into the HEAD, TRUNK, and EXTREMITIES. All these parts, however, are contained within one covering, the SKIN. Its structure ought therefore to be considered before that of any other part.

SKIN.—The skin is composed of the scarf and true skin.

The Scarf Skin is that fine, transparent, insensible membrane, which, covering the true skin, in its whole extent, forms the outer surface of the body.

It is of different degrees of thickness in different parts, and has an infinite number of small perforations, to admit of the passage of the hairs, and of the exhalent and absorbent vessels. Its use is to defend the true skin.

The scarf skin is connected to the true skin by a jelly-like substance, on which the colour of the outside of the body principally depends: hence this substance

is of a white or dusky hue in Europeans, and of a black or deep brown in negroes, mulattoes, &c.

This jelly-like substance, is probably intended to serve as an additional defence to the true skin, and also to cover its inequalities.

The True Skin lies immediately under the jelly-like substance. It is composed of a number of fibres, on which its elasticity depends, intermixed with a great many nerves, and different kinds of vessels.

The outer surface of the true skin is covered with small inequalities, which exhibit through the scarf skin the appearance of furrows. These inequalities are occasioned by various substances, as nerves, glands, and roots of hair.

The true skin is highly sensible. It forms one of the organs of the senses, that of *Touch*. This sense is more acute in the hands, and towards the points of the fingers, than in any other part; and is there defended by a transparent, horny-like substance, the nails.

The true and scarf skin are perforated by hairs: These are spread over all the outer surface of the body, except on the palms of the hands, and the soles of the feet; though their length is considerable only on particular parts.

The roots of the hairs are placed in the true skin, and are regularly organised parts, having minute vessels and nerves.

The hair on some parts, as on the head, &c. serves as an ornament to the body, to adorn which nature has neglected nothing. In other parts it is more obviously useful, in defending delicate organs from external injury, as in the eye and nose; and over the surface of the body, it probably protects the tender orifices of the skin.

Over the surface of the skin innumerable small glands are found; some of which prepare the suet already mentioned, which defends and softens the skin;

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head, to form the substance from which all the nerves immediately originate. From this substance ten pair of nerves pass out, through small openings, at that part of the head to which the face is attached. The continuation of the true and little brain then passes out at a large opening at the bottom of the head, to which the bones of the neck are joined, and constitutes what is called the *Spinal Marrow*.

Face.—The form and situation of the Face require no particular description.

The face of man exceeds that of every other animal, not only in the beauty of its colour, but in the variety of signs of the passions which it is capable of expressing.

The upper part of the face is called the *Forehead* or *Brows*. It differs in form in different persons. The skin with which it is covered can at pleasure be made to contract in a remarkable degree, in order to express some of the passions.

Eyes.—The Eyes are placed under the forehead, on each side of the root of the nose, lodged in a hollow formed by bones, and rendered soft by a quantity of fat, &c. By these means they are guarded from external injuries, from which they are more immediately defended by the eye-lids.

The upper half of the sockets in which the eyes are placed is surrounded by the eye-brows, these consist chiefly of a certain regular disposition of short thick hairs, and contribute much to the expression and beauty of the countenance.

The Eye-lids, which are continuations of the skin, rendered capable of motion, and lined with a fine delicate substance, terminate in the Eye-lashes, namely, hairs placed in a gristly substance.

In each Eye-lash, at the corner next the nose, there is a small opening, at which the Tears, after they have moistened the eye, enter, to be conveyed into the nose.

At the opposite corner, under the eye-lash, the small body is placed that furnishes the tears. The eye-lids, besides defending the eye, serve to prevent the tears from being constantly poured over the cheeks.

Each Eye is constructed in such a manner, that the picture of the object seen, is represented in miniature on the inside of its bottom; for the light entering at the *Pupil*, passes through a thin watery fluid, then through a small transparent body like chrystal, and lastly through a viscid glairy substance, like the white of an egg, by which means it is collected in a small space, at the bottom of the eye.

These *Humours*, as they are called, are contained within a strong covering, composed of three layers principally, which have been named *Coats*.

The outer layer is almost round, projecting a little at the forepart, which is quite transparent; in every other part this layer is of a milky white colour. To this outer covering the eye-lids and the apparatus for moving the eye are attached.

The second layer is of a dusky colour; it lines the whole inside of the outer one, except at its *transparent* part, where it is turned back, and forms a ring of different colours in different persons.

This ring surrounds the pupil, and being very irritable, and possessing a very active power of enlarging and diminishing the pupil, it serves as a curtain to prevent too great a quantity of light from passing into the eye.

The third or inner layer is that on which objects are represented; it lines only somewhat more than the posterior half of the internal surface of the eye; it is of a white colour, and when accurately examined, it is found to be formed by the branches of a large nerve, disposed in the form of net-work. This nerve, which is called *Optic*, passes in from the brain to the bottom of the eye.

The eyes are rendered capable of very considerable motions ; and both being precisely of the same structure, (except in cases of disease), the motions of each exactly correspond.

When any object is viewed, both eyes are turned towards it ; and although the object is represented on the bottom of each in an *inverted position*, yet it is seen only *single* and in its *natural situation*. The manner in which the idea of an object is transmitted to the mind is not understood.

Nose.—The Nose is the organ of the sense of smell ; by its form and situation it assists much in giving beauty and expression to the countenance.

The inside of the nose is divided in its whole extent into nearly two equal parts, by a partition that is partly bone and partly gristle ; at the upper part it is covered by a bony arch, and below, it terminates in a gristly substance, which can enlarge or diminish the passage to the nose called the nostrils.

The inside of the nose is lined and defended as other passages exposed to the admission of air are ; and over its back part the nerve which communicates the sense of smelling is spread in a beautiful manner.

The cavity of the nose is of so irregular a figure that it cannot be easily explained ; at the upper part under the bony arch, the cavity is small and of an unequal surface ; below that it is extended backwards over the roof of the mouth, and terminates in two openings above the root of the tongue.

There are several small cavities in the bones which surround the nose, lined like it, and communicating with its cavity.

Within the bony arch at each side there is a small hole by which the tears enter the nose ; hence, after having moistened the eyes, they are employed to dilute the mucus that defends the inside of the nose,

which might otherwise become too thick from its exposure to the air.

The *Sense of Smelling* is thought to be the consequence of the air, in passing through the nose, carrying along with it the principles of smell from the surrounding bodies, and applying them to the nervous branches which are spread all over the back part of the nose.

The *Temples* owe their flatness to the particular shape of the bones at that part; they assist in forming the face into a regular figure, while they afford a large surface for the attachment of some of the fleshy parts which move the under jaw, &c.

Cheeks.—The Cheeks are formed by several muscles performing the motions of the lips and jaw-bone, properly covered; they have at their side next the ear a large gland between the muscles: This gland prepares spittle, which is conveyed into the mouth through an opening in the inside of each cheek. From the situation of this gland, it is considerably compressed when the under jaw is moved.

The cheeks contribute much to the beauty and regularity of the countenance; they assist speech, serve to keep the food within the mouth, &c.

The *Ear.*—The External Ear may be considered to be a funnel for collecting sounds. Though nature has furnished it with an apparatus fitting it for motion, very few people possess the power of moving it.

The Internal Ear is situated within one of those bones which form the side of the skull; its structure is so complicated, and its several parts so very minute, that it is difficult to describe it accurately.

The sound collected by the external ear, is conveyed by a long winding narrow canal, (which is defended from external injuries by a soft liniment called the ear-wax), to a small membrane spread over an irregularly shaped cavity named the *Drum of the Ear*. Within

the cavity of the drum there are four very minute bones, connected by moveable articulations to each other.

The Drum has several small openings, of which it is necessary to enumerate only three. One of these, covered by the membrane already mentioned, is connected with the canal leading from the external ear; another forms the entrance of a passage into the mouth; and the third, covered with a thin membrane, separates the drum from a very irregularly shaped cavity called the *Labyrinth*. One end of the range formed by the junction of the small bones is attached to the membrane of the drum, and the other end to the membrane which covers the opening into the labyrinth.

The Labyrinth is of so irregular a form, that it is impossible, in a sketch like this, to attempt a description of it; its internal surface is lined with a fine membrane, over which a great many very minute nervous threads are spread.

It is probable that the passage from the external ear and the drum, with its bones, serve the purpose of collecting sounds; and these being applied to the nerves of the labyrinth, occasion the *Sense of Hearing*; but the particular manner in which the idea of that sense is conveyed to the mind, is equally obscure with that of the other senses.

Mouth.—The opening into the Mouth is surrounded by the lips.

The *Lips* are covered by a fine delicate skin of a bright red colour. They are capable of a variety of motions, and are therefore admirably adapted to express the signs of the passions, and to form the voice into the different modulations that constitute speech.

Below the under lip, the face is terminated by the *Chin*, which completes its symmetry.

The inside of the lips and cheeks is covered by a fine skin, in which there are many mucous glands. These,

by lubricating the whole internal surface of the mouth, prevent its functions from being interrupted.

The forepart and sides of the mouth are surrounded by the upper and under *Jaw*; the former of these is immoveable, and is formed by bones connected to the cheek-bones and nose.

The lower jaw is composed of one piece in grown persons, resembling in form a horse-shoe, connected by its ends to the sides of the head, below the ear, in such a manner, that it is capable of a very free motion from above downwards, and of a considerable one from side to side.

As the motions of the lower jaw are necessary for several purposes, it has many muscles attached to it, some of which are fixed to the temples and cheek-bones, and others to the neck.

In each jaw there are *Sixteen Teeth*, surrounded by a soft spongy substance, the *Gums*.

The *Teeth* are of different shapes, some of them being fitted for cutting, and others for bruising or grinding the food; hence they are divided into cutting and grinding teeth.

The *Cutting Teeth* are shaped like wedges, and have only one root. They consist of the six foremost teeth in each jaw.

The *Grinding Teeth*, of which there are five on each side in each jaw, are much larger than the cutting ones. They have two, three, or four roots; and their surface on the upper part is unequal, rising into several small points.

The *Teeth* are all covered, in that part which is not within the gum, with a fine enamel. In other respects they are merely bone, and, like other bones, are supplied with blood-vessels and nerves.

All that space which the teeth of the upper jaw surround, is called the *Palate*, or *Roof of the Mouth*. It

has somewhat of the form of an arch, and is covered by the same skin that lines all the contiguous parts. The palate is formed of two bones, which separate the nose from the mouth; and it is terminated by a kind of curtain, that hangs down from its back part over the root of the tongue.

This curtain, which may be termed the *Moveable Palate*, is seen at the upper and back part of the mouth, in the form of an arch, divided in the middle by a small body, resembling a nipple, called the *Pap of the Throat*.

At the termination of the moveable palate, at each side, an oval gland is situated. These bodies, from their appearance, are styled *Almonds of the Ear*. Their use is to furnish saliva.

The moveable palate is placed before the openings of the nose into the mouth, by which mechanism it not only closes up these openings when any thing is swallowed, by covering them exactly, but it also conducts the superfluous mucus from the nose into the throat.

The space surrounded by the teeth of the lower jaw is occupied by the *Tongue*, the appearance of which is well known.

The Tongue is formed in such a manner as to constitute the principal organ of taste, and to be capable of a great variety of motions, in order to modify the voice into articulate sounds, and to perform the various functions preparatory to swallowing.

The number of nerves with which it is supplied adapt it for the former, and the numerous fleshy portions of which it is composed, fit it for the latter purposes.

The tongue is bound down to the lower part of the mouth by a membranous cord, to prevent it from too great a degree of motion.

At its root, the tongue is attached to the lower jaw, and to the windpipe; but more especially to a small bone, resembling in miniature the under jaw-bone.

This bone, which may be called *the Bone of the tongue*, by its outer surface, allows of the attachment of the tongue and the muscles that move it, and by its inner surface, it permits the top of the windpipe to be securely lodged, and serves as a basis for many of the powers by which the windpipe is acted on.

The bone of the tongue is attached to the under jaw-bone by gristly portions.

On looking into the mouth of a living person, a pretty large opening is observed beyond the moveable palate and root of the tongue: This part in common language is called the *Throat*.

The upper part of the throat is more arched than the roof of the mouth. It is formed by part of the base of the skull, properly covered, and the moveable palate.

The back part and the sides of the throat are formed by the upper bones of the neck, somewhat flattened, and the ends of the lower jaw-bone, covered with the same sort of substance which lines the inside of the mouth.

That part of the throat which can be seen in a living person may be said to resemble a membranous bag. It forms the superior part of the *Gullet*.

Between the tongue and the beginning of the gullet the top of the windpipe is situated. At its forepart a small moveable gristly body, like the tongue in miniature, is attached in such a manner, that when any thing is swallowed, it shuts up exactly the passage to the windpipe, while it allows the food and drink to pass over it to the gullet as over a bridge.

TRUNK.—The Trunk consists of the *Neck*, *Chest*, and *Belly*. These are joined together at the back part by a range of bones, which connects and supports them all, called the *Spine*. The description of the structure of the spine must therefore necessarily precede that of the other parts of which the trunk is composed.

Spine.—The Spine is a bony pillar, extending from the top of the neck to the rump, serving to support the head, and to connect the several parts of the trunk, while at the same time it affords a canal through which the *Spinal Marrow* passes down, to furnish nerves to the trunk and extremities.

The Spine or Back-bone is divided into *True* and *False*. The former extends from the top of the neck to the bottom of the loins. The remaining part of the bony pillar constitutes the False Spine.

The *True Spine* is composed of twenty-four pieces of bone, resembling each other in their general structure, though they become gradually larger and thicker as they proceed downwards. Seven belong to the neck, twelve to the chest, and the remaining five, with the false spine, to the belly.

Each of these pieces is rounded before, and at its back part has several projections; one particularly prominent in the middle, one at each side, and a smaller one above and below each of the side-projections. Between the forepart and these projections there is a hole large enough to admit a finger.

The upper and under surfaces of these bones are flat.

All the pieces of which the True Spine is composed, are connected to each other by a gristly layer between them, and strong ligaments fixed to their projections at the sides and back, in such a manner that the hole in each forms a continued canal for the reception of the spinal marrow.

The bones of the True Spine are all capable of motion backwards, forwards, and to a certain degree from side to side.

From the particular structure of the True Spine, it is adapted for allowing the different motions of the head and trunk, without injuring the spinal marrow, any compression on which would induce palsy of the parts below.

The *False Spine* consists of a large bone, and a range of small ones. The former of these, called the *Sacred Bone*, is joined to the lowest bone of the true spine, in the same manner as the bones above it are connected to each other.

The Sacred bone is a large triangular immoveable bone. It is broad at the part which joins the true spine, and becomes narrow as it approaches the small range of bones attached to it below.

The outer surface of the Sacred Bone resembles that of two or three bones of the true spine joined together, by which it affords room for the attachment of strong ligaments, that connect it to the *Haunch Bones* at the sides, and of some of the muscles that move the thighs, &c.

The bony canal for the spinal marrow is continued along the Sacred Bone, till within a little of its lower end: it terminates there by a large opening, that is covered by a strong ligament.

The inside of the Sacred Bone is smooth. It is perforated by four or five holes on each side of its middle part, through which nerves pass.

The small range of bones that terminates the spine is called the *Rump-Bone*. It consists of three or four pieces joined together by gristle, capable of motion forwards and backwards.

These bones becoming very small at their lower end, make the spine terminate in a point.

The Rump-bone affords room for the insertion of some of the muscles, which close the lower part of the trunk, and supports some of the parts within the belly.

The *Spinal Marrow* is named improperly; for it differs very much from the oily substance called *Marrow*. It is a large thick nervous cord continued from the brain, furnishing nerves to every part of the trunk and extremities. The spinal marrow is so essential to life, that wounds of it generally prove fatal. It is

therefore defended very securely by being lodged in a bony canal.

In its course within the spine, the spinal marrow sends off, through openings between the sides of the bones, and through those of the sacred bone, thirty pair of large nerves. It terminates in the lower part of the sacred bone, by being divided into a great number of branches, which go to the lower extremities.

NECK.—The Neck connects the head and the trunk. Its external appearance, from being familiar to every one, requires no description.

Within the forepart of the neck the *Windpipe*, and behind it the *Gullet*, pass along in their course from the mouth to their respective terminations within the trunk.

The *Windpipe* is the canal through which the air passes from the mouth to the lungs. It is composed of a great many gristly rings, having their back part membranous, joined together by ligaments and fleshy fibres, lined with a fine, delicate, and highly sensible skin, which is defended from injury by many mucous glands.

The upper forepart of the windpipe is covered by a large gland, the use of which has not yet been ascertained: along each side of it the large vessels are situated, that convey blood to and return it from the head.

The *Gullet* is placed behind the windpipe, between it and the bones of the neck; it is a membranous fleshy tube, that leads from the throat to the stomach, and that is capable of contracting strongly.

The inside of the gullet is lined with a fine skin, similar to that which lines the mouth, and defended like it with mucus, poured out by glands placed on its surface.

Bones of the Neck.—The seven uppermost bones of the spine form the bones of the Neck; the first of

these is attached by an immoveable articulation to the head ; the other six are capable of motion, backwards, forwards, and from side to side.

The bones of the neck are less, and have a more considerable motion, than the other bones of the spine ; they are also somewhat flattened on their forepart, to allow room for the gullet and windpipe. In other respects they resemble those of the spine.

The Spinal Marrow sends off seven pair of nerves from between the bones of the neck. Some of these are distributed to the sides of the head, muscles of the neck, the windpipe, and gullet, and some run down to part of the bowels situated within the chest. The rest of these nerves running under the armpits, join with other nervous branches to supply the arms.

The remaining part of the neck is composed of glands and muscles, with branches of blood-vessels and nerves, covered by common skin.

The Muscles of the neck are those which perform the different motions of the head, neck, gullet, and windpipe.

CHEST.—The Chest is a large cavity, in which some of the organs most essential to life are lodged : it is joined to the neck above, and the belly below. The Chest externally is covered with skin, beneath which several fleshy portions are situated. These perform a variety of functions ; for some of them move the superior extremities, others assist in the action of breathing, and a few on the back part are employed to move the trunk of the body.

On the forepart of the chest the Breasts are placed. The Breasts of women are of a glandular structure, supplied with many lymphatics, blood-vessels, and nerves, mixed with fat and cellular substance. In the unimpregnated state, they may be said to be merely ornaments ; but at the end of pregnancy, they furnish milk for the nourishment of the child.

The Milk is prepared by the glandular structure of the breasts from the blood. It is taken up by a great many minute tubes, that terminate in several small vessels, which carry the milk to the nipples. These vessels are surrounded by a tough elastic substance, and have their ends corrugated, by which the milk, except it be accumulated in great quantity, is prevented from flowing out spontaneously.

By the operation of sucking, these vessels are drawn out, so as to become straight, and therefore no longer impede the egress of the milk, which is propelled into them by the function.

When the breast is no longer sucked, the vessels regain their former situation, by means of the tough elastic substance which surrounds them.

The breasts have a very remarkable connection with the womb, as they suffer considerable changes when it is affected. This circumstance cannot be altogether explained by the anatomical structure of the breasts.

The cavity of the chest is formed by part of the spine, the ribs, and the breast-bone.

Twelve Bones of the Spine, continued from the neck, belong to the chest; they have at their sides indentations, into which one end of the ribs is received.

The *Ribs* consist of twelve on each side. Of these the first seven are called *True Ribs*, because they join the spine and breast-bone. The remaining five become gradually shorter as they proceed downwards. They are fixed by one end to the spine. Their other end affords support to fleshy parts. These are named *Bastard* or *False Ribs*.

The *True Ribs* become gristly at their end next the breast-bone. They are articulated with it and the spine in such a manner, that they have motion upwards and downwards. In performing these motions, the ribs turn obliquely, by which they are pushed a little forwards. By this mechanism the cavity of the chest can

be enlarged. These ribs are joined to each other by fleshy portions, which perform their motions. The nerves and blood-vessels that supply the fleshy portions, run along the under edge of each rib.

Breast-Bone.—The situation of the Breast-bone is well known. It is a long flat bone, consisting of two or three pieces. At its upper part it is broad; and it terminates in one or two narrow points, which project into the belly. The breast-bone is articulated with the fore-ends of the true ribs. It is moved in a certain degree backwards and forwards in consequence of breathing.

By means of the bones of the chest, a kind of cage is formed, which is narrow above and broad below.

The Chest is separated from the Belly by a fleshy partition, called the *Diaphragm* or *Midriff*. It is attached to the ends of the false ribs, the lower part of the breast-bone, the under edge of the last true rib, and to the spine at the loins.

From the situation of this partition, the lower part of the chest slopes gradually from the end of the breast-bone to the bones of the loins. The side of the Midriff next the chest is convex; that next the belly is hollow.

The Midriff, by its structure, is capable of enlarging or diminishing the cavity both of the Chest and of the Belly. By its actions on the first of these cavities, it assists in breathing, speaking, laughing, coughing, &c. and by those on the latter, it promotes the course of the food through the intestines.

The Chest contains the *Lungs* with part of the wind-pipe, the continuation of the gullet, a canal called *Thoracic Duct*, and the *Heart* with its appendages.

The whole cavity of the Chest, and the outside of all its contents, are lined with a very fine, delicate skin, which is kept moist by a fluid furnished by the exhalents on its surface.

This skin divides the Chest into two cavities, by being doubled, and fixed to the spine and breast-bone. The cavities thus divided are not perfectly equal, for the right one is generally the larger.

By this contrivance, accidents affecting one side of the chest do not communicate to the other.

Windpipe and Lungs.—The Windpipe continued from the neck enters the chest at the upper part of the breast-bone. It proceeds along within the duplicature of the partition of the chest, till it arrives at about the fourth back-bone. It then divides into two branches, one of which is sent to the right, the other to the left side.

These branches entering the lungs are divided into innumerable small ramifications, which go to every part of the lungs, and which terminate in small cells capable of admitting the air, and also communicating with each other.

The structure of the Windpipe has been already described: the gristly rings keep it open for the constant admission of air, and the membranous part modifies the proportion necessary on various occasions, as in speaking, singing, &c. This is effected by numerous small muscles placed on its upper part.

The *Lungs* occupy almost the whole cavity of the chest. They consist of two large portions called *Lobes*, placed in different sides of the chest, and rendered perfectly distinct from each other by the partition already described. The lungs are of a greyish colour, except in children and old people. They are formed of the ramifications of the windpipe, a number of cells, and a great quantity of blood-vessels, and are also supplied with lymphatics, blood-vessels, and nerves, for their own particular economy.

The important purposes which the Lungs serve cannot be explained till the structure of the heart be exhibited.

Gullet.—After passing along the neck, the Gullet enters the chest, and goes down in the middle of the spine behind the partition. At one part it inclines a little to the right side, and then somewhat to the left. At last it advances forward, and penetrating the midriff, it proceeds towards the stomach.

Thoracic Duct.—A thin, transparent, narrow canal enters the chest from the belly. It extends along the right side of the back-bone as high as the fourth or fifth rib. It then crosses over to the left side, and forming a turn, terminates in a large vein between the first and second rib of that side.

This canal is called the Thoracic Duct. It is the reservoir of the chyle, that is conveyed by it into the vein in which it terminates.

Gland of the Chest.—The partition which divides the chest, separates the one side from the other in a small degree at the upper part. In the cavity thus formed a gland called *Thymus*, larger in children than in grown people, is placed, the uses of which have not been discovered.

Heart-Purse.—The two layers of which the partition above described is formed, leave between them a large cavity extending from about the middle of the breast-bone to the midriff. In this cavity the heart is situated.

The opening thus made is termed the *Pericardium* or *Heart-Purse*. It surrounds the heart nearly on all sides, and serves to retain it in the proper situation, as well as to defend it from injuries.

The Heart-Purse is constantly moistened by a thin lubricating fluid.

Heart.—The Heart is the great reservoir of the blood. It is placed within the partition of the breast in such a manner that it lies in a slanting direction, having its base towards the right, and its point to the left side, touching the sixth rib.

The heart is fixed to its purse at the base and at the under side, by which means it lies nearly on the middle of the midriff.

The largest portion of the Heart is formed by two strong fleshy bags joined closely together, called Bellies or Ventricles. These possess the power of contracting and dilating; by this they expel the blood from their cavities, which are quite distinct, being separated by a strong partition.

The Ventricles are placed in an oblique manner towards the breast-bone and spine; that which is next the former is called the Right, and the other the Left Ventricle.

At the broad end of the heart two small fleshy substances, resembling the ears of a quadruped, are attached to the Ventricles. These are called the Auricles. The situation of the Auricles corresponds with that of the Ventricles. Like them too they are hollow, and possess the power of contracting and dilating.

Blood-vessels of the Heart.—The Heart, like other organs, is supplied with blood-vessels and nerves for its own economy. Besides these, some Blood-vessels go directly into the cavities of the Heart. Of these the Veins belong to the Auricles, and the Arteries to the Ventricles.

Circulation of the Blood.—All the Blood collected from every part of the body is brought, by a large vein, into the right auricle, which, contracting, pushes it forwards into the corresponding ventricle. A large artery, leading from the right ventricle, and dividing into two branches soon after it leaves the heart, conveys the blood (forced into it by the contraction of the ventricle) into each lobe of the lungs.

The branches of this artery form a great many minute ramifications within the lungs, corresponding nearly with those of the windpipe. By these means the blood is distributed over the whole substance of the

lungs, and exposed to the air which is received within the windpipe and cells.

The blood is returned from the lungs by veins. These at last form only one large vessel, which enters the left auricle. The left auricle contracting, forces the blood into the ventricle with which it is united; from this, by the same means, it is pushed into a very large artery, destined for conveying it to every part of the body.

At each opening through which the blood passes into the Heart, a particular apparatus is placed, that favours the passage of the blood in the course just described, but prevents its return.

The *Great Artery* leading from the left ventricle, crosses over the fourth bone of the back, in an oblique manner, towards the right side. It then rises, and forms a curvature or arch at the second bone, and turning down, is continued along the left side of the spine, till it passes out of the chest through the midriff.

From the arch of the Great Artery, three or four large vessels carry blood to the head, face, organs of the senses, the upper extremities, breasts, &c. The blood is returned from these parts by veins, which terminate within the breast, on the right side of the spine, in the large vessel that enters the right auricle of the heart.

This vessel, which may be called the *Great Vein*, lies on the right side of the great artery, at the back of the partition of the chest. It is joined, where it enters the heart, by a similar vessel, which penetrates the midriff, from the belly, and returns the blood from the lower parts of the body.

Uses of the Lungs.—The Lungs perform the important function of *Respiration*. By this operation the blood is supplied with something necessary to life, and also deprived of its useless parts. For this purpose it is that the blood is distributed through the Lungs in great quantity.

Respiration is accomplished by the air being, by turns, received into and forced out of the Lungs. The midriff and ribs, by alternately enlarging and diminishing the cavity of the chest, are principal agents in this operation. The particular circumstances, however, on which this necessary action depends, are not yet clearly understood.

By respiration also the voice is formed. The modulation of sounds, which constitutes speech, is probably produced by the action of the upper part of the wind-pipe on the air which passes from the lungs.

BELLY.—All that part of the trunk below the midriff is called the **BELLY**. Its general external appearance requires no description.

The form of the cavity of the Belly is irregular. At the upper part, it slopes from before backwards, by the particular situation of the midriff; behind, it seems divided into two parts by the jutting in of the spine; and below, it is surrounded by a bony ring, which gives it somewhat the form of a bason, hence called Pelvis.

The *Pelvis* or *Bason* is a bony zone, composed of the sacred and rump bones, and two large irregularly shaped ones, called *Nameless Bones*. The two former are placed at the back part, and the two latter make up the sides and the forepart.

The *Sacred Bone* is joined to the last bone of the true spine, in such a manner, that its upper part projects forwards, while the rest of it, along with the rump-bone, inclines backwards.

The *Nameless Bones*, one at each side, are fixed to the upper half of the sacred bone by an immoveable articulation; they are firmly glued together, and their union secured by strong ligamentous bands, at the forepart, in a line directly down from the navel.

These bones, therefore, form a ring, no part of which is capable of motion.

Each of the nameless bones is divided, in children, into three portions, joined by gristle. Though these become united in grown people, the names by which they are distinguished in their original state are retained by anatomists ; hence the nameless bones consist of the *Haunch*, *Seat*, and *Share* bones.

The first of these is that which is articulated with the sacred bone, the second is that on which the body rests in the sitting posture, and the third is that portion placed between the groins.

The *Haunch-bone*, at each side, spreads upwards and outwards, and forms the sides of the lower belly. Its upper edge is somewhat semicircular. It affords room for the insertion of many muscles.

At the forepart, above the top of the thighs, its edge becomes irregular, having two projections, to which fleshy portions are attached.

The under part of the *Haunch-bone* only belongs to the pelvis properly so called. It forms a ridge, which is continued from the top of the sacred bone, below which it is scooped out to make a large notch. Through this opening a great nerve and blood-vessels pass to the lower extremities.

The *Seat-bone* extends from below the forepart of the *Haunch-bone*, to the bumpy part on which the body rests in sitting. This part is defended by gristle.

At its back part the *Seat-bone* has two projections, to which ligamentous cords, extending from the sacred and rump bones, are fixed.

The *Share-bones* of each nameless bone, joined together as already described, occupy the space between the groins.

By their upper edge the line formed by the sacred and haunch bones is continued, and constitutes a ring of an irregular figure, called the *Brim* of the Pelvis. This ring differs in male and female, both in shape and size.

At the forepart of the upper edge of each share-bone there is a projection, to which the extremity of the fleshy portions fixed to the projections of the haunch-bone is attached.

The Share-bones, at their lower part, gradually separate from each other as they proceed downwards to join the seat-bones. By this means an angle or arch is formed between them, which is called the arch of the Share-bones.

At the inner side of the top of each thigh a large oval hole is formed, surrounded by the seat and share bones. This is covered by a strong membrane, through which a nerve and blood-vessels pass.

In the middle of the outside of each nameless bone a large round deep cavity is placed, for the reception of the head of the thigh-bone. All the portions of which the nameless bones consist contribute to form this cavity.

From the description of the constituent parts of the Bason, it will appear evidently that it is of a very irregular shape. Its *Brim* lies in a slanting direction when the body is erect, the top of the sacred bone being considerably higher than that of the share-bones.

Its *Outlet*, if the bones alone be considered, is a waving line ; but when the ligaments which extend from the sacred and rump bone to the seat-bones are reckoned, it has nearly the same figure as the brim.

The great purposes which the deficiencies of bone at the lower part of the bason serve, are to lessen the general weight, and in the female to afford a safe passage to the child during labour.

The Pelvis supports the body, allows of the firm attachment of the thigh-bones, and lodges securely within its cavity several organs.

A number of fleshy portions, stretching from the ribs, and attached to the haunch and share bones, covered with skin, form the forepart and sides of the

Belly. By the manner in which these are inserted in the bones of the bason, an opening is left at each side immediately above the share-bones, and another between the projection of the haunch-bone and that of each share-bone. These afford room for the passage of the blood-vessels, &c.

The back part of the Belly is made up of the lower bones of the spine, and part of the fleshy portions which move the trunk, covered in the common manner.

The lowest part of the Belly, or outlet of the bason, is filled up with fleshy portions properly covered, which leave openings for the passage of the common discharges, &c.

The Bason in women is more shallow than in men; the sacred bone is broader and more hollow; the rump-bone, though it projects considerably forwards, is very moveable, and can be pushed back to a line with the extremity of the sacred-bone. The haunch and seat bones are also at a greater distance from each other in women than in men, and the arch at the forepart, below the junction of the share-bones, is much wider.

The *Brim* of the female bason is of an oval figure; it measures in the greatest number of women, from the back to the forepart, nearly four inches, and from side to side about five; but as a thick fleshy portion is extended along its side, the greatest width of the brim in a living person is in a slanting direction between these two.

The *Bottom* of the pelvis has naturally no regular appearance; but in certain circumstances during parturition it acquires nearly the same form and dimensions as the brim; for it measures about five inches from the back to the fore-part, and four from side to side.

The widest part of the bottom, however, is exactly opposite to the narrowest part of the brim, for the brim

is narrowest between Pubis and Sacrum, and the bottom is widest in that direction.

The depth of the female pelvis varies in different parts. Behind, when the rump-bone is pushed back, it measures six, at the sides four, and before, nearly two inches.

When the body is erect, the brim of the bason lies in a more slanting direction than that of the male, for the upper part of the sacred-bone is almost three inches higher than that of the share-bones.

The child passes through the cavity of the bason in parturition ; and for that purpose the part which generally passes down first, *the head*, is admirably adapted to the particular shape of that cavity.

The head of a child is oval, and its dimensions correspond nearly with those of the pelvis ; it possesses, moreover, a power of being diminished by compression, in consequence of the bones which form the skull being connected to each other very loosely.

When the head passes, it in general occupies the least possible space ; and therefore the part at which the hairs go off in different directions, is always in natural labour forced foremost, and the largest part of the head is uniformly applied to the widest part of the bason.

The head therefore enters the bason in such a manner that the ears are placed obliquely towards the sacred and share-bones, and is pushed down in the same direction till it arrives at the bottom of the bason. The longest part of the head being then applied to the narrowest part at the bottom of the pelvis, the position must be altered before it can proceed farther. This actually takes place ; for the face is turned into the hollow of the sacred-bone, and the back-head towards the share-bones ; the arch of the share-bones then receives the back-head, while the face gradually passes along the sacred-bone till the whole is protruded.

When the head of the child is at the bottom of the bason, before it is turned in the manner described, the widest part of the shoulders are applied to the narrowest at the brim, by which means the child could not pass out in that direction, even although the bottom were wide enough for the passage of the head.

When, however, the head is adapted to the bottom of the pelvis, the shoulders accommodate themselves to the dimensions of the brim, and then, when they arrive at the bottom, they make the same turn which the head does.

The structure of a child is such, that every part of the body readily passes through an aperture which can admit of the passage of the head and shoulders.

The Bason, therefore, is admirably well adapted for parturition. The manner in which the child passes through it is a circumstance with which practitioners ought to be intimately acquainted, before they can attempt to afford assistance during delivery. Many dreadful accidents have been the consequence of ignorance of this subject. Words alone cannot convey such an idea of it as is necessary in practice.

The whole cavity of the belly is lined with a fine, strong, soft skin, lubricated in the same manner with that which lines the chest. Like it also, it covers the surface of all the parts within the cavity.

The belly contains the Organs of Digestion, of Urine, and part of those employed for the continuation of the species. The two former of these alone belong to this sketch.

Organs of Digestion.—The Liver, Stomach, and Intestinal Canal, the Spleen, and Pancreas, are the organs by which the food is digested.

The *Liver*.—The Liver is a large mass of a pretty firm consistence, and a dark red colour, somewhat tinged with yellow. It is divided into two unequal

portions, called Lobes. The smallest of these is situated on the left side.

When viewed in its natural situation, the Liver seems to form half a circle below the midriff, placed obliquely from the right to the left side, extending in the former direction to the right kidney, and in the latter to the second false rib.

The Left Lobe of the Liver lies above the stomach, between it and the midriff. At its back part it is thick. It gradually becomes thinner towards the forepart, which can be felt under the breast-bone.

The Right Lobe is much larger than the left. It occupies the greatest part of the space formed by the midriff and false ribs on the inside. It is rounded on the upper part, and hollow below: the back part is very thick: the forepart terminates in a thin edge.

The Liver is composed of a great many blood-vessels, lymphatics, and some nerves, disposed in such a manner as to prepare the Bile from the blood, which is brought to it from the lower parts of the body for that purpose.

Gall-Bladder.—In the concave part of the right lobe of the liver, a small bag, somewhat like a pear in shape, termed the *Gall-Bladder* is situated. The inside of this bag is wrinkled. It is lubricated by a defending mucus, and it contains the fluid called Bile.

The Bile in the liver is collected in a great many small tubes which are united, and form a large canal immediately above the Gall-Bladder. This is joined by a similar one from that organ.

These two canals make a single conduit, which is inserted into the intestine a little below the stomach. By this means the bile is conveyed from the liver and gall-bladder.

The Stomach.—The Stomach is a large membranous and fleshy pouch, resembling in shape a bag-pipe. It is placed in the superior part of the belly,

between the large lobe of the liver and the spleen, somewhat obliquely, more to the left than to the right side. The small lobe of the liver separates the greatest part of it from the midriff, immediately below the point of the breast-bone.

The Stomach has two pretty large openings, the one in the left, the other in the right side. The former of these is about two or three inches higher than the latter.

The Gullet, penetrating the diaphragm from the chest, opposite the lowest back-bone, enters the left opening; the beginning of the intestinal canal is attached to the right.

The inside of the Stomach has a number of folds over its whole surface. These increase towards the left opening, by which, probably, the food is prevented from passing too quickly into the intestines.

The Gastric Fluid, or Fluid of the Stomach, formerly described, is furnished by an apparatus within that organ, the structure of which has not yet been clearly explained.

The Stomach is supplied with blood-vessels, lymphatics, nerves, &c.

The nerves of the Stomach are so numerous, and have such an extensive influence, that by means of them it has an intimate connection with many of the other organs. From this circumstance the effect which blows on the head, and disorders of many of the organs within the belly, produce on the Stomach, can be understood. The operation of many medicines, which, by being taken into the Stomach, occasion certain changes on the body, in so short a time, that they cannot be applied by the vessels to the parts which they affect, must be attributed to the actions of the nerves of the stomach.

Intestinal Canal.—From the right opening of the stomach, the Intestine or Gut proceeds. This con-

sists of a membranous fleshy canal, generally six or seven times longer than the body of the person to which it belongs, terminating at the part through which the coarse part of its contents pass out, called the *Anus*.

The intestinal canal, from being wider in some parts than in others, has been divided into the *Small* and *Great Guts*. The former of these occupy the upper and forepart of the belly, the latter the lower part and sides.

The intestinal canal, that it may be contained within the belly, makes a great many turns, which are prevented from interfering with each other, by being all bound down to the back bone, by a thin membranous substance. Through this also the blood-vessels, lymphatics, and nerves are transmitted to the intestines.

A portion of the intestinal canal passes along the inside of the false spine, nearly in a straight line, hence called the *Straight Gut*, or *Rectum*. This gut terminates in the *Anus*, which is surrounded by several fleshy portions, some of which prevent the contents of the intestines from passing out at all times, while others force them forward when necessary.

The internal surface of the intestines, like that of the stomach, is highly sensible, and has a number of small folds. A great many absorbent vessels open into every part of it; and it is defended by mucus, furnished by minute glands.

The intestinal canal possesses a power of contracting, by which it propels its contents. It is very strong, in proportion to the layers of which it is composed. At the same time its outer surface is so irritable, that, if exposed to air, it is very much disordered.

The *Spleen*.—The Spleen is a bluish oval body, five or six inches in length, and four or five in breadth.

It is situated under the midriff, in the hollow made by the false ribs of the right side, and is connected by ligaments to these parts, to the stomach, and the pancreas.

The Spleen has some nerves and lymphatics. It owes, however, its principal bulk to a great number of blood-vessels.

The *Pancreas*.—Behind the stomach, between it and the back-bone, a small body, not unlike the tongue of a dog, called *Pancreas*, or *Sweet Bread*, is situated. This body lies in a transverse direction, one end being connected with the beginning of the intestinal canal, the other with the spleen. Its breadth is about two or three inches, and its length seven or eight.

The Pancreas prepares a fluid similar in quality and appearance to the spittle. This is poured into the intestine, through a tube, at the part where the conduit from the liver and gall-bladder enters.

A firm, delicate, transparent membrane, composed of two layers, interlarded with fat, and supplied with many blood-vessels, is attached to the lower part of the stomach and spleen, and the upper part of the intestines. From this it hangs down quite loose, nearly to the bottom of the belly, covering the forepart of all the guts. This membrane is called the *Cawl* or *Omentum*.

Digestion.—By the process of Digestion, food is changed into the fluid formerly described, called chyle, on a due proportion of which the nourishment of the body depends.

The sensations of hunger and thirst remind man of the necessity of taking occasionally meat and drink, and excite dreadful feelings where their summons is not obeyed. Drink seems more immediately necessary to life, as the body can be supported much longer without meat than without it.

The food taken into the mouth is broken down by the teeth and mixed with the spittle, by which it acquires

a soft pulpy consistence. It is swallowed by the action of the tongue and several muscles, and conveyed along the gullet by the successive contraction of the different parts of that organ.

When received into the stomach, the food, (consisting of meat and drink) is mixed with the gastric fluid already described. After it has remained for a certain time, the different parts of which the food was composed become intimately united, and form a thick fluid of a greyish colour and sweetish taste, without smell.

This passes through the under orifice of the stomach into the intestinal canal, by the action of the stomach, assisted by the motions of the midriff and the abdominal muscles.

After it has proceeded about three or four fingers breadth along the intestine, the bile and fluid from the pancreas are added, by which it is rendered more liquid, and the different parts of which it consists are more intimately combined.

In this state it is conveyed through the whole extent of the intestinal canal, by means of the contractions of that tube, assisted by the midriff, &c.

During this process the thin and fine parts of this fluid are absorbed, while the thick coarse parts are pushed downwards, and thrown out at the anus.

These coarse useless parts are expelled by the combination of several powers; for by the action of the diaphragm and the muscles of the belly, which compress the intestines on all sides, aided by the successive contractions of the intestines themselves, they are forced down to the anus, the muscles of which being stimulated by their acrimony, give way, and allow them to pass.

The immediate manner in which the important function of digestion is performed, has given rise to many disputes, and is still involved in obscurity. It

cannot be compared to any artificial process which the industry of man can contrive.

Organs of Urine.—The organs of Urine consist of the Kidneys and Urinary Bladder.

The Kidneys are two pretty large bodies, resembling in shape a kidney bean, though very much larger. They are situated on each side of the bones of the loins, between the false ribs and the haunch.

The structure of the Kidneys is like that of glands.

In each Kidney there is a cavity, to which the urine is conveyed by several small tubes after it is prepared from the blood. From this cavity the urine is sent into two long narrow canals called *Ureters*, which pass down in a curved direction to the bladder.

Two bodies, supposed to be glands, and hence called *Renal Glands*, are situated at the upper part of the Kidneys, between them and the large blood-vessels. These bodies are larger in children than in grown persons, in whom they are shrivelled. Their use has not been satisfactorily explained.

The Urinary Bladder is placed in the bason immediately behind the share-bones and before the straight gut. It is a pretty large pouch, somewhat oval, terminating in a narrow part called the neck. It is fixed at the lower and forepart to the contiguous parts.

The Urinary Bladder is composed of several layers, one of which being fleshy, gives it the power of contracting strongly.

The internal surface of the bladder is very sensible, and defended from the acrimony of the urine by mucus. The neck of the bladder is surrounded by a number of small fleshy portions, which adapt it for retaining the urine.

The Ureters pass down in a curved direction from the kidneys, and enter the back part of the bladder, nearly at a finger's breadth from each other. The urine is conveyed by them into the bladder drop by drop.

The urine is expelled from the bladder by the contractions of that organ itself, assisted by the action of the midriff and abdominal muscles.

The Bladder is probably stimulated to contract in two different ways, by being distended, and by the acrimony of the urine; for when it is very full the desire for making water is urgent, and this also often happens when there is only a small quantity of high coloured acrid urine.

Distribution of the Blood in the Belly.—The *Great Artery*, after having penetrated the midriff, runs down along the left side of the backbone till it arrives at the lowest bone of the true spine, where it divides into two branches, which divaricate as they go down, and form a pretty large angle. In its course, it sends branches to the stomach, spleen, liver, and intestines, and also to the other contents of the belly. Each of the branches into which it divides at the lower part is subdivided into two, which are sent to opposite sides of the bason; one of these on each side called *Hypogastric*, supplies with blood the contents of the bason, and some of the neighbouring parts externally. The other pair goes out under the passage made by the muscles at the top of the thigh, to furnish the lower extremities.

The *Great Vein* lies exactly in the same direction with and on the right side of the *Great Artery*; it receives the blood from the organs of urine and other contents of the bason by separate branches. The blood of the stomach, spleen, and intestinal canal, is carried to the liver, after circulating through which, it is taken up by a vein that conveys it to the *Great Vein* immediately under the midriff at the right side.

The blood of the organs of digestion, therefore, undergoes a double purification before it is carried to the left side of the heart, first through the liver, and secondly through the lungs.

The *Thoracic Duct* receives chyle from the absorbent vessels of the lower extremities, and of the organs within the belly. It lies at first under, and then to the right side of the Great Artery, till it penetrates the midriff, as formerly described.*

The *Uterine System*† consists of the *Uterus* or *Womb* itself, and its *Appendages*.

The *Womb* is a small hollow organ, shaped somewhat like a pear flattened, placed in the cavity of the bason, between the straight gut and bladder. It is divided into the Bottom, the Body, the Neck, and the Mouth. The bottom is the line between the two upper corners; it is placed somewhat below the brim of the bason, and is about two inches in extent. The mouth is the lowest part of the Womb, when the body is in the erect posture; it consists of a small opening, surrounded by two pretty thick lips: the appearance, however, of this part varies in different women.

The body and neck, each contributing almost equal proportions, form the space between the bottom and mouth.

The substance of the Womb is fleshy, but it is more compact than that of any other fleshy part; it is supplied with a number of blood-vessels, lymphatics, and nerves, which are so much compressed, that their course cannot be traced.

The inside of the Womb is lined with a very fine skin, which is somewhat wrinkled in young women, particularly towards the neck. The structure of this skin is not perfectly understood. The extremities of many very minute vessels can be perceived on its surface; and between the wrinkles there are small mucous glands.

* See page 35.

† This description of the Uterine System relates only to those organs in the unimpregnated state.

From the inside of the Womb the periodical evacuation proceeds.

In the natural unimpregnated state there is scarcely any cavity in the Womb, for the sides of its internal surface are every where nearly in contact.

There are three openings in the Womb, two (one at each corner) at the bottom, and one at the mouth: the former are always very minute, the latter varies in different women.

Appendages of the Womb.—The mouth of the Womb hangs into a canal which serves as the passage to that organ. This canal, called *Vagina*, being attached to the neck of the Womb, higher at the back than the forepart, forms an angle with it.

The Vagina is a membranous, fleshy canal, composed of several layers, capable of being considerably lengthened and enlarged on different occasions. Its ordinary length is about four or five inches, and its breadth between one and two.

The layer which constitutes the inside of the vagina being much longer than the other, forms a number of small folds, which are obliterated after frequent child-bearing, &c. This layer has many mucous glands over its surface, and is exquisitely sensible.

The vagina, connected to the womb in the manner already described, passes down between the straight gut and bladder under the arch of the share-bones. It is united with the bladder and the passage leading to that organ, at the fore-part in its whole extent, and in a certain degree at the back part with the straight gut. From this circumstance, disorders in any of these parts will be readily communicated to the others.

The skin which covers the external surface of the womb (the same with that which lines the whole belly) forms at each side a broad doubling, named *Broad Ligaments*.

These doublings connect the womb to the sides of

the bason ; in so loose a manner, however, that they do not prevent it from occasionally changing its situation. They afford also support to the blood-vessels, nerves, and lymphatics of the womb.

From each corner of the bottom of the womb two small narrow fleshy canals run along the upper part of the broad ligaments in a curved direction, and terminate at the sides of the bason in a fringed substance, which hangs loosely in the cavity of the belly. These are the *Fallopian Tubes*.

The Fallopian Tubes communicate with the womb at the minute openings of its bottom. In their course they gradually enlarge, but at their fringed extremities they again have a very small orifice.

About one inch from the womb, at each side, two small bodies are placed in the broad ligaments, resembling a nutmeg flattened, called *Ovaria*. They are plump, large, and rounded in young healthy women, and become shrivelled and small in those who have had many children.

The structure of the ovaria, though certainly glandular, is imperfectly known.

At the fore-part of the womb, below the beginning of each Fallopian tube, a round cord, composed of vessels, nerves, &c. intimately interwoven, passes down to each groin. These are named the *Round Ligaments*. They seem to be principally useful in retaining the womb in its proper situation.*

EXTREMITIES.—The extremities consist of *Superior* and *Inferior*, the former constituting the Shoulders, Arms, and Hands ; the latter the Thighs, Legs, and Feet.

* In the former editions of this work, the Uterine System was minutely described. The author, however, with a view to render the present edition more generally acceptable, has placed the former description in a short Syllabus, which he has printed for the sole use of his female pupils.

Superior Extremities.—The Shoulder-blades are two large, flat, triangular bones, joined to the back-part of the chest. They extend from the first to the seventh rib, and accommodate themselves to the particular shape of the ribs.

They are attached to the chest by fleshy bands, in such a manner that they have a considerable degree of motion from above downwards, and from side to side; hence, though in their natural situation they are separated by the back-bone, they can touch each other when the arm is moved in a particular direction.

At their upper and outer part they have a hollow space, which receives the head of the first bone of the arm.

The Shoulder-blades are prevented from rising too far upwards by a curved bone, which on each side extends from their upper and outer corner to the top of the breast-bone. This is called the *Collar-bone*.

Both ends of the Collar-bone are capable of motion, by which it is not liable to be injured by sudden or violent actions of the arm.

This bone, besides regulating the motions of the shoulder-blades, provides by its incurvation a safe passage for the blood-vessels going to and coming from the head.

The *Arm* extends from the top of the shoulder to the elbow. It consists of a single long bone joined to the shoulder-blade, so as to possess a very free motion on all sides. This connection is strengthened by the fleshy portions which extend to it from the back and breast, and perform its various motions. These, covered with skin, and supplied with blood-vessels and nerves, give the external form to the Arm.

The space included between the Elbow and the Wrist is called the *Fore-arm*. It is composed of two long bones tied to each other at both ends. These bones are joined to the lower end of the bone of the

arm, in such a manner that, like a hinge, they have only motion backwards and forwards, while at the same time one of these bones has a rotatory motion.

The *Wrist* consists of eight small bones placed in two rows; the first of these is connected with the bones of the fore-arm, by a moveable, hinge-like articulation; and the second is joined to the hand in such a manner, that a slight degree of motion only can take place between them.

The *Wrist* serves as a basis to the hand, and affords it a large free motion.

The *Hand* consists of four long small bones, four fingers, and the thumb.

The four long small bones are articulated with the wrist and the fingers, the latter of which they support. They are joined together at each end, and are hollow where they form the palm, and convex at the back of the hand.

The four fingers, each composed of three bones, are capable of a great variety of motions.

The thumb, consisting also of three bones, is articulated with one of the bones of the wrist. It serves to regulate the motions of the fingers.

A number of muscles, covered with skin, and supplied with nerves and blood-vessels, make up the figure of the fore-arm, and perform its motions. The wrist and hand, besides these, have a great many ligamentous cords that facilitate the complicated motions of which they are susceptible.

Inferior Extremities.—The Inferior Extremities are divided into the Thighs, Legs, and Feet.

The Thigh is formed by a very large long bone, covered by a number of fleshy portions, which perform its various motions. Those on the back part attached to the thigh, and the bones of the basin, constitute the buttocks.

The Thigh-bone has a large round extremity, by

which it is fixed in the cavity formerly described in the nameless bones, in such a manner that it has very extensive motions. The other end is articulated with the leg.

The Legs consist of two long bones, situated nearly in the same manner with respect to each other as the bones of the fore-arm, and possessing a similar degree of motion.

The Bones of the Legs are articulated with the thigh-bone, nearly as those of the fore-arm are with that of the arm. A thick roundish bone, called Knee-pan, is placed at the fore-part of this articulation, having a very free motion upwards and downwards. This bone regulates the motions of the legs.

The articulation between the thigh and leg forms the Knee.

The inferior extremity of each bone of the leg projecting somewhat outwards constitutes the Ankle.

The Foot is composed of a variety of bones, seven of which form the back part of the foot. They are articulated with the bones of the leg, and with one another, so as to allow the various motions of the foot, while their back part, composed of one large piece, the Heel-bone, affords attachment to a strong tendon, which strengthens the articulation.

Five long bones are placed between these and the toes. They have no motion between themselves, but are joined together in such a manner as to form an arch along with the bones behind them. By this means a very firm support is afforded to the body, while the blood-vessels and nerves which supply the foot are protected from injury.

The Toes, like the fingers, are five in number. The great toe consists only of two pieces of bone; the others have three. The toes, though they have not so extensive a motion as the fingers, are of great use in walking.

The inferior extremities are supplied, like the superior, with blood-vessels, nerves, muscles, ligaments, &c. The skin on the soles of the feet is thicker and more insensible than in any other part of the body.

This Introduction cannot be better concluded than by a few general observations on the structure of the body.

All the parts of the human body, admirably connected with each other, form a general assemblage of powers, by which every purpose in life is wonderfully performed.

The *Head* affords a situation for the organs of the senses, which adapts them for the important office of serving as centinels to announce the approach of danger from surrounding bodies, and which renders their influence extensive.

The *Superior Extremities* act as servants and defenders of these organs, and are therefore placed near them.

The *Chest* is excellently constructed for the safe lodgement of the powers by which the blood is purified, and sent to every part of the body.

The *Belly* contains those organs which supply the new materials of the body, and carry off the worn out ones.

The *Inferior Extremities* serve as beautiful pillars to the whole human fabric, while they bestow on it a power of moving from place to place.

The *Whole Body* may be considered as the habitation of an unknown principle, which animates and regulates every part of it. The instruments of this principle are the nerves.

The necessary actions of the body after a certain period induce a degree of lassitude, which terminates in a total inability of performing the ordinary functions of

of life. *Sleep* is therefore provided for recruiting the body.

The *Involuntary Actions* of the body are continued during sleep, but in a slower succession. The thinking principle, except in cases of disease, is quite suspended.

MANAGEMENT
OF
FEMALE COMPLAINTS.

PART I.

CHAPTER I.

SEXUAL DISEASES.

WOMEN are subject to many diseases in consequence of peculiarity of sex. Some of these, by inducing troublesome symptoms, render life uncomfortable; and many, by affecting the general health, prove the source of the most dangerous symptoms.

It is of importance to explain the nature of all those diseases, that those afflicted with any of them may be enabled to apply proper remedies, or have recourse to proper advice before it be too late.

SECTION I.

EXTERNAL SEXUAL DISEASES.

WOMEN have sometimes Peculiarities in their External Form, which may proceed from original mal-conformation, or be the effects of other diseases.

When there is any thing uncommon in external appearance, that false delicacy, so natural in women, which often prevents them from consulting practitioners, should be immediately overcome, otherwise they may be subject to many inconveniencies which might easily be avoided.

Although women be apparently properly formed, the passage of the periodical evacuation is sometimes obstructed by a firm membrane, which closes it up.

This preternatural appearance, at a certain period of life, produces the most painful and troublesome complaints; for a tumour or swelling is gradually formed, by the accumulation of that fluid which ought to be discharged. From the confinement of the fluid, and the push which it makes at the accustomed periods, the most violent bearing down pains are occasioned.

These bearing down pains increase in violence according to the duration of the complaint, and at last, in the advanced stage of the disease, resemble so much the throes of labour, as to have often occasioned mistakes.

The disease may be suspected by this circumstance, that the painful symptoms disappear during the interval of the accustomed periods. But it is chiefly ascertained by there being no opening into the passage of the womb. It is a good general rule, when the pe-

riodical discharge does not appear at the usual time of life, to determine this point.

The cure of this disease, which is very simple, consisting only of an incision through the obstructing membrane, must be trusted to a practitioner.

The external form of women is apt to become changed, by the cohering of contiguous parts, in consequence of excoriations, or of previous inflammation.

Every part of the body becomes excoriated if exposed to moisture, and not kept clean; the most delicate parts are more particularly liable to this accident.

The great advantage, as well as necessity, of the frequent use of the *Bidet*, is therefore very obvious, as it affords the best means for preventing excoriations, and their disagreeable consequences.

When excoriations do happen, their treatment ought to be simple. If they are slight and superficial, the application of cloths dipt in Port wine, or a weak solution of sugar of lead*, will remove the complaint; but if the excoriations have a fiery appearance, and be deep-seated, they ought to be dressed with spermaceti ointment, very thinly spread on linen.

Inflammation affecting women externally, if accompanied with heat, throbbing pain, swelling, and tension, from having a very great tendency to terminate in extensive suppuration or mortification, ought to be always particularly attended to in the beginning; women should not therefore, in such cases, delay having recourse to proper assistance. If, however, this cannot be procured, violent pain must be prevented by doses of laudanum†, and a poultice consisting of soft bread

* Viz. ten grains dissolved in half an English pint of rose-water.

† The ordinary dose of laudanum for *grown persons* is from twenty to thirty-five drops, according to the temperament and strength.

soaked in alum water, or a strong solution of sugar of lead*, should be applied to the inflamed parts.

In cases where the inflammation is very violent, blood should be taken from the arm, and also, by means of leeches, from the part.

A particular kind of inflammation is attended with a very troublesome, though not dangerous symptom, an excessive degree of itching. This complaint, however, is the effect of several causes, which cannot be explained to those who are ignorant of the practice of physic. If, therefore, it be not removed by low living, and repeated doses of cooling salts, along with the liberal use of ripe fruits, proper advice is required. The disease may often be palliated by frequent doses of laudanum, and the application of simple camphorated ointment, or Goulard's cerate, to the affected parts.

Where itching takes place at the period of life when the monthly discharge ceases to return, if it be attended with occasional deep-seated pain about the bladder, it requires the most serious attention.

SECTION II.

BEARING DOWN AND DESCENT OF THE WOMB.

THE connections of the womb, it was formerly observed†, are so loose, that it readily changes its situation.

From this circumstance it may be understood, that if the vagina be very much relaxed and enlarged, the

* Viz, a drachm dissolved in a gill of vinegar and half a pint of rose-water.

† Page 52, 53.

womb will fall lower into it than it naturally does. When this happens, it presses on the neck of the bladder and the lower part of the straight gut, and hence those parts are irritated.

The symptoms of this complaint, in its incipient state, are, bearing down pain, especially when using exercise, frequent desire to make water and go to stool, and a discharge of a slimy fluid from the vagina, together with pain in the back.

When these symptoms are disregarded, the disease continues to increase in proportion to its duration. In many cases the womb protrudes entirely without the vagina, and then becomes highly troublesome and painful. It also in that state, from its connection with the bladder, renders the subject of it unable to make water, without lying down and pushing up the protruded tumour.

The causes of the descent of the womb ought to be universally known, as it is certainly often in the power of women to escape entirely from the miserable and uncomfortable state to which they must be reduced if subject to that complaint.

Every disease which induces weakness of the habit in general, but more especially of the passage to the womb, will lay the foundation for the bearing down or descent of the uterus. Irregularities of the periodical evacuation, frequent miscarriage, improper treatment during labour, and too early or violent exercise after lying in, are the most common circumstances to which this disease is to be attributed.

The cure of *Bearing down* of the womb, if attended to early, may often be easily accomplished. The tone of the vagina must be restored by the cold bath, and astringent lotions thrown into it three or four times a-day, while at the same time internal strengthening remedies should be taken, and the patient ought to be confined very much to a horizontal posture.

When, however, the disease has proceeded so far that the womb *descends*, the cure is attended with considerable difficulty, and requires time in proportion to the duration of the complaint, and the state of the patient's general health.

Young married women, troubled with descent of the womb, may expect to be entirely relieved from it if they become pregnant, provided they be properly treated after delivery.

In cases where there is no probability of pregnancy, the womb should be kept up by means of a piece of sponge adapted to the passage, moistened with any mild astringent liquor, and the remedies advised for bearing down of that organ should be carefully employed.

When, however, the descent of the womb is very troublesome, and has continued for a considerable time, the only relief which can be obtained is to be procured from the use of an instrument called *Pessary*.

Women in general are prejudiced against such instruments, and many practitioners have recourse to them with great reluctance: some indeed have absolutely prohibited their use, and have alleged, that they can never answer any good purpose, but that, on the contrary, they always increase the malady, and produce other bad effects.

That pessaries have often been the cause of many very troublesome, as well as dangerous symptoms, cannot be denied; but this can only happen when they are improperly managed; for these instruments, when judiciously employed, always contribute very materially, at least to the ease and comfort of the patient, and can never do any harm.

The Author of this Work knows at present many women who are enabled, by the use of a pessary, to make every exertion necessary in active life, without feeling the smallest pain from the instrument; while

the few who, in the course of his practice, have refused to try that expedient, suffer all the disagreeable effects which can originate from a weakening disease and want of exercise.

SECTION III.

PROTRUSION OF THE VAGINA.

PROTRUSION of the vagina is not so frequent as descent of the womb; but when it occurs it is fully as troublesome. It appears most commonly in the form of a tumour hanging out without the passage, with the mouth of the womb at the upper and fore part of it, which distinguishes it from the protrusion of the womb.

When the vagina is very much relaxed, and at the same time narrow, the weight of the womb bearing down on it pushes out that part of it which is most loosely connected to the contiguous parts,* and consequently occasions the appearance already described.

The cure depends on the protruded part being replaced, and the weakened state of the vagina remedied. These purposes may be accomplished by the means recommended in cases of descent of the womb. As however, protrusion of the vagina is often the consequence of general weakness of the habit, the Peruvian bark, and mineral waters, with steel, should be taken internally, and a suitable plan of diet and exercise ought to be followed.

* See Page 52.

SECTION IV.

TUMOURS IN THE VAGINA AND WOMB.

THE Vagina and Womb are subject to fleshy excrescences called *Polyipous Tumours*, in common with some other parts of the body. These in many cases are soft as clotted blood; in others they resemble flesh; and sometimes they are found of a hard consistence. They are of different sizes and shapes.

Little inconvenience is felt from these excrescences when they are small, except from their occasioning irregular discharges of blood from the womb or vagina. But the most troublesome, as well as dangerous symptoms occur in the progress of the disease, when the tumour becomes bulky.

Violent bearing-down pain, frequent discharges of blood, and the constant draining of a fetid, ill-coloured fluid from the vagina, along with inability to make water, and irritation on the straight gut, inducing continual desire to go to stool, are the symptoms of a large excrescence in the womb or vagina. When the disease has continued for some time, the tumour hangs at last without the passage of the womb.

These excrescences have often been mistaken for descent of the uterus, and sometimes even for the head of a child. A surgeon in Lyons actually tore away, by the utmost exertion of force, the womb, along with an excrescence, having imagined that the unfortunate patient was in labour, and that he pulled by a part of the child.

If this disease be long neglected, the pains increase in violence, and the patient becomes emaciated from the continual discharges.

In the treatment of excrescences in the vagina, &c. it is of very great importance to form an accurate idea of the disease. The symptoms, therefore, which distinguish it from other complaints ought to be well known.

Excrescences of the womb differ from descent of that organ, in being attended with frequent discharges of blood, and when felt, in being broad and bulky, and having no orifice like the protruded womb, and in being easily moved or twirled round as it were, by the finger.

If the disease produced by such excrescences be early attended to, in many instances it can be removed without danger, or occasioning much pain. But when the excrescences have acquired a great size, the danger is proportionally increased.

The cure depends on a surgical operation, which ought only to be attempted by those who have had opportunities of treating such cases, as it requires a very accurate knowledge of the structure and situation of the contiguous parts, to avoid those errors in performing it which have proved fatal to many women.

SECTION V.

CANCEROUS AFFECTIONS OF THE WOMB.

ULCELERATED Cancer of the Womb is perhaps the most dreadful disease to which the human body is subject.

This disease commonly begins at the decline of life, though cases, from time to time, occur where it attacks young women. Its approach is in general gradual. At first the patient feels an uneasy weight in the lower part of the belly, with the sensation of heat or disagreeable itching. By degrees irregular shooting pains, darting across from the share bones, take place. The pain at last becomes fixed in the womb, and is described to occasion a constant gnawing burning sensation. A discharge of ill-coloured, fetid, acrid matter from the vagina attends this pain; and notwithstanding every attention to cleanliness, excoriates the neighbouring parts. If the patient have the misfortune to linger long in this situation, her condition becomes shocking in the highest degree, both to herself and to those about her. Under such circumstances, death loses its formidable appearance, and is anxiously wished for both by the unhappy sufferer herself, and by all her friends.

Such symptoms require the most serious attention; for the woman's comfort must depend on their proper treatment; and therefore recourse should be had, on their first appearance, to the advice of a practitioner.

By a continued perseverance in a milk and vegetable diet, with a total abstinence from animal food of all kinds, and every fermented liquor, and by occasional blood-letting, and the establishment of one or two issues in the arms or above the knees, together with frequent doses of cooling laxative salts, the progress of the disease may be retarded, if the complaints be attended to at the beginning.

Cancerous complaints, in their advanced stage, produce such deplorable effects, that it cannot be considered wonderful that women subjected to them should, with eagerness, have recourse to every impudent quack who pretends to have discovered a nostrum for their cure. The author of these pages, however,

deems it his duty to caution women against spending that time in listening to the pretensions of empyricks, which may be so advantageously employed at the beginning of such complaints, in adopting suitable means to check their progress.

Were any medicine discovered which should possess the power of removing cancer, the fortunate discoverer certainly would not long conceal his success : and hence such unequivocal evidence of the fact would soon be furnished, as should put the matter beyond a doubt. At present, however, quacks found their pretensions to merit on the successful event of single cases. Delusive pretensions ! Were any single case of cancer cured by internal medicines, every cancerous complaint, wherever situated, should yield to the same means ; just as (what is well known) the particular disease for which mercury is a certain remedy, although it appears in a variety of forms, and in different parts of the body, is uniformly removed by the same mineral.

Many shocking cases have occurred within the observation of the Author of this Work, where women have neglected pursuing with steadiness the suggestions of regular practitioners, in consequence of the false confidence they were induced to place in the dishonest promises of the discoverers of nostrums. A simple recital of the agony of such women previous to death, might appear incredible. The interference of the legislature, in checking this species of robbery, is certainly required, since not only is money stolen, but also is life destroyed, and that in a way of torture too, which the severity of law has never yet exercised on the most flagitious criminals.

SECTION VI.

DROPSY OF THE APPENDAGES OF THE WOMB.

THE Womb itself has been imagined to form the seat of collections of a watery fluid, like other cavities of the body. This, however, can never probably happen, except where the fluid is contained within white-coloured bladders of various sizes, resembling green grapes when too ripe, called *Hydatids*. The nature of these bodies is not yet fully understood. At first I was inclined to suspect, that when hydatids were situated in the womb, they were formed by the retention of part of the *after-birth*, or of a blighted conception. But the following case overturned this opinion.

A Lady, at the cessation of the periodical evacuation, complained of symptoms which indicated the existence of a polypous tumour in the womb: And, on examination, this was found to be really the case.

The tumour was easily removed; and the patient recovered perfectly.

About ten years afterwards she began to feel an uneasy weight at the lower part of the belly, and suspected that her former complaint had returned. The mouth of the womb, however, was found quite closed up; but the uterus appeared bulky and heavy. This appearance continued for some time, attended with no other inconvenience than what originated from the sensation of a considerable weight, which produced a degree of bearing-down.

At last, in the 62d year of her age, she was seized with very strong forcing pains in the womb; and a large mass, weighing above two pounds, consisting of

a quantity of hydatids, joined together by a membranous substance, was passed.

During the violent pains which preceded the expulsion of this mass, the patient lost so great a quantity of blood from the womb, that faintings were induced, and she became very much weakened. After a few weeks, however, by proper management, she recovered perfectly.

The appendages of the womb, called *Ovaria*,* are very frequently the seat of dropsy. This disease most commonly occurs at that time of life when the periodical discharge naturally becomes irregular, though it sometimes appears in young women.

At first, dropsy of the ovarium is very small, and attended with no disagreeable symptoms. It increases gradually in bulk, and is originally confined to one side only, most frequently the left one. The patient enjoys usual good health in most cases till the tumour has acquired a considerable size; it then induces pain and numbness in the thigh corresponding with the side in which the swelling is situated, and by degrees the body becomes wasted, the appetite bad, and the strength impaired.

When the swelling has increased so much as to enlarge the whole belly, breathlessness, and cramps of the thighs and legs, are produced, which at last terminate the woman's life.

The progress of this disease, however, is not equally rapid in all cases. Some women have had dropsical ovaria upwards of twenty years, without feeling much inconvenience from them. Of this I once saw a very remarkable instance: the patient was at last suddenly carried off by the fluid bursting into the cavity of the

* See p. 53.

belly. In others, the dangerous symptoms proceed with rapidity to their fatal termination.

Every thing which tends to retard the action of the vessels of the body proves a cause of dropsy.

It was observed, that a thin fluid is furnished by the arteries, which lubricates the surface of every cavity of the body. If the proportion of this fluid be too great in any of the cavities, either from being supplied in too large quantity, or from not being regularly absorbed, it will gradually accumulate, and form dropsy.

Although the ovaria in their natural state have no cavity, as they are of a spongy texture, they are calculated for allowing the stagnation of fluids, while their outer covering is capable of a very great degree of distention, and hence readily becomes a sac for containing the accumulated fluid.

Every circumstance, therefore, which is apt to impede the circulation of the blood, or to weaken the general habit, but more especially the uterine system, may occasion dropsy of the ovaria. Consequently, too tight lacing, with a view to acquire a fine shape, sedentary life, frequent discharges of blood from the womb, and injuries during labour, lay the foundation for this disease.

Dropsy of the ovaria ought to be carefully distinguished from general dropsy, and from pregnancy; if it be mistaken for the former, the patient may be teased with medicines, which will rather aggravate than relieve the disease; and if the latter be taken for this complaint, the most fatal consequences must follow. Many women have lost their lives by such mistakes.

Dropsy of the ovary is in general seldom discovered early enough to admit of a complete cure. The great aim, therefore, in most cases, ought to be to prevent its progress.

For this purpose, every means which can promote general health ought to be employed.

Diuretic medicine, and gentle laxatives, should also be taken from time to time. Nitre, cream of tartar, and an infusion of juniper-berries or of broom-seed, seem to be the best diuretics; and any of the laxative cooling salts may be used to keep the belly gently open. These remedies are serviceable only in preventing the watery fluid from increasing in quantity, for there is little probability that it can be evacuated by the power of any medicine. While this plan is pursued, the belly should be firmly compressed by a flannel roller, or proper bandage.

When the symptoms of breathlessness and very great debility become urgent, the water may be taken off by the operation of tapping. A temporary relief only, however, will in general be obtained by this means, for the fluid is commonly soon again accumulated in increased quantity.

In some rare cases, where the general health of the patient remained unimpaired, by the use of strengthening remedies the disease has been prevented from returning after tapping; and hence patients, under such circumstances, should not altogether despair.

The fluid in dropsical ovaria, however, is more often contained within hydatids than within a single sac, and therefore much less can be expected from medicine. This may be known from the inequality of the tumour. It is of consequence to discover the existence of hydatids, as in such cases little benefit can be procured from an operation.

SECTION VII.

IRREGULARITIES OF THE PERIODICAL EVACUATION.

IT is well known, that those women are most healthy who have the periodical discharge most regularly ; and, on the contrary, that those who have bad health, either have it excessively, sparingly, irregularly, or want it altogether.

Hence it has been supposed to be so much connected with health, and so essential to the female constitution, that irregularities of that evacuation prove the source of most of the diseases incident to the sex. In general, however, these are more frequently the *effects* of something faulty in the habit, than the *cause* of the bad health which at that time occurs.

Women in the higher ranks of life, and those of a delicate nervous constitution, are subject to sickness, head-ach, and pains in the back and loins, during the periodical evacuation.

Those of the lower rank, inured to exercise and labour, and strangers to those refinements which debilitate the system, and interrupt the functions essential to the preservation of health, are seldom observed to suffer at these times, unless from general indisposition, or a diseased state of the womb.

Women subject to pain, &c. while out of order, should be cautious what they eat or drink at that period. They should frequently repose on a bed during the day, when oppressed, languid, or pained. They ought to drink moderately any warm diluting liquor which is most grateful to the stomach, as gruel, weak white-wine whey, cow-milk whey, penny-royal or balm tea, a weak infusion of saffron, &c. and must

carefully guard against cold, fatigue, and night irregularities.

The pains with which many women are so much distressed during this period are best relieved by opiates. Fifteen drops of laudanum may be taken in a cupful of warm tea in the morning, and twice that quantity in weak negus, white-wine whey, or gruel, at night, immediately before bed-time.

The tendency to constipation which opiates induce, must be counteracted by the use of gentle laxatives, or emollient glysters.

Along with the pain, some women discharge small fleshy or thin skinny substances, which always indicate some diseased action of the womb, and require most particular attention.

The periodical evacuation sometimes, in young women, suddenly disappears for a period or two, and in some cases much longer.

This circumstance always occasions much apprehension, and every medicine which is imagined to possess the power of restoring the discharge is therefore very eagerly had recourse to.

As many causes may put a stop to the periodical evacuation, the method of cure must be varied according to circumstances. If the complaint seem to have originated from exposure to cold, errors in diet, or passions of the mind, the warm bath should be used for several nights preceding the time when the discharge should appear, and a gentle vomit or laxative ought to be taken.

If the woman has evident troublesome symptoms of fulness, blood-letting, frequent doses of cooling laxatives, and spare living, will prove the most effectual remedies, and are certainly safe, as the same treatment would be proper though there were no *obstruction*.

A very different plan ought to be pursued when

there are symptoms of great weakness. Nourishing diet, the moderate use of wine, gentle exercise, the Peruvian bark, a course of steel, mineral waters, and the cold bath, are in such cases necessary. A table spoonful of white mustard seed evening and morning, or a small cupful of a weak infusion of horse-radish, on such occasions, sometimes produce very good effects; an infusion of chamomile, tansey, balm, or penny-royal, may be employed with the same views.

From the great variety of causes of sexual obstruction, it is certain that many medicines which possess very opposite powers, may in different cases produce the same effects; for the same reason a remedy which in one case may prove mild, inoffensive, and successful, will in another apparently similar one, occasion the most violent disorders.

Medicines, with a view to restore the periodical evacuation, ought therefore to be employed with the greatest caution. No remedy applicable to every case can possibly be discovered; and many cases yield to a proper regulation of diet and exercise, after having resisted all the ordinary remedies.

All forcing medicines should be carefully avoided, as they act by stimulating other parts, and hence their effects are often dangerous, and never certain.

Electricity has frequently been found a powerful remedy in cases of obstruction; but as it may often be productive of the very worst effects, it should never be had recourse to without proper advice.

The periodical discharge often becomes irregular merely from change of residence. Such irregularities are merely temporary.

When the periodical evacuation is sparing, the best palliative treatment is to guard against exposure to cold at that period, and by the use of the warm bath to promote the discharge.

Women who are nervous and delicate, whose health

has been impaired by frequent miscarriages, or whose constitution is weakened by a sedentary inactive life, low diet, or any other cause of debility, are chiefly subject to *immoderate, long continued, or frequent* menstruation.

When the blood evacuated, instead of being purely fluid, comes off in large clots or concretions, attended with a considerable degree of pain, throbbing, or bearing down, the case is highly alarming and dangerous, for it indicates a diseased state of the womb, as the periodical discharge, in its natural state, never coagulates.

Frequent or excessive evacuations are always attended with languor and debility, and loss of appetite, with pain in the loins, and sometimes faintings; and when they occur in a violent degree, anxiety, coldness of the extremities, and hysteric fits are occasioned.

Universal weakness of the system, which brings on a train of nervous complaints, and swelling of the legs, and a disposition to hectic fever, which may at last terminate fatally, are the consequences of frequent or excessive menstruation.

The cure depends much on the cause, the constitution, and manner of life of the patient. More in general is to be expected from regular living and proper diet and exercise, than from medicine.

When the discharge is excessive and dangerous, cooling diet, cool air, horizontal posture, and cold *topical* applications, are the principal remedies. The patient should be kept as cool as possible, and perfectly at rest, both in body and mind, as long as the discharge continues. Her food should at that time be light and nourishing, but not heating, and should be quite cold. When great anxiety, languor, and faintness occur, light nourishment must be frequently given, and now and then a little cold claret or cinnamon water, by way of cordial.

The discharge cannot be immediately stopped by any internal medicine; but it may be moderated, and hence the danger of the complaint may be obviated.

With this view, if the patient be of a full habit, hot or feverish, the nitrous mixture* should be taken; but otherwise, rose-tea, agreeably sharpened with spirit of vitriol, is preferable. Alum-whey is also a powerful remedy, and readily procured. The eighth part of an ounce of alum will curdle an English pint of milk; the whey thus prepared must be sweetened to the taste, and a small cupful may be drank as often as the stomach will receive it.

When there is much pain or anxiety, opiates may be given with advantage.

The state of the belly must be attended to; it can be kept gently open by the use of castor oil†, or any mild laxative. Glysters under such circumstances are improper, from their tendency to increase the discharge.

A light decoction of Peruvian or oak bark‡, rendered acid to the taste by elixir of vitriol, is the best remedy to strengthen the general habit, and to prevent a return of the disorder.

Irregular recurrence of the sexual evacuation may be occasioned by a variety of circumstances; but it most frequently happens from general indisposition, or in consequence of the particular period of life.

Where symptoms indicating diseases of the habit, as weakness, loss of appetite, swelled legs, &c. occur at the same time with irregular evacuation, they alone should be attended to, for on their being remedied, the return of the sexual discharge depends.

* See forms of medicine at the end of this work.

† The dose for a delicate woman is less than a table-spoonful.

‡ See forms of medicine.

When irregularities take place about the forty-fifth or fiftieth year, they must be imputed to the natural decline of life, and ought to be treated as such. Many women on these occasions, averse to be thought old, flatter themselves that the irregularity is occasioned by cold, or some accidental circumstance, and therefore, very improperly, employ their utmost endeavours to recall it.

When the periodical evacuation is about to cease, the symptoms which occur are extremely different in different women; for in some it stops at once, without any bad consequence; in others it returns after vague and irregular intervals, for several months or years preceding its final cessation. In such cases it has at one time the appearance of little more than a shew; at another it comes on impetuously, and continues for some time excessive.

The symptoms of disease which in many women occur at this period of life, are to be ascribed rather to a general change in the habit, than merely to the absence or total cessation of the sexual evacuation.

Although this change is natural to the female constitution, if the many irregularities introduced by luxury and refined mode of living be considered, it will not appear surprising that this period should prove a frequent source of disease.

Women who have never had children, or good regular health, and those who have been weakened by frequent miscarriages, are most apt to suffer at the decline of life.

It frequently happens, that women who were formerly much pained when out of order, or who were troubled with nervous and hysteric complaints, begin at the cessation of the periodical discharge to enjoy a good state of health, to which they had formerly been strangers.

If the evacuation should stop at an earlier period of

life than usual, and the woman be not pregnant, the nature of the symptoms will point out the proper management.

When no particular complaint occurs in consequence of the decline of life, it would be exceedingly absurd to reduce the strength by an abstemious diet, low living, and evacuations, as is unfortunately very often advised.

If, on the contrary, headach, flushings of the face and palms, or an increased degree of heat, restlessness in the night, and violent pains in the belly and loins, are occasioned at this period, there is reason to believe that a general *fulness* exists, in consequence of the stoppage of the accustomed discharge.

When, therefore, these symptoms occur, or when the legs begin to swell, or eruptions to appear in different parts of the body, spare living, with increased exercise, occasional blood-letting, and frequent gentle purgatives, ought to be recommended.

SECTION VIII.

SEXUAL WEAKNESS.

WOMEN are very much liable to a discharge of a slimy mucus, from the passage leading to the womb, which varies considerably in appearance, consistence, and quantity, in different cases.

This complaint is always disagreeable and troublesome, and frequently occasions great weakness, and a train of nervous disorders; as it is also the disease to which women are most peculiarly subject, it must form an important object of attention.

Sexual weakness, or *Whites*, as it is vulgarly called, proceeds either from the vagina or from the same source as the periodical evacuation. In the former case it ought to be considered merely as a local complaint; but in the latter it is very much connected with the general health.

In the internal surface of the vagina, it has already been observed,* there are many mucous glands; these furnish a liquor by which that canal is constantly lubricated. When these glands prepare too great a quantity of mucus, the superfluous proportion is naturally discharged, and constitutes the mildest species of sexual weakness.

In this case, the fluid discharged has a glairy appearance, somewhat like thin starch. It is attended with no pain, and does not affect the health in the smallest degree.

This disease is troublesome only from the disagreeable sensation which it induces: it may be readily removed by proper attention.

The cause of this complaint is an *irritation* or relaxation of the mucous glands of the vagina: hence it is occasioned by the bearing down of the womb, and by every other circumstance which can irritate the vagina, such as polypous tumours, &c. or which can debilitate that organ.

The cure is to be accomplished by removing the irritating cause, and by the use of the cold bath.

When, however, the discharge is of a yellow colour, or is thin and fetid, it certainly is owing to constitutional disease.

Too great a degree of fulness, in consequence of high living, inactivity, or the peculiar disposition to corpulency which some women have at a certain period

* See page 52.

of life, frequently occasions an increased action of the glands in the inside of the womb.

This may be known by the attending symptoms. If there be violent pains in the head, back, and loins, together with flushings in the face, and heat in the palms of the hands, and if the pulse be strong and full, there can be no doubt of the cause.

The discharge under such circumstances can only be removed by repeated blood-letting, spare living, and general evacuations, by means of laxative medicines.

In these cases the use of astringents would be productive of the worst effects.

When a thin discharge of a greenish or dark colour proceeds from the vagina, chiefly a few days before and after menstruation, and disappears during that evacuation, it then proceeds from the same source as it.

When this complaint continues for a considerable time, it gradually weakens the general habit, and in a particular manner affects the stomach. It tends also very materially to impair the functions of the uterine system; and hence women subject to this complaint are always barren as long as it continues.

This species of sexual weakness will yield only to strengthening remedies, and the use of topical astringents.

With these views, the stomach must be emptied once or twice by vomits,* after which the Peruvian bark, either in substance or decoction, with elixir of vitriol, alternated with the use of tincture of steel, may be had recourse to with success.

The cold bath, (in the sea when the season will permit), along with the topical application of astringent liquors, by means of a womb syringe, ought also

* See forms of medicine.

to be employed. The most convenient astringent lotions are, a strong infusion of green tea, port-wine and water, or the strong solution of sugar of lead already mentioned.*

Along with these remedies, light nourishing diet and moderate easy exercise will be found beneficial.

This particular kind of the disease sometimes happens before the complete establishment of the periodical evacuation; in such cases, it ought to be left entirely to nature, unless disagreeable symptoms attend it.

When any discharge from the passage of the womb is accompanied with inflammation, burning heat, difficulty or pain in making water, troublesome sensation of itching, &c. more especially towards the decline of life, women should not lose time in trifling, but should at once apply for proper advice.

SECTION IX.

STERILITY.

IT is a mistaken idea, that nature has intended that all women should be mothers; for some have original imperfections in the uterine system, which cannot be remedied by any operation of art, and which often remain concealed till after death.

Sterility can be obviated only in those cases where it is the consequence of irregular menstruation, of improprieties in the manner of living, of long continued female weakness proceeding from the same cause, or

where it arises from such external imperfections as are capable of being removed by art.

As the proper treatment necessary in cases of sterility from such causes, is an object of great importance, since it must conduce to the re-establishment of the health of the woman, as well as to the advantage of mankind, recourse should always be had at once to the advice of practitioners.

SECTION X.

HYSTERIC AFFECTIONS.

WOMEN, it is well known, are more irritable than men. From this circumstance, they are subject to a disease which appears under very different forms in different persons, called *Hysterics*.

In the regular hysteric fit, the patient is first seized with a pain in the left side, which gradually affects the whole belly; this is sometimes preceded by or accompanied with sickness and vomiting. By degrees a sense of suffocation is felt in the throat, which seems to be occasioned by the sensation of a ball mounting up to it from the stomach.

These symptoms are commonly attended with violent sudden fits of crying and laughing, the transition from the one extreme to the other being rapid and unexpected, and by convulsive motions of the whole body. They are often followed by stupor and faintings, from which the patient gradually recovers, after having for a considerable time sighed deeply.

After the fit, the patient is not conscious of what happened.

This disease occurs most frequently about the time of the periodical evacuation. Women who are robust, healthy, and full, or inactive, and those who feed highly, and are subject to profuse menstruation, are most liable to this complaint. It generally attacks them from the age of fifteen to thirty-five.

The cure of *real* hysteric fits can only be accomplished by regular spare living, a careful attention to the state of the belly, and by the use of those means which have been recommended to promote the periodical evacuation.

The symptoms which immediately constitute this disease may be removed, where violent, by blood-letting and a brisk purgative, along with the warm bath. The first of these remedies must be employed before the others.

If the stomach seem loaded, or if the patient have any tendency to vomit, chamomile tea, with a few drops of hartshorn, or a dose of Ipecacuan, should be exhibited.

Those who have been subject to this disease are often troubled with threatening symptoms of it, especially when exposed to cold, or suddenly affected with any violent emotion of the mind. Bathing the feet in warm water, the horizontal posture, and drinking a little warm white-wine whey or negus, prevent the progress of the disease in many cases.

Women who are of a very delicate irritable constitution, whose feelings are acute, and whose habit is weak, are often attacked with symptoms which resemble some of the hysteric ones.

These symptoms differ from those attending regular hysteric affections, by their being less violent, by their occurring at vague irregular intervals, seemingly unconnected with the periods of menstruation, and by their affecting only women of weak irritable relaxed habits.

The treatment of these disorders must be very different from that of regular hysterics; for the remedies necessary in the former would prove highly improper in the latter.

They require the employment of every means which can strengthen the system, along with variation of scene, and agreeable cheerful company.

The use of opiates in these disorders is more beneficial than in the real hysteric affections: though in both they must be occasionally had recourse to, to palliate troublesome symptoms; yet the habitual use of such remedies must be carefully guarded against. Valerian, camphor, musk, and the other medicines commonly styled nervous, are the suitable remedies for this disease; but they ought never to be prescribed in a spirituous form.

CHAPTER II.

PREGNANCY.

THE particular manner in which Pregnancy takes place has hitherto remained involved in obscurity, notwithstanding the laborious investigations of the most eminent philosophers of all ages.

Although Pregnancy is a state which (with a few exceptions) is natural to all women, it is in general the source of many disagreeable sensations, and often the cause of diseases which might be attended with the worst consequences, if not properly treated.

It is now, however, universally acknowledged, that those women who bear children enjoy usually more certain health, and are much less liable to dangerous diseases, than those who are unmarried or who prove barren.

SECTION I.

CHANGES PRODUCED ON THE WOMB BY IMPREGNATION.

IN consequence of impregnation the womb suffers very considerable changes in Size, Shape, Situation, and Structure.

These are very different in the early and latter months of pregnancy, and therefore require a separate description.

In the early months the size of the womb is not much augmented, for about the fourth month it is not so large as to be felt by applying the hand on the belly.

Its shape is chiefly altered at the bottom, which becomes rounded, and rises considerably above the broad ligaments. Between the fourth and fifth month its shape and size resemble pretty nearly an ordinary sized Florence flask, somewhat flattened.

The situation of the womb during the early months is not materially altered, for it remains within the cavity of the bason till the fourth month, when it begins to ascend. Before that time, from its increased weight, it sinks rather lower than naturally, and hence produces an irritation on the neighbouring parts, which explains some of the complaints during that period.

The structure of the womb in the early months is considerably changed; its *mouth*, from a very short time after impregnation, is closed up with a glairy substance, which prevents any thing from passing out of or into it; and hence no woman can menstruate during pregnancy, as many have alleged.

The substance of the womb at this time becomes spongy at the bottom, and the blood-vessels which enter at that part are gradually enlarged in size, though they are not so large, till after the fifth month, as to be capable of admitting much blood.

After the fifth month the womb increases rapidly in size, and can then be felt plainly by the hand applied externally. Between the eighth and ninth month it is so large as to be twelve or thirteen inches in length, and eight or nine in width at its broadest part.

The shape of the womb, in the latter months, is somewhat oval. It acquires this form, however, by

degrees; for till the sixth month its neck remains nearly as in the unimpregnated state; after that time it gradually becomes enlarged, and at last its former appearance is entirely obliterated.

As the womb is attached to the sides of the pelvis only to the extent of about three inches above its mouth, by far the greatest part of it is fixed to none of the surrounding parts, and is therefore quite unsupported.

The round ligaments seem to be very much stretched in the latter months.

The situation of the womb after the fifth month varies considerably. It ascends by degrees as high as the pit of the stomach, at which it arrives a little after the eighth month; and then it again sinks in such a manner, that immediately before labour comes on, in many cases the belly appears quite lessened, or flat.

The changes on the neck, and on the situation of the womb, have been considered as marks by which the exact period of pregnancy can be ascertained; but as the neck undergoes more rapid changes in some cases than in others, and as the womb rises higher in first than in subsequent pregnancies, and varies also according to the shape of the woman, little dependence can be placed on such circumstances.

When the womb rises as high as the pit of the stomach, it occupies nearly the whole cavity of the belly, and by pushing the intestines behind and to the sides, it compresses them very much, which occasions many complaints at that period.

The structure of the womb in the latter months is very different from what it is in the unimpregnated state. It is of a very lax spongy texture, easily torn; and hence there is the greatest necessity for the most cautious management during labour, otherwise the child, under certain circumstances, may readily be pushed through the substance of the womb into the ca-

vity of the belly, an accident followed by the most alarming consequences.

The *blood-vessels* of the womb, after the fifth month, increase very considerably in size, especially at one part; and therefore a discharge of blood from the womb after that period is always extremely dangerous, as the vessels are then capable of pouring out a very great quantity.

SECTION II.

CONTENTS OF THE WOMB DURING PREGNANCY.

THE child would be exposed to many hazards, in consequence of the various exertions which women must necessarily make during pregnancy, were it placed in the womb without any defence. Nature has, however, provided a most beautiful apparatus for protecting it from such dangers.

The child, when in the womb, is included within a bag formed by three membranous layers, and is surrounded by a watery fluid, which prevents it from being affected by external injuries.

The outer of these layers, although pretty thick, is easily lacerated; it is attached to the whole internal surface of the womb, and receives blood from that organ.

The other two layers seem to belong exclusively to the child, as they are found to envelope it in cases where it is not contained within the womb. They are transparent and strong, and have no visible blood-vessels.

The child is connected with the mother by a thick

spongy mass, which differs in size and shape in different cases, called the placenta, cake, or after-birth.

The cake lies between the outer and the two inner layers of the bag in which the child is contained: its surface next the mother is covered with the former, and its other surface with the latter.

The external surface of the cake is very spongy, and receives blood from the arteries of the womb, which penetrate into its substance. The blood is returned to the womb by large veins.

The internal surface of the cake is quite distinct from the external; it is composed of a very great number of blood-vessels, which divide into exceedingly minute branches, interwoven with each other, and with cellular substance. These vessels receive blood from and return it back to the child.

The cake, therefore, consists of two parts, which, though intimately connected with each other, have a distinct system of blood-vessels; for the one belongs exclusively to the mother, and the other to the child; and no blood has ever been proved to pass directly from the one to the other.

The child is connected to the cake by a cord called the umbilical cord, or navel-string; this consists of two arteries, a vein, and a quantity of a jelly-like substance, covered by skin, the external part of which seems to be formed by the two internal layers of the bag containing the child.

The Umbilical Cord varies in length and thickness in different cases. One of its extremities is attached to the cake, the other to the child. The former of these is fixed at no particular part of the after-birth in every case, for it is sometimes connected to the middle, sometimes to the edge, but more frequently to some part between them. The latter is generally inserted into the middle of the belly of the child.

It was formerly observed, that each branch into which

the *Great Artery* is divided at the lower bone of the spine, is subdivided into two ; the internal of these in the child before birth being extended, run up along each side of the urinary bladder, pass out at the centre of belly, and form the *Arteries* of the umbilical cord. These arteries are divided into a very great number of minute branches, and terminate, as usual, in veins, which uniting, form one large vessel, the vein in the umbilical cord.

This vein returns the blood to the child, and conveys it in the most expeditious manner to the heart by peculiar canals, which are shut up soon after birth.

In grown people, it was formerly remarked, all the blood returned from every part of the body is distributed over the substance of the lungs, before it be again circulated through the system. This takes place in children immediately after birth : before that time, however, a small portion of the blood only is sent to the lungs, but the whole is distributed over the cake.

From this circumstance, and from the child being very soon killed when the cord is so much compressed that the blood cannot pass through it, the cake, it is probable, serves the same purpose to the child before birth which the lungs do afterwards.

The substance by which the child is connected to the mother is not attached to any certain particular part of the womb ; for it is sometimes fixed to the neck or orifice, but fortunately more often to the bottom, or near it.

The *water* contained within the layers which surround the child is somewhat heavier than common water. It has a saltish taste, does not coagulate, like the white of an egg, but seems to approach in its properties to the nature of urine. This fluid is seldom, except in the early months of pregnancy, quite pure, for it is liable to become polluted by impurities from the child.

This water, therefore, cannot, from its nature, be in-

tended for the nourishment of the infant ; a fact which is confirmed by the circumstance of its being in much greater quantity in proportion to the size of the child, in the early than in the latter months.

This fluid serves several valuable purposes. It defends the child from external injuries ; it affords it an equable temperature, not liable to the extremes of heat and cold, to which the body of the woman must necessarily be subject ; and it has other important uses, to be afterwards explained.

The position of the child in the womb merits attention, as it explains the causes of some of the dangers to which women are sometimes exposed during parturition.

The child, during the early months of pregnancy, floats loosely in the fluid by which it is surrounded ; but after it has increased to such a size as to occupy nearly the whole cavity in which it is contained, it is folded into an oval figure, so that it takes up almost the least possible space.

One or other extremity of this oval figure which the child forms is commonly placed at the mouth of the womb, and in by far the greatest number of cases it is that made by the head ; sometimes, however, the other extremity is in that situation. It happens also in very rare cases, that the extremities are placed towards the sides of the womb ; a circumstance which must render delivery difficult and hazardous.

The contents of the womb increase in size at first very slowly, and afterwards rapidly ; for after the first eight or nine weeks the bag which contains the child is seldom larger than a hen's egg ; but from that time it becomes perceptibly enlarged every week or two.

As children at the full time differ in size and weight in different cases, it is probable that the same degrees of difference take place in the early months : therefore no particular proportions can be ascertained respecting

the dimensions of children at the various periods of pregnancy.

A child born at the full time generally weighs from six to ten pounds, which latter it seldom exceeds ; and every child that does not weigh more than five pounds, may be considered to be premature.

When more than one child is contained within the womb, each is included in its own proper membranes, and is attached to the mother by a cake peculiar to itself. In many cases, however, the cakes are contiguous to, or entirely blended with each other : but the navel-string, which belongs to each child, points out the distinction between them, and proves that a single cake cannot serve two or more children. In some rare cases, the blood-vessels belonging to the child of each cake communicate with each other : hence a particular precaution in the management of the delivery of twins becomes necessary.

SECTION III.

SIGNS OF PREGNANCY.

THE Signs of Pregnancy arise from the changes produced on the womb by impregnation, and the effect which these communicate to the general system ; for the womb has a very extensive influence over many parts of the body.

They may be divided into those of the early, and those of the latter months.

During the first fourteen or fifteen weeks, the Signs of Pregnancy are very ambiguous ; for as they proceed from the influence of the womb on other parts, they

may be occasioned by every circumstance which can alter the natural state of that organ.

The first circumstance that renders pregnancy probable, is the suppression of the periodical evacuation, which is generally accompanied by fulness in the breasts, headach, flushings in the face, and heat in the palms.

These symptoms are commonly the consequences of suppression, and therefore are to be regarded as signs of pregnancy in so far only as they depend on it.

As, however, suppression of the periodical evacuation often happens from accidental exposure to cold, or from the change of life in consequence of marriage, it can never be considered as an infallible sign.

The belly, some weeks after pregnancy, becomes flat, from the womb sinking, as formerly explained; and hence drawing down the intestines along with it. But this cannot be looked upon as a certain sign of pregnancy, because an enlargement of the womb from any other cause will produce the same effect.

Many women, soon after they are pregnant, become very much altered in their looks, and have peculiarly irritable feelings, inducing a disposition of mind that renders their temper easily ruffled, and incites an irresistible propensity to actions of which on other occasions they would be ashamed.

In such cases the features acquire a peculiar sharpness, the eyes appear larger, and the mouth wider than usual, and the woman has a particular appearance, which cannot be described, but with which women are well acquainted.

These *Breeding* symptoms, as they are called, originate from the irritation produced on the womb by impregnation; and as they may proceed from any other circumstance which can irritate that organ, they cannot be depended on when the woman is not young,

or where there is not a continued suppression for at least three periods.

The irritations on the parts contiguous to the womb are equally ambiguous, and therefore the signs of pregnancy in the first four months are always to be considered as doubtful, unless every one enumerated be distinctly and unequivocally present.

From the fourth month, the signs of pregnancy are less ambiguous, especially after the womb has ascended into the cavity of the belly.

In general about the fourth month, or a short time after, the child becomes so much enlarged, that its motions begin to be felt by the mother; and hence a sign is furnished at that period called *Quickening*. Women very improperly consider this sign as the most unequivocal proof of pregnancy; for though when it occurs about the period described, preceded by the symptoms formerly enumerated, it may be looked upon as a sure indication that the woman is with child; yet when there is an irregularity, either in the preceding symptoms or in its occurrence, the situation of the woman must be doubtful.

This fact may be easily understood; for as the sensation of the motion of the child cannot be explained, or accurately described, women may readily mistake other sensations for that of quickening. I have often known wind pent up in the bowels, and the natural pulsation of the great arteries, of which people are conscious only in certain states of the body, mistaken for this feeling.

After the fourth month, the womb rises gradually from the cavity of the bason, enlarges the belly and pushes out the navel; hence the *Protrusion* of the *Navel* has been considered one of the most certain signs of pregnancy in the latter months. Every circumstance, however, which increases the bulk of the belly,

occasions this symptom : and therefore it cannot be trusted to unless other signs concur.

The progressive increase of the belly, along with suppression, (after having been formerly regular), and the consequent symptoms, together with the sensation of quickening at the proper period, afford the only true marks of pregnancy.

These signs, however, are not to be entirely depended on ; for the natural desire every woman has to be a mother, will induce her to conceal, even from herself, every symptom that may render her situation doubtful, and to magnify every circumstance which can tend to prove that she is pregnant.

The situation of practitioners in such cases must be very embarrassing and distressing. It ought, however, to be adopted as a general rule, that where any irregular symptoms give room for suspicion, if strong proofs are offered in support of the alleged pregnancy, the woman should for a certain period be treated as if pregnant, in order to avoid those unfortunate consequences which have too often occurred from an opposite line of conduct.

Beside quickening and increase of bulk of the belly, another symptom appears in the latter months, which, when preceded by the ordinary signs, renders pregnancy certain beyond a doubt. It is the presence of *milk* in the *breasts*. When, however, there is any irregularity in the preceding symptoms, this sign is no longer to be considered of any consequence.

As every woman must naturally wish to distinguish pregnancy from disease, the disorders which resemble it form the subject of the next section. It is, however, necessary to remark, that wherever any circumstance occurs which affords the most distant reason to doubt the case, recourse ought to be had to the advice of an experienced practitioner, and every symptom should be unreservedly described to him.

SECTION IV.

CIRCUMSTANCES WHICH INDUCE SYMPTOMS RESEMBLING THOSE OF PREGNANCY.

EVERY woman would certainly wish to avoid the sneers to which those are generally exposed who improperly imagine themselves with child. It must be an important object, therefore, to exhibit a view of the circumstances which occasion symptoms resembling those of pregnancy.

These vary much in their nature ; for some are occasioned by morbid effects on the uterine system, which are sometimes the consequence of pregnancy ; some originate from diseases affecting the womb, and others occur merely from the natural change at the decline of life.

It is now universally known, that after impregnation, the child, in its original minute state, passes from one or other of the *Ovaria*, along the corresponding Fallopian Tube, into the womb. Sometimes, however, the child remains in the ovarium or tube, or falls into the belly, and nevertheless is nourished, and increases in size for a certain time. These cases are named *Extra-Uterine Conceptions*.

For the first four or five months, in such cases, the symptoms of breeding appear regularly. After that time, however, the breasts lose their enlarged appearance, and become flaccid ; the belly no longer increases in size, and a weighty and cold sensation is felt in one side.

The usual term of pregnancy at last elapses without any symptom of labour.

Cases of extra-uterine conceptions have terminated

variously. In some irritable constitutions, the inflammation which must unavoidably be produced on the neighbouring parts, from the unusual presence of a large body, is so violent as to occasion death; but in other cases, suppuration is brought on, which furnishes an outlet for the confined conception; and in some rare instances, the extra-uterine child has remained, without exciting very disagreeable complaints, for many years.

Proper advice, in every case of this kind, should be had recourse to as early as possible, as it will be the means of preventing many of those dangerous symptoms which often are the consequence of inattention.

It is to be recollected, however, that cases of extra-uterine conception are so very uncommon, that for forty years not above six have occurred in this city.

Every disease which, affecting the womb, tends to increase the size of that organ, or any of its appendages, produces symptoms nearly resembling, for the first three or four months, those of pregnancy. Such are collections of blood, or hydatids, or tumours in the womb, and dropsy of the ovaria.

These may be distinguished from pregnancy by the symptoms peculiar to themselves, already described, and are to be treated in the manner formerly advised.

Another circumstance, by increasing the size of the womb, may cause symptoms like those of breeding, the presence of what is called a *Mole* in the womb.

Women were formerly much imposed on by interested practitioners respecting the nature of moles. The most dreadful apprehensions were excited in consequence of these being alleged to be occasioned by faults in the general habit, which it required the most vigorous employment of the powers of medicine to counteract.

Moles are however merely blighted conceptions,

which, from retention in the womb, lose their organized form.

They are generally expelled in the same manner as miscarriages, and are preceded by the same symptoms, and hence require nearly a similar treatment.

Women who are married at a late period, anxious to have a family, naturally mistake the circumstances which appear at the decline of life for the signs of pregnancy. Such cases are highly troublesome to practitioners; for the patient, with great care, acquires the most accurate description of the breeding symptoms, and with wonderful facility imagines that she feels every one of them.

The suppression of the accustomed discharge first furnishes hopes for what is anxiously wished. Her supposed situation affords an excuse for indulgence in inactive life, and for the gratification of every appetite: of course the natural disposition to fulness, which strong healthy women have at that time, is so much increased, that the belly becomes enlarged, while *idea* had formerly suggested the sensation of quickening.

In many such cases a fluid, resembling milk, is found in the breasts, and this never fails to confirm the delusions of the patient. It is probable, that such a fluid can be produced by mechanical pressure on the breasts; and perhaps some other circumstances may also contribute to its formation, that have not yet been fully explained.

SECTION V.

DISEASES INCIDENT TO THE EARLY MONTHS OF PREGNANCY.

IN consequence of the change produced by Pregnancy on the womb, many disagreeable complaints occur in the early months, which, though not immediately dangerous, may, if neglected, occasion the loss of the child, and lay the foundation for a train of disorders, that may materially impair the health of the patient.

The principal diseases incident to the early months are, sickness and vomiting, heartburn, disordered state of the bowels, unnatural craving, swelling and pain of the breasts, fainting and nervous fits, and preternatural change of position of the womb.

Sickness and vomiting.—The most healthy women are as much subject to sickness and vomiting during the early months of pregnancy as those who are weak or delicate. The symptoms require, however, very different treatment in these two cases.

When sickness or vomiting is attended with violent strainings, bleeding at the nose, pain or giddiness in the head, flushing in the face, increased heat in the palms of the hands, with other symptoms of fulness and disturbed rest, blood-letting, with an open belly, and a spare diet, afford the greatest relief.

When, however, the vomiting occurs in weak delicate women, and when it is attended with great weakness and languor, with a disposition to sweat on using moderate exercise, or during the night, a very opposite plan of management must be pursued.

In such cases, bleeding should be carefully avoided,

and a light nutritious diet ought to be recommended. The moderate use of wine is also necessary.

Small doses of any light stomachic bitter, as Columbo, Peruvian bark, or the bitters, the preparation of which is described in the forms of medicine at the end of this work, should be taken every day during the early months by those who are delicate.

The powers of digestion being impaired, the stomach becomes readily loaded with crude indigested food; and hence sickness and vomiting are occasioned. Women in the early months seem to have a natural tendency to this cause of sickness; this may probably be owing both to the particular change in the system, and to the inactive sedentary life in which many think themselves obliged to indulge at that time.

The stomach may be known to be disordered, if, along with violent retchings, the tongue be foul, and there be an ill taste in the mouth, attended with fetid breath or belchings.

When such symptoms accompany the sickness or vomiting, the stomach should be emptied once or twice a-week, by means of fifteen or eighteen grains of Ipecacuan, which are found to affect the body much less than natural straining in vomiting, and often produce the happiest effects.

In many cases however, the breeding sickness continues, notwithstanding every remedy, till the womb rises into the cavity of the belly, and the motion of the child be distinctly perceived, when in general it ceases.

When the sickness is excessive, and the stomach at the same time is not disordered, opiates often afford temporary relief.

The plaster with opium, described in the forms of medicine, applied to the pit of the stomach, has often moderated the sickness, when every other means had been tried in vain. Many practitioners recommend

plasters composed of various stimulating and heating materials, to be applied in the same manner; but as they are frequently productive of very disagreeable complaints, in consequence of the violent irritation which they induce, if they ought not to be entirely exploded, at least they should be employed with much caution, and only by the advice of a practitioner.

Heartburn.—The uneasy sensation produced by heartburn, though commonly confined to the early months, sometimes accompanies every stage of pregnancy.

This complaint often originates from less degrees of those causes which occasion sickness and vomiting; hence, in different cases, it requires a variety of treatment.

When the heartburn is attended with a constant desire to hawk up phlegm, the stomach should be emptied by a vomit, the state of the belly attended to, and small doses of the Peruvian bark and vitriolic acid ought to be taken once or twice a-day.

If this complaint be accompanied with a sour taste in the mouth, and acid eructations, lime-water, prepared chalk mixed with water, or magnesia, afford the best palliatives. The belly should be kept gently open by means of magnesia and rhubarb. Gross food of every kind ought to be avoided, and the stomach should never be overloaded.

When, however, the uneasy burning pain produced by this disease is not attended with an inclination to hawk up phlegm nor acid eructations, a little fine Gum-Arabic, or a spoonful of a fluid prepared by mixing the white of an egg with a little sugar and water, so as to make it of the consistence of thin syrup, taken occasionally, will in many cases moderate the pain. If the patient, with such symptoms, have any marks of fullness, she should lose blood.

Disordered state of the bowels.—The natural func-

tions of the stomach are very liable to become disordered in the early months of pregnancy; hence looseness of the belly is a common complaint at that time.

This disorder proceeds from various causes; and therefore it requires, in different cases, different modes of treatment.

When looseness of the belly is attended with symptoms of disordered stomach, it can only be remedied by a vomit and gentle doses of magnesia and rhubarb, while at the same time every irregularity in diet must be carefully avoided. When there is no sickness, two or three doses of magnesia and rhubarb will be sufficient.

In these cases the use of opiates, or any restraining medicine, with a view to remove the complaint, must prove highly injurious; for they tend to increase the disordered state of the stomach and bowels.

If, however, looseness of the belly proceeds from the irritation produced by the increasing bulk of the womb on the straight gut, to which it has been observed it is contiguous, small doses of opiates will then prove beneficial. This cause may be suspected if the looseness be not accompanied with any symptoms of disordered stomach. In this case, when the straining at stool is violent or very frequent, occasional *Lavemens* made of thin starch, with fifty or sixty drops of Laudanum may be had recourse to with great safety.

Unnatural cravings.—Pregnant women have often unnatural cravings, or what are termed longings, which, however absurd they may appear on some occasions, are frequently entirely involuntary. Where they are confined to articles relating to diet, this may always be considered to be the case.

These cravings seem to proceed from the state of the stomach, for they often occur in men whose stomachs are disordered. The peculiarly irritable state of the mind during pregnancy, already taken notice of,

probably increases the violence of cravings, that might, under other circumstances, be only felt as transient desires.

Longings should, unless where the indulgence might be followed by disagreeable consequences, be in general gratified; for when the appetite is feeble, and the powers of digestion impaired, the stomach often rejects particular substances, and retains others, which, though seemingly whimsical, are suggested by a kind of natural craving.

Although, therefore, unlimited compliance with every desire might be improper, yet the wished-for substance, where it can be easily procured, should be allowed, as it may perhaps agree better with the stomach than any other substance, and as disappointment in the irritable state of early pregnancy might induce passions of the mind that would be productive of many disagreeable circumstances.

Women often claim indulgence in their longings, by an argument well calculated to insure success, the dangers which might happen to the child from their cravings being neglected.

Although at present the idea, of the imagination of the mother having the power to produce marks on the body of the child, does not so universally prevail as it did formerly; yet many people, judicious and well informed in other respects, still seem to favour this opinion.

Many cases might be adduced, where children were born with marks on the skin (vulgarly called *flesh-marks*) where the mother had never been conscious of any longings; and many instances might also be cited, where women have been refused the indulgence of their longings, without any effect having been produced on the child, although the woman's imagination had continued to dwell on the subject for several months.

Women do not possess the power of altering the structure of any part of their own body, with which however they have an immediate relation. It cannot therefore be thought probable, that Nature has made them capable of altering, by any passion of the mind, the structure of a body, to which, it has been remarked, their fluids are not even directly transmitted.

Flesh-marks originate from accidental injuries of the skin when the child remains in the womb, and may be occasioned by its particular situation, and a variety of other circumstances.

Passions of the mind which induce violent agitations of the body, during the early months, when the child is very delicate and tender, may not only cause flesh-marks, but also such a derangement of its organs as to render it *monstrous*; hence it is only under such circumstances that longings can affect the child.

Swelling and Pain in the Breasts.—From the remarkable connection between the womb and the breasts, already taken notice of, these in the early months of pregnancy often become swelled, and hence occasion pain. These symptoms are most distressing to women who are in great good health, and of a full habit of body.

In general these complaints require only that the breasts be kept quite loose, and covered with soft flannel or fur. Stays, therefore, if they are worn, should be carefully prevented from pressing on these parts.

When the swelling and pain render the woman very uneasy, a little fine warm olive-oil should be rubbed gently on the breasts evening and morning, and afterwards the flannel must be applied. The belly should be kept open, and if there be marks of general fullness, blood ought to be drawn from the arm.

Suppuration of the breasts during the latter months of pregnancy is always a dangerous complaint, and of course requires the most serious attention.

Hysteric and Fainting Fits.—Many women are subject to these complaints during the early months, and especially about the period of quickening. They are merely temporary symptoms ; and though in some cases they are attended with alarming appearances, in general they are slight, and of short duration.

The treatment of these complaints must be varied according to the state of the patient's body. If the woman have, along with the faintings, &c. any symptoms of fulness, blood-letting, spare diet, and an open belly, afford the best means of relief. But, as is most frequently the case, if the woman be of a weak irritable habit, easily affected by surprise, or subject to passions of the mind from external accidents in the unimpregnated state, nervous and fainting fits are the natural consequence of that peculiarly irritable disposition during the early months of pregnancy, which has already been described.

In such cases, opiates can alone perhaps be depended on to remove the immediate complaints ; and variation of scene, cheerful company, moderate easy exercise in the open air, together with the use of any light bitter, will probably prevent their recurrence, or moderate their violence.

Officious attendants often recommend cordial drinks in these cases. But all liquors of that nature should be prohibited, unless on the most urgent occasions ; and when they are allowed, they should be confined to Claret or Port wine and water.

The temporary relief from nervous complaints that strong heating liquors afford, readily render their frequent use habitual, and lay the foundation for a practice which, in the female sex, is in a particular manner disgusting and dangerous ; and therefore, in general, such indulgences should be steadily refused.

Preternatural Change of Position of the Womb.—The position of the womb is apt to become preterna-

turally changed a little before it rises out of the cavity of the bason, which happens some time between the third and the fourth month, as formerly mentioned. As this circumstance constitutes a disease,* which, if not early attended to, is productive of very great danger, a knowledge of its symptoms and causes must be an interesting and important object to every woman.

The first symptoms of the disease are, retention of urine, with a sense of uneasy weight, occasioning pain and bearing down, at the back part of the bason, attended with frequent unnecessary calls to stool. By degrees the pain becomes so violent as to induce strainings like those which occur during labour.

The pain of the distended bladder, after a short time, becomes intolerable; the posterior part of the vagina is protruded in form of a tumour; and the calls to stool are very urgent, but are only productive of fatiguing fruitless efforts.

At last the bladder is violently inflamed; hence fever, delirium, and convulsions, terminate the sufferings of the unfortunate patient.

All these complaints are occasioned by the womb being turned out of its natural situation; for in these cases its bottom is pushed back between the upper part of the vagina, and the straight gut, and its mouth is drawn upwards to the superior edge of the share-bones: hence the uneasy sensation in the back part of the bason, the bearing down pain, with the protrusion of the vagina, are explained.

When the womb continues in this situation, the common discharges must be necessarily stopt; and consequently, from the distention of the bladder, and the accumulation of the contents of the intestines, obstacles are occasioned which oppose the return of the womb to its proper situation.

* It is called, in medical language the *Retroverted Womb*.

This particular complaint can be distinguished from every other by the symptoms already enumerated, and by a bulky body occupying nearly the whole cavity of the bason being readily felt between the vagina and straight gut.

Violent exercise, or bearing down from exertions in consequence of laughing, crying, straining from retching, &c. when the bladder is full, at that time when the womb begins to rise out of the bason, are probably the causes of the preternatural change of position of that organ.

The event of this disease, unless proper advice has been early had recourse to, is always uncertain.

When the urine and contents of the intestines have been retained for a considerable time, along with bearing-down pain and protrusion of the vagina, the woman's life is in very great danger.

The cure in these cases depends on the womb being replaced in its natural situation, and being kept there till its increased bulk prevents the possibility of its again sinking down.

This cannot be accomplished unless the urine and contents of the intestines are previously removed; and then, if the disease has not continued for several days, the reduction can be easily effected by gentle means.

It requires often the most dexterous management to draw off the water in such cases, from the altered position of the passage to the bladder; and therefore, as the life of the woman must depend much on that operation, an experienced and skilful practitioner ought always to be called in.

Blood-letting and opiates are in some cases necessary.

The recurrence of the complaint can only be prevented by confinement to the horizontal posture, till the increased bulk of the womb makes it rise above the brim of the bason.

Women who, from particular circumstances, do not obey the calls of nature when they occur, are subject, about the fifteenth or sixteenth week of pregnancy, to a slight degree of this disease; for the bladder being connected with the forepart of the womb, when much distended, will readily push that organ backwards, as it more easily yields to afford room for the increased bulk of the bladder than the coverings of the forepart of the belly.

Although, in such cases, a disposition towards the preternatural change in the situation of the womb, already described, takes place; if the bladder be emptied by proper means, no disagreeable consequence will follow, provided the woman be kept quiet, and in the horizontal posture.

Within these few years, several eminent authors and practitioners, from having seen these cases, have adopted an idea respecting the nature and cure of the *Præternatural Change of Position of the Womb*, which inculcates a very dangerous practice.

They have alleged, that as the position of the womb can only be preternaturally altered by suppression of urine, if that can be removed, no danger will ensue; and that there is no necessity for attempting to reduce the displaced organ to its natural situation, because the gradual increase of its bulk will readily accomplish it.

Such opinions, it is evident, are founded on those cases where there is only a trifling change of position in the womb, from the distention of the bladder, as already explained.

If such practitioners were called to visit a patient who, along with suppression of urine, &c. had violent bearing-down pains, with protrusion of the vagina, and if on examination a large tumour were found between the vagina and straight gut, were they to content themselves with drawing off the water, and en-

deavouring to procure a discharge of the contents of the intestines, their patient would be probably soon lost.

Were minute investigations consistent with the design of this work, it could be easily proved, from the writings of such practitioners, that they have not drawn a proper distinction between the *tendency* to, and real *existence* of this disease; for they have not even hinted at the symptoms which I have described to be characteristic marks of the complaint.

SECTION VI.

DISEASES INCIDENT TO WOMEN DURING THE LATTER MONTHS OF PREGNANCY.

FROM the situation of the womb during the latter months of pregnancy, it cannot appear surprising that women are subject to many complaints at that period. The ordinary disorders which occur in advanced pregnancy are, costiveness, piles, swellings in the legs, thighs, and lower part of the belly, pains in the back and loins, cough and breathlessness, cramps, cholick pains, and retention, difficulty, or incontinence of urine.

Costiveness.—Many women disregard this complaint, as it appears trifling, and in their opinion cannot be productive of much danger. The most unfortunate consequences, however, have often been occasioned by neglected costiveness.

The pressure of the womb on the contents of the belly must have a considerable effect in producing this disease; but that, perhaps, is not the only cause; for

it is probable, that during the latter months of pregnancy, a larger proportion of blood than usual is prepared from the same quantity of food, and therefore the contents of the intestines are more coarse and solid.

Women should never allow more than one day to pass without having a motion: They may keep themselves regular in this respect by the use of a considerable proportion of vegetables in their diet, and by taking occasionally a dose of any of the laxatives mentioned in the forms of medicine.

When women have unfortunately been constipated for several days, they ought at once to apply to a practitioner, as they might otherwise be exposed to much hazard. If, in that situation, they take any ordinary laxative medicine, they increase the danger of the disease; for the coarse hard solid contents of the intestines would either be expelled with great pain and much difficulty, or might be retained, while the intestines would be violently irritated.

In these cases, therefore, repeated emollient *Lave-mens* should be administered previous to the use of any laxative medicine.

Piles.—Small livid tumours at the bottom of the straight gut, occasioning considerable pain, are called *Piles*: they are the common attendants of costiveness, though it is probable that some other circumstances contribute to induce the disease during the latter months of pregnancy.

The piles, when attended with no discharge, are named *blind*; and *bleeding*, when blood is poured out from them. They are divided into external and internal, from their particular situation; for when the livid tumours are situated about the verge of the gut, they obtain the former name, and the latter when they do not appear externally.

The external piles can be very readily distinguish-

ed; but it requires considerable judgment to discover the existence of internal ones. When, however, violent pain is felt at the lower part of the straight gut on going to stool, or on walking, and at no other time, there can be little doubt of the nature of the disease.

The blind piles are always most painful; the bleeding ones never prove troublesome, unless they are attended with such a discharge as to weaken the body.

Piles, during pregnancy, cannot be completely cured. The painful symptoms, however, can be moderated. For this purpose, spare living, occasional blood-letting, and keeping an open belly, are chiefly to be depended on.

When the swelling from piles is considerable, the application of any astringent substance, such as an ointment prepared of two parts of Goulard's cerate, and one of powdered galls, will be found useful.

If, along with great swelling, there be violent throbbing pain, attended with feverish symptoms, &c. leeches should be applied to the part, and afterwards fomentations to encourage the bleeding. Sitting over the steams of warm water has been recommended in such cases; but it may be productive of very bad effects, and should not therefore be advised.

The bleeding piles require no particular management, except attention to the state of the belly, unless the discharge from them be profuse, which it seldom is during pregnancy. At that period it may generally, perhaps, be considered as a critical evacuation.

The old remedy of sulphur, mixed with an equal proportion of cream of tartar, has been found very useful in every case of piles. The good effects of this medicine are not to be attributed to any specific quality, but merely to its acting as a gentle laxative.

The principal inconvenience arising from this complaint is, that the patient cannot take that exercise which her situation in other respects seems to require;

for the piles are always much relieved by rest in the horizontal posture.

Swellings in the Legs, Thighs, and lower part of the Belly,—at first subside in the morning, and occur only towards night, but in many cases at last continue constantly with little variation.

These swellings, when the general health is not impaired, are attended with no danger, and are only troublesome when they occur in a violent degree, which they seldom do except in first pregnancies, or where the increase of bulk of the womb is very considerable, as they disappear soon after delivery, and are therefore to be considered as temporary evils only.

Where there are no symptoms of great fulness, the treatment of swellings of the legs, thighs, &c. during the latter months of pregnancy, must consist of attempts to palliate the distressing symptoms; which may be accomplished by moderate easy exercise, rubbing the swelled parts gently evening and morning with a flesh-brush or with soft flannel, keeping the belly open, and using frequently the horizontal posture.

When, however, along with the swellings, there are evident signs of general fulness of the body, blood-letting, and a spare diet, can alone prevent the dangerous effects which might be the consequence of such a state, either during labour or after delivery.

Pains in the Back, Belly, and Loins,—are very common complaints in the last months of pregnancy.

They proceed from a variety of causes, as the change of situation of the womb, its pressure on the neighbouring parts, &c. and hence they require a variety of treatment suited to the circumstances of the case.

When these pains are slight, change of posture, and attention to diet and to the state of the belly, are

alone requisite; but where they are very violent, recourse ought to be had to the advice of a practitioner, as small bleedings, opiates, &c. are often necessary.

Cough and Breathlessness.—It was formerly remarked, that the Belly is divided from the chest by a fleshy partition, which is capable of increasing or diminishing the cavity of either. When the womb rises very high, it presses on this partition, and hence a proper space is not allowed for the free expansion of the lungs. From this circumstance breathlessness is occasioned; and as the blood in such cases cannot pass freely through the lungs, an irritation is produced, which excites the cough.

These complaints cannot be removed till the size of the womb be diminished, and therefore no permanent relief is to be expected till after delivery.

When, however, they prove very troublesome, occasional blood-letting, an open belly, and a proper posture when in bed, (*viz.* half sitting and half lying), afford the best means of relief.

Blisters, as some have recommended, can only be productive of temporary good effects; and as they must be always attended with considerable pain, and may be the source of many disagreeable sensations, they ought seldom to be employed.

Cramps.—Women near the end of pregnancy are subject to cramps in the legs, thighs, &c. which occur most frequently when lying in bed. They are occasioned by the pressure of the womb; and therefore, like the complaints depending on the same cause, they do not entirely cease till after delivery.

When the disagreeable sensation arising from cramps is very painful, rubbing with dry flannel or a flesh-brush, or the application of Anodyne or Opodeldoc balsam, or *Æther*, to the affected parts, are the best modes of procuring relief. Opiates, where the belly is loose, may also be had recourse to occasion-

ally. In slight cramps, change of posture affords almost immediate relief.

Cholic Pains.—Towards the latter end of pregnancy, cholic pains are often so severe as to threaten to induce, or even to resemble throes of labour. They proceed from several causes, such as, disordered bowels, pressure of the womb, irregularities in the diet, &c. If cholic pains are not preceded by, nor attended with costiveness, they may be easily remedied by opiates, and a proper regulation of diet.

But if, along with these pains, the woman is costive, or has lately been so, a practitioner should be at once consulted, otherwise, by improper treatment, or from the circumstances of the complaint not being accurately discovered, the greatest danger may be apprehended; for sometimes, in such cases, there is an appearance of the complaint quite opposite to costiveness, which originates merely from the drinks that are taken being tinged with the contents of the intestines in their passage through these organs.

This appearance of looseness, when in fact obstinate costiveness exists, has often deceived the attendants, as well as the patients, and ought therefore to be carefully distinguished.

Retention, Difficulty, or Incontinence of Urine.—These complaints generally trouble women near the term of delivery. As they proceed from the pressure of the womb, they cannot be expected to be removed till the womb be emptied of its contents.

Retention of urine is always to be considered as a complaint which may be productive of the worst consequences, if neglected; for besides laying the foundation for future disorders, if labour should come on during it, the bladder might be irreparably injured. Recourse should be had therefore, in all such cases, to the assistance of a practitioner. Difficulty in mak-

ing water may be often removed by change of posture, which should be carefully attended to.

Incontinence of urine is a most disagreeable complaint, as it keeps the patient always in a most uncomfortable state. It can only be moderated by frequent horizontal posture; and its bad effects may be prevented by the most scrupulous attention to cleanliness, and the use of a thick compress of linen, or a proper sponge.

SECTION VII.

CONVULSIONS DURING PREGNANCY.

WHEN convulsions occur during pregnancy, the life of the patient is always to be considered in the most imminent danger.

These alarming and frightful fits are commonly preceded by violent pains in the head or stomach, and dimness or loss of sight, together with great oppression about the breast.

Hysteric fits have in some cases been mistaken for convulsions; but they may always be distinguished by this circumstance, that in the latter there is a discharge of a frothy fluid from the mouth, which never appears in the former.

When such dangerous complaints occur, a practitioner should be immediately called in, as the patient's life must generally depend on proper treatment.

It would be inconsistent with the nature of this work to point out the various remedies necessary in convulsions; but by enumerating the ordinary causes of that

dreadful disease, such cautions may be suggested as may perhaps save some women from dangers to which they might otherwise be exposed.

Convulsions only occur in those habits which are much exhausted from profuse evacuations, or which are supplied with a larger proportion of blood than usual.

It is in the latter of these habits that convulsions during pregnancy most ordinarily take place.

It has already been observed, that a large quantity of blood is necessary in the pregnant state, especially in the latter months; but if women at that time indulge in a very full diet, it is more than probable that a greater proportion than what the nourishment of the child requires is prepared.

In such cases, women are readily affected with convulsions, if exposed to any sudden violent agitation of the mind, as fright, anger, &c.

Where women are thus liable to the disease, very slight irritations on any of the acutely sensible organs will occasion it, such as over-distention of the bladder, or the long continued pressure of the bulky womb on any particular delicate part.

The treatment of convulsions during pregnancy must depend on a variety of circumstances; and therefore such cases, as I have already remarked, ought always to be trusted to an experienced practitioner.

Where proper assistance cannot be immediately procured, blood-letting, (unless the patient be very much exhausted from previous weakening complaints), and exposure to a free circulation of air, are the best means for affording temporary relief, and should not be neglected, as by retarding the progress of the disease the patient's life may be saved. The contents of the bowels also should be cleared out by proper *Lavemens*. Previous to these means, a cork tied up in a piece of linen should be insinuated be-

tween the jaws, in order to defend the tongue from the injuries to which it is exposed during the fit.

Opiates ought never to be employed, as they generally induce or accelerate fatal events. Emetics also are now no longer prescribed in such cases.

SECTION VIII.

DISCHARGE OF BLOOD FROM THE WOMB DURING PREGNANCY.

REASONS have been already adduced to prove, that in the natural state of pregnancy no discharge of blood can take place; hence the idea that women are sometimes *regular* during the early months is erroneous. Every appearance of blood, therefore, in the pregnant state, ought to be considered as a certain indication that something uncommon has happened.

The discharge may either proceed from the passage to the womb, or from that organ itself. In the former case no bad effects can be dreaded, but in the latter one the most disagreeable consequences may ensue.

When a little blood comes away after walking or standing for a considerable time, attended with a trifling pain at the lower part of the belly without any symptoms of fever or of increased action of the blood-vessels, and without any accident having occasioned violent agitation of the body, it may be supposed to proceed from the passage to the womb, and may easily be remedied by confinement for a short time to the horizontal posture, and afterwards avoiding much walking or long continued erect position of the body.

When, however, the appearance of blood is preceded by or accompanied with flushings of the face and heat in the palms of the hands, with much thirst; or when pains of the back, loins, or lower part of the belly, occur at the same time; then it may be considered to proceed from the womb itself.

In the early months of pregnancy, in such cases, the patient's life can never be in the smallest danger, if she is not otherwise unhealthy, provided she be under the care of a skilful practitioner, though it is more than probable that the child will be destroyed, and miscarriage induced.

But in the latter months, on the contrary, the life of the patient is always in danger, until the discharge be entirely stopt or moderated.

The immediate cause of a discharge of blood from the womb during pregnancy, is the rupture of blood-vessels, by the partial or total separation of those parts which connect the child with the mother.

This circumstance explains the difference of danger in the early and latter months; for in the former, it has been remarked, the blood-vessels of the womb are small, and therefore incapable of pouring out much blood; but in the latter they are very large, and hence may discharge in a short time a great quantity.

Every circumstance which can increase the circulation of the blood in the early months, and at all times of pregnancy, every accident which can injure the womb, will readily affect the connection between the mother and child; such are violent agitation of the body, blows on the belly or back, or irritation from any of the neighbouring parts communicated to the womb.

There is another cause of this accident quite different from any other, and attended with much more danger. It depends on the improper place of attachment of the after-birth. The cake is not fixed invariably to

any particular part of the womb, though it most generally adheres to the bottom; in every case where, therefore, it is attached to the neck of that organ, which indeed happens seldom, it must necessarily be separated when that part begins to be changed in consequence of pregnancy.

When a discharge of blood is once induced, it is liable to recur from the most trifling accidents, as surprise, exertions in coughing, laughing, &c.

The management in these cases must be varied according to a number of circumstances; for very opposite treatment is necessary in different cases.

Tranquillity of mind and rest of body are proper in every case. Confinement to bed, therefore, and seclusion from company, should always be advised.

It is also of great importance that the patient be kept cool, for which purpose an airy bed-room should be chosen, few bed-clothes ought to be allowed, and the drinks, &c. must be almost quite cold.

In every case where blood is lost, a degree of languor or faintishness is usually induced, and hence officious attendants frequently exhibit spirits or wine as necessary cordials. As, however, these generally increase the action of the blood-vessels, they serve to promote and increase the discharge, and should therefore be strictly prohibited.

The application of cold wet clothes to the lower part of the belly, is often employed in these cases with the greatest success, especially in the early months.

Blood-letting and opiates are remedies which on many occasions produce the happiest effects. But as they may frequently be productive of much harm, they are not admissible in every case.

The circumstances on which the use of these remedies depends, cannot be explained with propriety in this work. The treatment of every case where the discharge is not stopped by the management already

described, ought to be committed to the care of an experienced practitioner, otherwise the health of the patient may be materially impaired, or even her life endangered, besides the loss of the child, which is a common consequence of neglect in these cases.

This becomes more especially necessary wherever the discharge is occasioned by the particular place of attachment of the after-birth; for in these cases the danger is so great, that a few minutes delay may prove fatal to the patient. This cause can only be discovered by a skilful practitioner, and its dreadful effects can only be prevented by immediate delivery.

SECTION IX.

ABORTION.

BY Abortion or Miscarriage, is meant the expulsion of the child at any period when it cannot live; it must therefore happen during the first six months of pregnancy.

It has been a very prevalent opinion, that women in genteel life alone are subject to miscarriage, except when it is occasioned by any violent effect produced on the body by accidents. This, however, is a mistake; for women in the lower ranks of life are as often liable to abortion as those in the higher spheres, if they inhabit large cities. The regularity of living, and the other advantages enjoyed in the country, render that accident much less frequent there among women of every rank.

When the many irregularities in the mode of living, the impure air, &c. to which those who inhabit cities

of any extent must necessarily be exposed, are considered, it will appear extraordinary that miscarriage does not happen much more often than it really does.

The symptoms of abortion are various. They do not appear in the same succession in every case, and therefore they cannot be detailed with precision.

The sudden cessation of the breeding symptoms before the period of quickening, together with a sense of weight and coldness in the lower part of the belly, or the same sensation at any time after quickening, with flaccidity of the breasts, may be considered as sure symptoms of future miscarriage.

Pains in the back, loins, and lower part of the belly, bearing down, with regular intermissions and discharge of blood from the womb, are indications of threatening abortion. But miscarriage sometimes happens without any previous cessation of the morning sickness or flaccidity of the breasts, and does not take place where violent pains with loss of blood have occurred.

The immediate cause of abortion, is the separation of the appendages of the child from the womb, along with contraction of that organ. This may be induced by a variety of circumstances, with which it is of importance that every woman should be acquainted.

The death of the child, which may happen from many causes, or a diseased state of any of its appendages, will inevitably occasion abortion.

Some women have a certain tendency to miscarry, which renders the most trifling accident productive of that misfortune, while others suffer the most astonishing agitations of the mind and body, without the same bad consequence. Women have this tendency in different degrees, and are therefore liable to miscarriage in the same proportion.

This tendency may depend on weakness, or irritability of the general habit, or of the womb itself, on a disposition to fulness, or on some defect in the womb,

which may prevent it from increasing equally in size, according to the period of pregnancy. Women also who have formerly miscarried, are very liable to frequent repetition of similar accidents.

Wherever this tendency to abortion takes place, every circumstance which can affect the womb, immediately, or through the intervention of other parts, will readily produce miscarriage. Such are, fatigue from long walking or dancing, straining from coughing, or from efforts at stool in consequence of cholic-pains or severe looseness, violent agitation of the body, sudden passions of the mind, as excessive fear or joy, surprise, &c. exposure in a heated room, tight lacing, and a great variety of other circumstances.

Miscarriage in every case is attended with disagreeable consequences ; for by laying the foundation for the repetition of the same accident, it may both render the woman incapable of being the mother of a living child, and may also injure irreparably her general health.

In the early months of pregnancy, abortion is productive of no immediate danger, provided proper assistance be called ; but after the fifth month the life of the patient is always in a precarious situation, till the womb be entirely emptied of its contents.

The event of every case of miscarriage must depend on the nature of the symptoms, and on the causes which induce the accident. The former of these has already been explained. With respect to the latter, where the cause is discovered to proceed from the death of the child, or from such a state of the mother's body that the womb cannot retain the child, such as great irritability or weakness of the general system, or of the womb itself, or irritation communicated from the parts contiguous to that organ, the threatening event cannot be prevented. If, however, fulness is observed to be the cause, or any violent passion of the

mind, if the bearing down pains have not come on, by proper management the woman may be yet enabled to carry the child to the full time.

It is of importance also to remark, that in some rare cases where abortion is threatened from these causes, if the woman have conceived *Twins* or *Triplets*, one child may be expelled, and the other retained, if proper attention be paid.

Such cases suggest a caution, which should never be neglected, that after miscarriage every patient should be treated for some time as if she were actually still with child, in order to prevent the possibility of a second child being lost, especially as the actions of the womb, when once excited, are very readily renewed by the most apparently trifling irritation.

One cause of abortion is generally attended with more serious consequences even than the loss of the child; for it most commonly occasions the death of the mother, that is, where *artificial* means have been employed to induce miscarriage.

Some unfortunate women, to conceal their criminal indulgences, endeavour, by various means, to procure the expulsion of the child, before it have acquired such a size that their situation can be discovered. These improper intentions can never succeed, unless very violent effects are produced on the organs contiguous to the womb, which explains the cause of danger; for inflammation of these delicate parts is very readily excited by any violent irritation, and is liable to be communicated to all the contents of the belly.

Wherever, therefore, women commit such unjustifiable crimes to conceal the indulgence of irregular passions, their life is exposed to the greatest danger.

The treatment in cases of miscarriage must be regulated by a great variety of circumstances, particularly by the nature of the symptoms and causes, and by the constitution of the patient.

As the future health and happiness of the woman must often depend on the proper management of such cases, recourse should always be had to proper advice.

For the benefit of those who may not be able to procure immediate assistance, from the situation of their residence, &c. the following general rules are given ; as it is inconsistent with the plan of this work, to enter minutely into the detail of such circumstances as require a knowledge of the practice of medicine or from their importance and intricacy should be referred to skilful practitioners.

When there is an appearance of blood, in consequence of any of the accidents already fully explained, which threatens miscarriage, the patient should be put to bed, and kept quiet and cool ; and if she be of a full habit, or have symptoms of fever, she ought to lose blood from the arm.

By these means, provided regular bearing-down pains do not succeed the discharge, and no bulky or skinny-like substance, or large clots of blood, be expelled, there is reason to hope that in such cases miscarriage will be prevented. But when, along with the discharge of blood, large clots come off, attended with bearing down, or pains in the back and loins, especially if the symptoms which precede abortion have appeared, there must be every probability that the threatening event cannot be obviated.

In these cases, every bulky substance which is passed should be kept in a bason of water, that the exclusion of the child and its appendages may be ascertained.

When in such cases the child alone is expelled, and violent pains still continue, attended with a trifling discharge of blood, the occasional exhibition of a simple *Lavement*, consisting of warm water and a little oil, will often moderate the pain, and promote the expulsion of the appendages of the child ; for till this latter

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pregnant, about the period at which she had formerly been unfortunate. In the greatest number of cases there is a greater disposition to miscarry from the eighth to the twelfth week than at any other time, and therefore such women should be confined very much to bed for a few days before and after that period. Cold bathing, particularly by means of the shower-bath, and occasional blood-letting, with a variety of other means, have often great effect in preventing abortion; but as these can only be beneficial according to the circumstances of the case, and as their use may be sometimes highly improper, neither the cold bath nor blood-letting ought ever to be advised, without the concurrence of a judicious practitioner.

When women miscarry repeatedly about the fifth or sixth month, and feel, previous to that accident, the symptoms of the child's death formerly described, and at the same time, the child when expelled is putrid, some latent poison, which will yield to a particular course of medicines, may be suspected to lurk in the constitutions of the parents.

SECTION X.

RULES AND CAUTIONS FOR THE CONDUCT OF PREGNANT WOMEN.

FROM the history of the complaints to which pregnant women are liable, it will appear obviously, that many of them may be avoided by proper attention. The following general cautions are offered, with a view to accomplish that important purpose.

The complaints incident to the early months of pregnancy are different in their nature from those which occur in the latter months; a different mode of management is therefore necessary at those two periods.

Cautions in the Early Months.—Women during that time have a natural tendency to fulness; hence the diet should be spare. Though sedentary life increases that tendency, yet the exercise should be very moderate; for every circumstance which can cause fatigue ought to be carefully guarded against.

The dress of pregnant women, especially at the period when the womb begins to rise out of the basin, should in general be loose and easy. Tight lacing, besides impeding the ascent of the womb, and hence inducing abortion, by compressing the breasts often renders women unable to suckle their children.

Crowded companies, by occasioning many disagreeable restrictions, may lay the foundation for the most dangerous complaint about the time when the womb rises out of the basin, as has been particularly explained; and hence women in that situation should be strictly prohibited from crowded companies and public places. The impurity of the air, on such occasions, is sufficient, in the irritable state of pregnant women, to induce many very disagreeable complaints.

Women, in the early months, should be very guarded in the use of laxative medicines, as any violent irritation of the bowels at that period is readily communicated to the womb.

The belly may be kept regular by means of ripe fruit, boiled vegetables, or any very gentle laxative, as Lenitive Electuary, stewed Prunes, Tamarinds, &c.

Cautions in the Latter Months.—In the latter months, the stomach is not so apt to become disordered, as in the early periods of pregnancy; and as a

greater proportion of blood is required to supply the increased bulk of the womb and contents, a more full diet may be allowed.

The exercise also should be increased, and (unless under certain circumstances) women, towards the end of pregnancy, ought to be as much in the open air as possible; riding in an easy carriage on good roads, also, is attended with the best effects.

Women, in the latter months, ought to be as much in cheerful agreeable company as their circumstances will allow; for otherwise they are apt to become melancholy; and it is well known that the depressing passions sometimes prove the source of the most dangerous disease which can occur during pregnancy.

From the very great size of the womb at that period, it will be readily understood, that long continued pressure of that organ on any particular part must be productive of material injury, therefore frequent change of posture is absolutely necessary. This should be attended to during the night, as well as during the day.

Costiveness, it has been formerly explained, is always to be guarded against with the most scrupulous attention during the latter months: women should never suffer above a single day to pass without having a motion.

In every period of pregnancy, when there are evident marks of fulness, it should be removed by blood-letting, otherwise many disagreeable symptoms may occur. This will more especially be the case in the latter months, for at that time such a habit induces a tendency to be affected by convulsions.

Occasional rest on a bed or couch, in cases of fatigue, or of painful sensation from weight and pressure, is an essential precaution, and may be employed with great advantage at any period of pregnancy.

MANAGEMENT
OF
FEMALE COMPLAINTS.

PART II.

CHAPTER I.

NATURAL LABOUR.

WOMEN are generally delivered of that burden which constitutes them mothers, about nine months, that is, thirty-nine weeks or two hundred and seventy-three days after conception ; but the exact period of impregnation cannot in most cases be ascertained, and therefore it is not easy for women to reckon accurately.

As, in some cases, the term of pregnancy is considerably shortened, it is probable, that in others, it is somewhat protracted. Although this has been often denied, yet from many observations in my own prac-

tice, it appears to me certain beyond a doubt. In confirmation of this opinion, it may also be remarked, that since the term of pregnancy is often protracted for several days in other animals, it is reasonable to suppose that the same circumstance may happen in women.

In the greatest number of cases women are delivered without much difficulty or danger; such labours are therefore styled Natural.

Although natural labour be not attended with great danger, yet the assistance of a regular practitioner is always necessary in order to guard against accidents which might otherwise happen, and which might render the patient's future life miserable. This important truth has been denied, from a mistaken comparison between the labour of women and that of the animals of the brute-creation; but the structure of such animals exempts them from those hazards to which women, from their make, are necessarily subject.

SECTION I.

OF THE CIRCUMSTANCES WHICH HAPPEN DURING NATURAL LABOUR.

THE sufferings of a woman during child-bearing, have been compared to the fatigues of a person on a journey; and this idea has led practitioners to divide the parts of a labour into three stages. The first stage consists of the opening of the mouth of the womb, and of the bag which includes the child; the second, of the actual passage of the child, and its se-

paration from the mother ; and the third, of the exclusion of the after-birth, &c. All these several effects are produced chiefly by one simple cause, the contraction of the womb. By this process, that organ, from being a large pouch, adapted to lodge the infant, as already described, gradually shrinks into a thick round body, the cavity of which is not capable of containing more than an ordinary hen's egg.

First Stage of Labour.—The approach of labour is announced by a variety of sensations, which, though certainly very distressing and disagreeable to the woman, being occasioned by circumstances that are preparatory to an easy delivery, ought to be submitted to without impatience ; but this lesson is commonly gained by experience alone.

Previous to labour the belly generally becomes much diminished in bulk, in consequence of the child sinking to the lower part of the belly.

The first signs of labour are pains in the back and loins, occurring at irregular intervals, and inducing the most disagreeable sensations. These are occasioned by the incipient contractions of the womb ; they serve the valuable purpose of gradually opening the orifice of that organ, which, it was formerly remarked, becomes closed up from a short time after conception.

The consequence of this effect of the contractions of the womb, is the discharge of that substance which had sealed it up, that is of a slimy matter, often slightly tinged with blood, called in common language, the Shews.

When these symptoms have continued for some time, the patient becomes very uneasy ; she has frequent warm and cold fits, with urgent desire to make water, &c. and is exceedingly restless, as every situation appears unsupportable and uncomfortable to her.

By degrees the pains increase in frequency and

force ; they occur at regular intervals of ten or twelve minutes, and do not then occasion the continued uneasiness which is felt at first ; for when they are off, the patient usually is perfectly relieved.

These are the marks by which women may judge themselves to be in labour ; but as pains often occur in the latter months of pregnancy, which may deceive them, it must be an important object to point out the mode of distinguishing them from the true labour-pains, as otherwise they may be kept for several days in a state of anxiety and distress.

Spurious pains, as they are called, occur most commonly towards the evening, and are most troublesome during the night ; they are more trifling and irregular than true pains ; and as they produce no change on the orifice of the womb, the Shews do not succeed them.

Spurious pains are occasioned by the pressure of the womb upon the parts which surround it, or by costiveness. In the former case they may be removed by change of posture and opiates ; and in the latter they can only be obviated by the costive state of the belly being remedied.

In many women spurious pains are attended with a discharge which somewhat resembles that produced by true pains ; a circumstance that is apt to impose on the patient, and on some practitioners ; hence in many cases it requires a considerable degree of judgment to distinguish spurious from true pains. From inattention in this respect, I have been called to many women, who have been deemed several days in labour, when in fact labour had not commenced.

When the first stage is pretty well advanced, the pains generally recur with great regularity every five or six minutes, or even oftener ; but the only certain method of being assured of the progress of this stage, is the feeling the state of the mouth of the womb.

In some cases the first stage of labour proves very tedious, except under particular management; for if there be pains, it may be generally completed within fifteen or sixteen hours. But in the majority of cases, the woman suffers no more than from eight to twelve hours, till the mouth of the womb be completely opened.

The contractions of the womb push forward the lower part of the membranous bag, with some of the water, in which the child is contained, like a small bladder, and this being insinuated between the edges of the orifice of the womb, gradually forces them asunder, and, increasing in size in proportion as they are separated, continues to open the orifice, and the superior part of the vagina, till these parts are sufficiently enlarged to admit of the entrance of the child's head.

By these means those delicate and acutely sensible parts are not exposed to the injuries which would ensue from their being suddenly forced open. Women, therefore, instead of becoming impatient during the first hours of labour, should consider, that the more slowly their delivery proceeds at that period, the more certain will be their chance of a speedy recovery.

After the passages are sufficiently prepared, the membranous bag bursts, and the waters are discharged, which is generally followed by a temporary remission of the pains.

Where the waters are discharged at an earlier period of the labour, much distress is commonly experienced.

Second Stage of Labour.—In natural labour, the child is so pushed forward through the passages as to take up the least possible room, as has been already described, page 42.

This is accomplished by the mere contraction of

the womb; for the infant, if alive, is thrown into a profound sleep, otherwise its struggles might burst or inflame the womb.

In some cases, soon after the waters are discharged, there is one continued bearing-down pain till the delivery of the child; while, in others, the pains recur at distant intervals, and increase in force and effect by degrees only. The former of these circumstances more usually happens in women who have had several children, and the latter in those who lie-in for the first time.

Third Stage of Labour.—The appendages of the child are thrown off by an effort of nature alone in by far the greatest number of cases. For this purpose, the most simple, as well as most powerful means are employed.

When the delivery of the child has not been conducted with too much hurry, the womb diminishes in size in a very gradual manner, in proportion as its contents are expelled.

It is in this manner prepared for contracting regularly from above downwards, after the woman has recruited from the fatigue of the former stages of labour.

After the patient, therefore, has rested for some time, she again feels pains, which are occasioned by the womb renewing its contractions. They are termed grinding, from their being much less violent than those by which the expulsion of the child was accomplished.

When these contractions have continued for a certain time, the after-birth, &c. is separated, and then thrown off, and the sides of the womb become every where in close contact.

By these means, the orifices of those large blood-vessels which are ruptured by the separation of the after-birth, are stopped up, and consequently the dis-

charge of blood that might otherwise prove the source of the greatest danger, is prevented.

The appendages of the child are generally expelled within from ten minutes to an hour after delivery.

But sometimes from mismanagement, or from a diseased state of the after-birth, they are retained for a considerable period; in which case there is always much danger.

SECTION II.

OF THE ASSISTANCE NECESSARY DURING NATURAL LABOUR.

First Stage. EVERY woman in general is impressed with much apprehension at the beginning of labour, which, if indulged, may be productive of very bad effects; it is therefore important that a cheerful friend or two should be present on such occasions, in order to inspire the patient with spirits and courage.

Heating drinks, by way of cordials, are too often prescribed by the attendants at the beginning of labour. They increase the natural tendency to fever which women have at that time, and the temporary vigour they induce is soon followed by a great degree of languor, that retards the delivery.

When labour has actually commenced, the bed on which the patient is to be delivered requires a little preparation, that it may not remain wet and disagreeable after the delivery.

Nurse-keepers, generally, are very well acquainted with the make of the bed necessary for lying-in. The

following directions, however, for that purpose, will be found useful, where such women are not to be had.

The bed should be placed in such a situation that the room may be properly ventilated, without the patient being exposed to a current of air; it should also be kept at a little distance from the wall. The bed-curtains should be made of thin materials, such as cotton or linen; they ought to be quite clean, and should never be completely drawn round the bed, otherwise neither can fresh air be admitted, nor the foul air be allowed to escape.

A hair-mattress should be placed over the feather-bed, and over it one or more dressed sheep-skins, or a piece of oiled cloth ought to be spread; a pair of clean sheets should then be laid on in the ordinary way, and another pair, in the form of a roller, must be applied across the bed, having the ends folded in at the sides. The under sheet at the foreside of the bed should be pressed in, and the upper sheet, when turned over the bed-clothes and outer covering, should be secured by means of a needle and thread, by which no obstacle will impede the necessary assistance of the practitioner.

A coarse blanket, folded within a sheet, in the form of a table-napkin, ought to be laid immediately beneath the patient, and should be removed after delivery.

The pillows ought to be placed in such a manner, that the face of the woman, when she is on her left side, may be towards the back of the bed.

By adopting these directions, women will not be exposed to cold during labour; they will be comfortable after delivery, without being much disturbed, while they can receive all the necessary assistance without inconvenience.

The dress of women during labour ought to be as light and simple as possible, that it may not over-heat themselves or embarrass the practitioner.

When labour has really commenced, the bowels

should, if necessary, be emptied by means of an emollient *Lavement*.

As long as the contractions of the womb tend only to prepare the passages, in general no assistance is necessary. The woman should be kept quiet and cool, though she ought not to be confined to one posture. Violent agitations of the body must be carefully guarded against, otherwise the waters may be discharged prematurely; and hence the most disagreeable consequences might ensue.

For these reasons, the frequent interference of a practitioner in the beginning of labour, except where there is some unusual resistance to the opening of the womb, or the water has drained off too early, would be productive of much harm, and could be attended with no good effects.

At that period, no medicine or other expedient for increasing the force of the pains, should be prescribed, as the more slowly the passages are enlarged, the less injury will the patient suffer.

Women frequently vomit during the first hours of labour. No danger, however, is to be apprehended from that complaint, if the patient have had no previous disease. On the contrary, the vomiting often accelerates the delivery. If, under these circumstances, there are evident marks of a disordered stomach, green tea or an infusion of chamomile flowers, with a few drops of spirit of hartshorn, should be drank.

Second Stage.—The woman ought not to be put into bed till the first stage be nearly completed, and then she ought to be placed on her left side, with a folded pillow between her knees.

When the child begins to pass through the bason, many women are seized with shivering fits, which generally announce an expeditious delivery, and are to

be considered dangerous in those cases only where the state of the woman's former health has been bad.

The bearing-down pains, by which the child is forced through the passage, should be the effort of nature alone, and ought not to be assisted by the exertions of the woman; for in that event, the child would either be pushed upon the parts at the outlet of the bason, before they are prepared for it, or the woman would be so much worn out, that she could not undergo the necessary fatigue that attends the complete expulsion of the child.

This important caution cannot be too strongly inculcated; for inattention to such conduct, and the impatience which women in such situations cannot perhaps avoid, often make a labour difficult and painful, that would otherwise have been natural and easy. Voluntary bearing-down must be particularly guarded against at the time when the head of the child is only prevented from being born by the soft parts at the outlet of the bason; for if the delivery be then hastened, these parts will be readily torn; and in consequence, the woman's future life must be rendered miserable.

The management of a skilful practitioner is indispensably necessary, to prevent so unfortunate an accident, in every case where, from the acute feelings of the patient, violent bearing-down at that period cannot be resisted.

From inattention to this important duty on the part of practitioners, many women have been reduced to the most pitiable condition in which human beings can be found.

After the head of the child is excluded, the woman should be allowed to enjoy for a little the temporary relief she feels, and therefore the body ought not to be immediately pulled out with force, as is often

done ; for besides the injuries which may be occasioned by not allowing the patient a little rest, the delivery of the after-birth will be thereby rendered difficult. Two or three minutes should therefore be allowed to elapse before the body be drawn forward.

The child should not be separated from the mother till the navel-string be properly tied, so that no blood may be discharged from the divided vessels, an accident that might prove fatal. Unless, however, the child have discovered evident symptoms of life, it should not be disengaged from the mother, till proper means are employed for its recovery, except on particular occasions.

Third Stage.—Before the after-birth be excluded, it is an important object to discover if there be any other child in the womb, and therefore that must be ascertained immediately after one child is born. The marks by which the presence of twins, triplets, &c. may be distinguished, are to be described in a subsequent chapter.

In assisting the delivery of the after-birth, the practitioner must wait for the contraction of the womb ; for if that be not attended to, the most dangerous consequences may follow. It is of great importance that this circumstance should be properly understood ; for the patient's life, after an easy labour, may be destroyed by the rashness of an ignorant practitioner. By explaining, however, the cause of danger, those who are prevented from being under the care of persons of skill, may be enabled to counteract the effects of ignorance, and may thereby escape those hazards, to which they would otherwise be exposed.

The greatest portion of the womb, at the full period of pregnancy, is quite unconnected with any of the neighbouring parts, and is therefore unsupported, while the after-birth is most generally attached to its bottom. If, therefore, the extraction of the appendages of the

child be attempted before the womb contract, the inside of that organ will be turned out; and if the rash practitioner continue to pull down, the inverted womb will be drawn out of the woman's body, and death will soon follow.

When the grinding pains are felt, by which the contraction of the womb is distinguished, the practitioner then should assist the expulsion of the after-birth, by pulling gently by the navel-string during a pain, and by endeavouring to bring down the after-birth through the bason, in such a manner that its progress may not be interrupted by any of the neighbouring parts.

While the assistance thus described is given by the practitioner, the patient should bear down moderately; all violent exertions, however, should be avoided; for by coughing, sneezing, &c. dangerous symptoms might be induced.

The contractions of the womb, when slow, may be assisted, by gently rubbing the belly of the woman with the hand. Stimulating medicines, or *Lavemens*, for this purpose, ought never to be employed.

CHAPTER II.

LINGERING AND DIFFICULT LABOURS.

WHEN delivery is not accomplished within twenty-four or thirty hours after the womb has begun to contract, although the head of the child be forced foremost, the labour may be termed lingering.

In such cases, much management becomes necessary, to prevent the patient from being worn out by anxiety and apprehension; and much judgment is required to distinguish those obstacles which will yield in a little time, by the continuance of labour-pains, and cannot therefore occasion danger, from those which can be overcome only by the interference of the practitioner.

By a knowledge of the causes of lingering labours, women may be enabled to avoid that anxiety and impatience which contribute in a considerable degree to retard delivery. This chapter is dedicated to that purpose.

SECTION I.

LABOURS RENDERED LINGERING BY IMPROPER
MANAGEMENT.

THE officious interference of ignorant practitioners is a frequent cause of lingering labour; for if assistance be attempted before the passages are pre-

pared for the delivery of the child, the increased action of the womb, &c. will only tend to weaken the patient, and to render her incapable of making those exertions, on which the successful and expeditious termination of labour may depend.

The improper regulation of the passions of the mind very often interrupt and retard the progress of labour. If, therefore, a practitioner, instead of inspiring the patient with courage, either totally neglect speaking to her, or look afraid, delivery will inevitably be retarded.

Hence, every circumstance that can occasion any violent passion of the mind, should be carefully guarded against.

When the patient is kept too long in one position, and too soon made to believe that she is in actual labour, she naturally becomes tired; her strength is worn out, and the pains go off, or occur only at irregular distant intervals.

A variety of treatment, suited to the circumstances of different cases, is necessary in labours which are protracted from improper management.

When the strength is exhausted, nourishing food and cordials should be given.

The most proper nourishment during labour is beef-tea, chicken-water, and calves-feet or hartshorn jelly; and the best cordials are, tea, coffee, or barley-cinnamon water.

When the water which surrounds the child is evacuated before the mouth of the womb be sufficiently opened, or where the woman has been allowed to take stimulating drinks, what would have been a natural labour, becomes a very difficult one, from the pains going entirely off.

In these cases, if the child's head be not actually in the passage, the patient should have an opiate, or lose blood, according to circumstances, and be permitted

to rest for some hours ; after which the pains probably will return.

But when the head is already within the bason, from the pressure on the delicate parts contained within that part, considerable injuries may be occasioned, and therefore the safety of the woman must depend on expeditious delivery.

In former times, no mechanical expedient with this intention could be employed without endangering the life of the child ; but fortunately at present, practitioners are enabled to deliver the woman in many cases where Nature alone cannot be trusted, without injuring the child in any degree.

Many women are improperly impressed with a rooted antipathy against the use of instruments, a circumstance which is perhaps to be attributed principally to the faults of practitioners. It has long been a popular custom to declaim against iron-hands, as they have been opprobriously styled ; and however hackneyed the subject, it is still very often introduced.

Such opinions proceed either from interested motives, or from prejudices founded on ignorance. For in the hands of those practitioners who alone should employ instruments, no bad consequences can ever follow their use ; and by their means, lives, which would otherwise be lost, are very often saved.

In the beginning of last century, when the art of midwifery was making a rapid progress towards that improved state in which it now is, perhaps the ardent zeal for improvement, shewn by the various practitioners in that line, might have rendered instruments more frequently used than was really necessary. But this is by no means the case at present ; for the powers of Nature are now always allowed to exert their full influence, before a practitioner attempts to interfere materially.

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Although the use of instruments in the hands of a skilful assistant, are not productive of any bad consequence ; yet it must not be concealed, that considerable practice and experience, with a complete knowledge of the subject, are essentially requisite, otherwise much harm may readily be done. Operations in midwifery require more dexterity than those of surgery in general, and their event is of greater importance, as two lives are at stake.

The conduct of those women, therefore, who insist on their delivery being finished by mechanical expedients, whenever the labour-pains are not strong and forcing, is highly reprehensible. In such cases, the practitioner has occasion for the exertion of determined courage, to resist the improper solicitations of the patient, and ignorant attendants.

Extraordinary assistance during labour should never be given, except after the most deliberate examination of every circumstance of the case ; and therefore no prudent and honest practitioner has occasion to conceal the use of instruments, at least from the attendants of the patient.

SECTION II.

LABOURS RENDERED LINGERING BY THE POSITION OF THE CHILD.

IN natural labour, it has been observed, the head of the child enters the bason in that position which occupies the least possible space. It sometimes, however, happens, that it comes down in a direction requiring more room than usual. It cannot therefore

appear surprising, that under such circumstances, a longer continued action of the womb and assisting powers is required to expel the child.

When, however, no other obstacle prevents delivery, the improper situation of the child's head proves a temporary impediment only ; and although it may occasion more painful feelings to the patient, than if the labour were strictly natural, yet if the pains be strong and forcing, she will be as safely delivered as if every thing had been perfectly favourable.

But when, along with the improper position of the child's head, the pains of labour become weak, and delivery is in consequence retarded ; then, unless the position be altered by the management of the practitioner, the violent pressure which must be induced on the neighbouring delicate parts, will be productive of much injury.

Fortunately the structure of a child's head is so admirably contrived, that when it enters the bason in a bad position, it excites an irritation on the womb, which makes it contract with unusual force ; hence in such labours the pains are generally violent and forcing.

Although in the greatest number of these cases the labour will be terminated safely by waiting a certain time ; yet the assistance of the practitioner may often relieve the patient from many hours of severe suffering. It must not, however, be concealed, that unless an experienced practitioner have the charge of the patient, nature alone should be trusted, as ill-directed attempts to assist, may, in such cases, be the occasion of the most unfortunate effects.

SECTION III.

LABOURS RENDERED DIFFICULT BY THE PARTICULAR STRUCTURE OF THE CHILD.

WHEREVER the child's head exceeds considerably the dimensions formerly detailed, if the bason be of the ordinary size, an obstacle must be opposed to delivery, which can only be surmounted by a diminution of its bulk.

The size of the head may be increased in consequence of a diseased state, called water of the head; or the same effect with regard to delivery, will be produced by that species of monstrosity, where two children are grown together, or where one child has two heads.

The former of these cases is by much the most frequent occurrence, and yields to the most simple management; the latter occurs, fortunately, very rarely.

When the head is perceived to be enlarged by a collection of water, it is not always necessary to diminish it by artificial means, as Nature often adapts it in a wonderful manner to the parts through which it passes, and therefore time should be allowed for so important a purpose.

But when it is found, that although the labour-pains have been strong and forcing, the head does not seem to make much progress, then it becomes necessary to let out the water, by which means the size of the head is immediately reduced, and the delivery is soon accomplished. It has often been alleged, that little caution is required either in having recourse to this operation, or in performing it; for no child born

under such circumstances can ever live any considerable time.

As, however, it is highly presumptuous to limit the powers of Nature, no operation, which may be injurious to life, should ever be attempted without the most urgent necessity for it; and when it is had recourse to, every caution should be observed which can tend to prevent danger.

In some cases, the water can be discharged by so small a puncture, that no injury shall be done to the child's life.

Where the obstacle to delivery is occasioned by a double head, much dexterity is required to extract the child without diminishing one of the heads, an object which should always be attempted, though the efforts for that purpose should not be carried too far, nor continued for too long a time.

SECTION IV.

LABOURS RENDERED LINGERING BY THE FORM OF THE WOMAN.

THE passage through which the child proceeds during labour, is not equally well formed in all women; for the human body is subject to a disease, from which other individuals of the animated creation are exempted. By this disease the bones are rendered soft, and their shape altered, in consequence of which the size of the basin may be very much reduced.

Where the deviation from the natural shape and size is not very considerable, although a longer time than usual be required; yet the delivery may at last be

accomplished with safety, both to the mother and child.

In such cases, women should not become impatient or restless, otherwise they will be soon worn out, and their delivery may be rendered impossible without extraordinary aid.

The duty of practitioners, on these occasions, is to allow the pains of labour to have all the effects which they can produce, to support the patient's strength, and to prevent her spirits from being depressed.

It requires much skill and experience to distinguish between the appearance and the reality of danger in many cases, but especially in labours rendered tedious by deformity of the bason. It is astonishing how much pain some women can suffer without material injury ; and the manner in which the child's head is moulded by the form of the passage, is often surprising. Perhaps no circumstance in nature is better calculated to prove the existence of an omnipotent guardian Power, than the admirable provision made for the expulsion of the child.

The conduct of those practitioners, therefore, who intrude on the works of Nature, must be highly culpable ; and hence, except where she fails, every sensible, prudent practitioner will rather endeavour to prevent her intentions from being counteracted by improper interference, than presume to offer to assist her.

Unfortunately, however, it sometimes happens, that the passages through which the child should proceed, are so contracted, that the woman cannot possibly be delivered of a living infant at full time.

When these cases are under the care of an ignorant or timid practitioner, the life of the patient must be exposed to very great danger ; for by the continued action of the womb, the child is forced violently against the bones of the bason ; hence the fleshy parts

which are interposed are much bruised, and therefore inflammation will be soon induced, which, extending to the neighbouring parts, must at last put a period to the life of the unfortunate woman.

These are not the only hazards which may ensue from the unskilful management of the practitioner, where there is a considerable defect in the capacity of the bason; for by delaying too long affording the proper and necessary assistance, the strength of the woman may be worn out, and such a shock given to the general system, that her recovery shall be either very precarious, or incomplete.

The trust reposed in practitioners by women under such circumstances, ought therefore to be considered as a charge of the most sacred nature, and should never be undertaken, except by those who, from observation founded on practice, feel themselves adequate to the important task.

To determine on the proper time in such cases, for giving assistance, in order to save the patient's life, and to accomplish so desirable a purpose, must be objects of the greatest moment, and ought not to be intrusted to the care of every practitioner; for more judgment and dexterity are often required to fulfil these views, than are necessary in the treatment and performance of the most complicated surgical operation.

This important truth can only be controverted by those who are ignorant of the subject. It ought to be universally known, as it may tend to save many valuable lives. It cannot be too much regretted, that women often put themselves under the care of uninstructed female practitioners, when their own lives, and that of their children, are in danger, when they would not submit to the most trifling external operation under the hands of an ordinary surgeon.

The form of the bason is not the only circumstance in the make of women that may retard delivery. The fleshy parts through which the child must necessarily pass, often occasion much resistance. This more generally happens in women who are advanced in life before they begin to have children.

In proportion as the fleshy parts are rigid, a greater length of time will be necessary for preparing them for the safe passage of the child. But if it be forced through them before such preparation, they may either be lacerated, or so violently bruised, that very disagreeable and dangerous complaints may be induced.

Every means, therefore, which tend to increase the force of the labour-pains, where the delivery of the child is opposed by the unyielding state of the fleshy parts at the bottom of the bason, should be carefully avoided.

Fomentations and other expedients for promoting the relaxation of these parts, have also been recommended. But except the use of pomatum, all the other proposed means for such an effect, by inducing a great tendency to subsequent inflammation, may be the cause of much future distress, and ought consequently never to be had recourse to.

In some rare cases the obstacles to delivery have arisen from diseases of the parts within the pelvis, but the exact nature of such cases cannot be detailed in a work of this kind.

SECTION V.

GENERAL OBSERVATIONS ON LINGERING AND DIFFICULT LABOURS.

FROM the remarks which have been made on lingering and difficult labours, it must be obvious, that these may be often occasioned by the impropriety of conduct of the patient or practitioner.

Women of violent passions, accustomed to the unlimited gratification of all their desires, do not easily submit to the necessary restrictions during labour; their strength therefore becomes worn out by restlessness and anxiety, and their delivery is in consequence either retarded, or rendered difficult.

The disposition, however, of the female sex is generally so amiable, that women are much more patient and resigned during pain, than could be supposed by men, who commonly do not possess so great a share of these happy qualities; therefore obstacles to delivery do not very often originate from the improper conduct of women, where the practitioner is capable of offering prudent advice.

The greatest number of lingering and difficult labours, where the health and constitution of the patient are not previously impaired, should with justice be attributed to the officious and ill-directed interference of ignorant practitioners.

It ought therefore to be considered an object highly interesting to mankind, to prevent the fatal errors which may arise from unskilful management during labour. Every feeling mind must be much shocked on reflecting, that other countries possess in this respect an important superiority over Great Britain; for

in every other civilized state of Europe, precautions are adopted by the police, which preclude ignorant practitioners from the charge of lying-in women.

Till within these few years, in this island, so celebrated for the successful cultivation of the arts and sciences, midwifery was degraded to a mechanical profession alone; the bodies of women, it would seem, were considered as inanimate machines, capable of suffering, without injury, all the accidents which may happen during child-bed under improper treatment; and even the lives of children, so interesting to society and to individuals, appear to have been disregarded.

Every one who is not insensible to the interests of humanity, must wish that the real nature of the trust reposed in practitioners of midwifery, which has till lately been overlooked, should be perfectly and universally understood; for by that means many unfortunate accidents must be often prevented.

Although the impropriety of those women becoming pregnant whom their particular form renders incapable of bearing living children, might perhaps be easily shewn, it may not be proper to adduce arguments on such subjects; for they might probably only tend to intimidate those who have already put it out of their own power to profit by them.

Much management in the treatment of lingering and difficult labours is frequently necessary.

In lingering labours, the principal duty of the practitioner consists in allowing the powers of nature to produce their full effect, and to remedy those circumstances which may tend to impair them.

In difficult labours, on the other hand, where assistance becomes necessary, the proper time for interfering, and the manner of assisting suited to different cases, must be his important study.

On some occasions, the symptoms of these two species of labours so nearly resemble each other, that it is not easy to draw the line of distinction between them. That, however, is an object of great importance, because the life of the child or mother may be sacrificed by a mistake in such cases.

While a prudent practitioner will never interfere unnecessarily, he ought to guard particularly against trying what nature can suffer, rather than what she can accomplish, by delaying that assistance which art can supply.

CHAPTER III.

PRETERNATURAL LABOURS.

WHEN the child presents any other part than the head to the passage, the labour is called Preternatural; in common language, a cross-birth.

In the greatest number of preternatural labours, the life of the woman is not exposed to hazard, though that of the child is generally in danger.

In some cases, however, the situation of the child is such, that unless it be altered the woman cannot be delivered. Fortunately the practice of midwifery is now so much improved, that except where the case has been originally very improperly treated, there is scarcely a bad situation in which the child may be found that cannot be remedied by an experienced practitioner.

SECTION I.

PRETERNATURAL LABOURS WHERE THE LIFE OF THE PATIENT IS EXPOSED TO NO DANGER.

IT has been already mentioned, that the child, when in the womb, occupies the least possible space, and forms an oval figure, one end of which is commonly placed toward the bason; although the

end formed by the head is most usually in that situation, the other extremity, it has been calculated, once in fifty or sixty cases is found there.

The Breech, Knees, or Feet of the child are therefore the parts which are first forced into the passage more frequently than any other, except the head.

In all these cases, if the woman be healthy, the delivery may be accomplished without any extraordinary assistance, with perfect safety to the patient ; but the life of the child is often very much endangered.

This circumstance originates from the child being exposed to the compression of the womb a longer time than in cases where the head is first in the passage ; which is occasioned by the increased space which it then occupies. This can be easily understood, from the manner in which the child is expelled when any of its lower parts come down first ; for in proportion as the body advances, the arms are pushed up towards the head, till at last they are placed along each side of it, consequently they increase its size.

Another cause, which certainly contributes to render the delivery less expeditious in these cases, is, that the lower parts of the child are seldom forced into the passage in that direction in which they take up the least possible room. Hence it requires a long time before the contractions of the womb can have the effect of adapting them to that situation.

Unless, therefore, assistance be given in all these cases, there is always a risk of the child being exposed to hazard ; and if the practitioner do not proceed with caution and gentleness, some of its parts may be injured.

A certain degree of dexterity is required to deliver the head of the child in these cases after the body is expelled. Force is not only unnecessary, but even very improper, as the tender neck of the infant may be dislocated, or even the body separated, and the head

left within the womb ; an accident that must be very shocking, and that formerly was not uncommon.

While too much rashness cannot be reprobated in sufficiently strong terms, excessive timidity, as it may be as fatal to the child, should be as carefully avoided. A proper degree of steady resolution, equally distant from rashness and timidity, while it enables a practitioner to operate in these cases with success, can only be the result of dexterity, and a perfect acquaintance with the manner of operating.

SECTION II.

PRETERNATURAL LABOURS, WHERE THE LIFE OF
THE PATIENT IS EXPOSED TO DANGER.

WHEN the child lies in such a situation that neither the head nor lower parts are placed next the passage, Nature cannot, in general, accomplish the delivery ; and therefore, unless the position of the child be altered, the life of the woman can scarcely be saved.

The operation by which this is performed, is called, in the language of midwifery, Turning, and consists in bringing the feet into the passage.

When the bad position of the child is discovered before the Waters be drained off, the operation of Turning may be had recourse to with perfect safety, (provided the woman be in good health), and without occasioning much pain to the patient or trouble to the practitioner. The same caution and dexterity, however, are necessary to save the child in these cases, as

in those where the feet are originally in the passage.

But, when, either from the restlessness of the patient, or from the improper interference of the practitioner, the waters have been evacuated at an early period of the labour, the life of the child must be generally in danger, and the woman also exposed to some hazard.

The dangers which in such cases threaten the woman and child, proceed from the womb becoming closely contracted round the body of the infant soon after the waters are off, and from the spongy state of the womb in the latter months of pregnancy, already taken notice of, which renders it easily torn if much force be employed.

From this circumstance the child has been often pushed through the substance of the womb into the cavity of the belly ; and in by far the greatest number of such cases the accident proves fatal.

The operation of Turning should never, therefore, be attempted by those who do not possess a perfect knowledge of the principles necessary to accomplish it, as otherwise much harm may be done. Indeed I have been long accustomed to consider Turning, in certain cases, as the most difficult operation which can be performed on the human body ; and hence it requires the greatest exertion of skill. That its object is highly interesting must be universally acknowledged ; for the life of mother and child depend on its success.

Many women, by their improper behaviour, add much to the natural dangers attending Turning ; for the temporary pain which they must necessarily feel, instead of being suffered with patience, often makes them unmanageably restless. On such occasions, any injury which may be done, ought with justice to be

attributed to their own fault, and not to an error on the part of the practitioner.

It should be considered as a duty incumbent on every woman, to submit with resignation to the management of the practitioner under whose care she is placed, provided she be satisfied with respect to his character and abilities; for an opposite conduct, besides hurting herself, by ruffling his temper, may prevent him from operating with that calm deliberation, on which the safety of the child at least must frequently depend.

CHAPTER IV.

LABOURS WHERE THERE IS MORE THAN ONE CHILD.

WOMEN often produce two children at a birth, sometimes three, and in some very rare cases, four or five. A superficial observer might imagine, that these cases are favourable to the increase of mankind : but this by no means happens ; for the woman's recovery is always more uncertain after the delivery of twins, &c. than after that of a single child ; and where the number of children exceeds two, they seldom live long after birth.

It was formerly remarked, that when more than one child is contained within the womb, each is included within a distinct bag : it seldom therefore happens, that the delivery of one is prevented by the interference of another, though such cases have occurred, and have been attended with considerable difficulty.

But Twins and Triplets do not lie in the natural position ; for the breech of one is usually opposed to the head of another : hence in these cases, the labour must be preternatural, and consequently in some degree hazardous.

The management of such cases, therefore, requires particular attention, as not only the life of the child, but also that of the patient, are on these occasions at stake.

SECTION I.

MEANS BY WHICH THE EXISTENCE OF TWINS MAY BE ASCERTAINED.

IT has been very improperly believed, that when women have conceived of twins, there are certain symptoms before delivery, by which that circumstance can be ascertained. In fact, there are no sure indications of the existence of a plurality of children, till after the birth of one child. The unusual bulk during the latter months, on which many people depend for such information, is very fallacious; and hence I have long ago experienced the truth of the observation of a practitioner of the century before the last, that in those cases where, from the appearance of women, there is the greatest room for suspecting twins, only one child very often exists, while many women have a plurality of children, who exhibit before delivery no marks of such a circumstance.

After the birth of one child, it is very easy to determine whether any other remains. This may be commonly done without having recourse to the painful and indelicate means that have been often proposed and practised; for by feeling the state of the belly alone, a judicious practitioner will be very seldom mistaken on such occasions.

When only one child has been originally contained in the womb, that organ, soon after delivery, diminishes very much in size, while the bowels, which were kept out of their natural situation in the latter months of pregnancy, immediately get forward to the forepart of the belly, and hence that part feels soft and yielding.

But when a second child remains, the womb does not apparently diminish in size. The intestines, therefore, remain behind and at the sides, and the forepart of the belly has the same hardness as before the delivery of the first child.

Some circumstance may from time to time occur, to prevent a practitioner from ascertaining, by this simple method, the existence of a plurality of children; and in these cases only, the other means proposed for accomplishing the same purpose should be put in practice.

SECTION II.

MANAGEMENT IN CASES OF TWINS.

IN cases of plurality of children, it has already been mentioned, the blood-vessels of the cake of each sometimes communicate with one another. If, therefore, that part of the cord which is left attached to the after-birth be not tied, the life of the second child may be exposed to hazard: hence the cord should never be left untied, both for the sake of cleanliness, and to prevent the possibility of such an accident.

When a second child is discovered, many practitioners proceed immediately to deliver the woman, before she have recruited from the fatigue of bearing the first child: others avoid interfering, and trust the whole business to Nature.

It must, however, appear inhuman in the highest degree, not to allow the patient the enjoyment of that relief from pain for which she has so much occasion, after having born one child, at least till her strength

be somewhat restored, to enable her to undergo the necessary fatigue that she must again suffer.

But, as has already been mentioned, there is a great probability that the position of the second child is unfavourable ; and, consequently, if such cases were left entirely to Nature, both the patient and child might be lost before proper assistance could be procured.

In every case of Twins, therefore, the second child should be delivered by the operation of turning, as soon after the patient's strength is restored as possible ; provided neither the head, breech, nor feet be next the passage, while the patient has violent forcing pains ; in these cases, the delivery may be conducted on general principles.

In all cases of this kind, it is the indispensable duty of the practitioner, to stay constantly by the patient till she be completely delivered ; for dangerous symptoms may occur, that might be remedied by his assistance, and that would otherwise perhaps prove suddenly fatal.

The management in cases where there is more than two children, is not attended with more difficulty than that of twins. On such occasions, the life of the patient is in no increased degree of danger ; but that of the children must be always precarious, in proportion to their size, &c.

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SECTION I.

LABOURS WHERE THE LIFE OF THE CHILD IS EXPOSED TO DANGER.

A PORTION of the umbilical cord may be forced down, either naturally, or in consequence of mismanagement. In the former case, it will be found through the membranes at the beginning of labour; in the latter, it only comes down after the waters are drained off.

The cord can fall down naturally only where it is uncommonly long, or where the child lies in a cross position, and therefore such cases occur very seldom.

But when the waters are evacuated before the passages be properly prepared for allowing the delivery of the child, the cord will be generally forced down before, or along with the presenting part.

When the cord is felt originally through the membranes, the patient should be kept very quiet, and in one posture, till the circumstances preparatory to delivery are completely accomplished; when the practitioner, by turning the child, may probably be able to save its life.

But when the early discharge of the waters has occasioned the protrusion of the cord, it will not be often in the power of a practitioner to obviate the threatening danger, without exposing the life of the patient to much hazard.

As, therefore, this accident cannot be frequently remedied, it must be an important object to prevent its occurrence. By proper attention, this can be generally accomplished; for the premature discharge of the waters must be either the fault of the practitioner

or patient, and may consequently be commonly prevented.

The great advantages, therefore, of quietness at the beginning of labour, on the part of the patient, and of guarded caution on that of the practitioner, must be very obvious. From what has already been said on this subject, it will probably appear, that from neglect of these necessary rules, many deliveries, which would otherwise be strictly favourable, are rendered painful to the patient, and dangerous to the child.

SECTION II.

LABOURS ATTENDED WITH CONVULSIONS.

THE precautions by which convulsions during labour may in many cases be prevented, have already been mentioned; and the dangers to which pregnant women are exposed, when attacked with this frightful disease, have also been pointed out.

When convulsions occur in the time of labour, the safety of the woman commonly depends on expeditious delivery; and therefore the proper means for accomplishing so important an object must be employed without delay.

The treatment on such occasions should be entrusted to a skilful practitioner alone; and therefore directions for that purpose are inconsistent with the nature of this work.

But as in many cases, it may be in the power of the ordinary attendants to stop the threatening fit by simple remedies, it is of importance to explain such means.

When, during labour, the patient complains of a very severe pain in the head or stomach, along with dimness of sight, or the sensation of flashing of fire before the eyes, with flushed face, if she be of a strong full habit, or if she have not been much weakened by previous disease, blood should immediately be drawn from the arm, and a free current of air admitted into the room.

If, notwithstanding these means, the threatening fit should come on, a cork ought to be put between the jaws, otherwise the tongue may be very much injured.

Sometimes in such cases the stomach is disordered, and increases the tendency to convulsions. Wherever that is discovered, the patient should be made to drink an infusion of Chamomile-flowers, or Columbo; which, by emptying the stomach, may on some occasions prevent a return of the fit, or moderate its violence.

It must not, however, be concealed, that when convulsions occur during child-bearing, the woman cannot be pronounced to be out of danger till after delivery, as has already been observed.

SECTION III.

LABOURS ATTENDED WITH A DISCHARGE OF BLOOD FROM THE WOMB.

IN a former part of this work, the dangers which result from a discharge of blood in the latter months of pregnancy were pointed out, and the cir-

cumstances by which that accident may happen were explained.

When such a discharge occurs during labour, it must depend either on an accidental separation of the whole, or more commonly of a part of the after-birth, or on the unusual place of attachment of that substance. The patient's life is exposed to greater hazard from the latter than the former of these causes.

When the discharge is trifling, and does not originate from the situation of the cake, no apprehension should be entertained; but the practitioner ought to stay constantly by the patient, to be ready to interfere, in the event of the discharge becoming profuse. In such cases, the woman should be kept very cool; the bed-clothes ought to be few; the room must not be crowded, and the drinks should be quite cold. Every thing which is heating, being highly pernicious, cannot be too strictly prohibited.

If the discharge be considerable, or so long continued that the patient's strength is much impaired, her safety will depend on immediate delivery, which must therefore be accomplished on general principles. A few minutes delay on such occasions may prove fatal to mother and child.

When the after-birth is unfortunately attached to the neck or orifice of the womb, the utmost danger is to be dreaded; for the patient's life must in almost every case of that kind depend on the judgment, courage, and dexterity of the practitioner.

SECTION IV.

CONSEQUENCES OF THE RETENTION OF THE AFTER-BIRTH.

THE after-birth can be retained in the womb above two or three hours after the expulsion of the child, only in consequence of a particular diseased state, which cannot be explained in this work, or from the womb having contracted so irregularly, that the mouth becomes quite closed up. In the former case, a portion of it is generally disengaged, and hence a discharge of blood is occasioned. In the latter, unless proper means be adopted for extracting it, the cake will in a short time become putrid.

Either of these circumstances must be attended with danger to the patient; for if a discharge of blood occur, it cannot be stopped till the womb be emptied of its contents; and if the after-birth in a putrid state be retained for two or three days, a very bad fever will be induced.

Whenever a considerable discharge takes place after delivery, the attendants are generally with reason alarmed, and therefore there is not much hazard that the case can be mistaken or mismanaged. But when no discharge appears, it too often happens, that the patient is unwilling to allow the practitioner to interfere; the attendants think it cruel to disturb her; and even many practitioners, from timidity or aversion to give pain, avoid endeavouring to assist in proper time. Many melancholy cases have originated from such causes.

It must therefore be obvious, that as the life of the patient is never exempt from danger till the after-

birth be extracted, no practitioner ought on any pretence to leave a woman for even a short space of time, till that circumstance have taken place.

After the cake has been retained for several hours, it may in general be brought away by a perseverance in making the necessary efforts for that purpose. The patient, it must be confessed, will be unavoidably exposed to a little pain: but temporary sufferings can never be put in competition with the hazards to which she would be otherwise exposed.

When the after-birth, from a diseased state, adheres so firmly to the womb, that it cannot be entirely extracted; within two or three days, according to circumstances, after the disengaged portion is excluded, tepid water should be from time to time thrown into the passage of the womb by the common means, and a tea-spoonful of the Peruvian bark should be given twice or thrice a-day. This management must be continued till the retained portion be discharged, which commonly happens on the fourth or fifth day.

MANAGEMENT

OF

FEMALE COMPLAINTS.

PART III.

CHAPTER I.

TREATMENT OF WOMEN AFTER DELIVERY.

WHEN women have enjoyed good health previous to pregnancy, and when their labour has not been attended with any uncommon circumstance, their recovery after delivery cannot be precarious, except from inattention to those precautions which the peculiar state of their system at that time renders necessary.

In order to render the necessity for the precautions suggested in the sections of this chapter obvious, the following short view of the state of women after delivery is offered.

The effects of labour may with propriety be termed general and particular; the former are those which originate from fatigue; the latter arise from the peculiar state of the body before and after delivery.

Even in the most favourable cases, women must be very much fatigued by the exertions which are necessary to expel the child. The violent contractions of the womb, and assisting powers, increase the action of the heart and blood-vessels, and the resistance which is opposed by the particular form of the child, &c. occasions a considerable degree of pain; hence a temporary fever is induced. The old maxim, that a woman, after delivery, should be considered as a person much bruised, is therefore founded on reason.

The diseases incident to the childbed state, however, depend more on the particular, than on the general effects of labour. These, therefore, merit much attention.

In the latter months of pregnancy, the womb occupies so large a portion of the cavity of the belly, that the stomach and intestines are greatly compressed, and the circulation of the blood is impeded through the neighbouring vessels.

During labour, the action of the midriff, the fleshy parts of the belly, and the womb, must compress all these parts in an increased degree, while the passage of the child through parts naturally small, occasions a temporary uneasiness.

After delivery, the pressure is suddenly taken off from all the parts within the belly by the diminution in size of the womb, and the blood is allowed to pass through them more freely, while from the previous long-continued pressure, the power of the blood-vessels is much impaired.

The womb suffers great changes after the exclusion of the child and secundines; for it contracts into a

comparatively small size, its sides approach to each other, and become in contact. The orifices of its blood-vessels are large and open; and for a certain time, though its size be diminished, its weight continues the same. For three, four, or five days, a red-coloured discharge proceeds from these vessels, which gradually changes to a milky colour, then becomes greenish or brownish, and disappears entirely at different periods in different women, and according to various circumstances, depending on constitution, &c. It ceases sooner in nurses than in others. This evacuation is called in popular language the Cleanings, and technically the Lochial discharge.

The state of mind, having considerable influence on lying-in women, should not be overlooked.

When the body is in any considerable degree weakened, the actions of the sentient principle commonly become also impaired. From this cause, added to the increased sensibility of the nervous system which prevails during pregnancy, it commonly happens, that a few hours after delivery, women generally are unable to bear those circumstances which formerly never affected them. They are susceptible of the most trifling impressions, are easily fluttered or disconcerted, and suffer the most immoderate sensations of pleasure or grief from apparently insignificant causes.

As every violent passion of the mind is accompanied with a corresponding effect on the corporeal system, it must be very evident, that in the state of the body after lying-in, the worst consequences may be dreaded from any violent agitation.

The action of the heart and arteries; by means of which the blood is circulated through every part of the body, is very readily altered or disturbed, whenever the nervous system is in the condition now described.

Two other circumstances peculiar to the child-bed

state deserve attention; the formation of milk, and the restoration of the womb to its original small size. The former of these is accomplished by a determination of a great quantity of blood to the breasts, and a particular action in the glands of these organs. The latter is produced partly by the activity of the absorbents connected with the womb, and partly by means of the lochial discharge.

As there are certain natural causes of disease during lying-in, so there are certain disorders to which women of every description are liable for some time after delivery. Such are, loss of blood from the womb, fever, inflammation of different parts, affections of the breasts, and stoppage of the cleansings, with its consequences. Women who have been much secluded from the open air, little inured to exercise, and habituated to indulgence in the luxuries of genteel life, are liable to many other complaints.

SECTION I.

REGULATIONS RESPECTING THE DIET OF LYING-IN WOMEN.

SOME degree of languor or faintness generally occurs immediately or soon after delivery, and is the natural consequence of the fatigue from the exertions during labour. It has been long customary on such occasions, to give the patient something stimulating, by way of cordial, such as strong spirits or drinks with wine and spices, &c.

When the great sensibility of the stomach, from its numerous nerves, already described, and the exten-

sive influence which it has over the whole body, are attentively considered, the impropriety of exhibiting stimulating substances in the irritable state of the patient after delivery, will be very striking. If it be evident, by the flushing of the face, &c. that a glass of spirits even in women in health, increases the velocity of the blood, it must be obvious that more violent effects will be produced by the same cause, when the body is weakened and irritable.

A small proportion of warm negus, or a little panada, or, when the languor is excessive, a piece of bread or biscuit soaked in wine, or a bit of sugar dipped in brandy, are the only cordials which a prudent practitioner would allow.

For a few days after delivery, women are generally very thirsty; and provided the drinks be not heating, (except they do not propose to nurse), their desires may be safely gratified. Gruel, with sometimes a very small proportion of wine, toast and water, lemonade, tamarind and apple tea, barley water, &c. are the most proper drinks. It is always proper that they should be somewhat warm, whatever the season of the year be.

After the third or fourth day of lying-in, if the patient's strength require it, she may be indulged with two or three glasses of wine during the day. Unless under particular circumstances, red wine of any description ought never to be taken till the end of the second or third week, because all red wines tend to stop the cleansings. After the tenth or twelfth day, if she give suck, she may also be allowed a beer-glass full of porter or mild ale after dinner and supper.

Many errors are committed by practitioners in the regulation of the food of lying-in women. All gross meats which might overload the stomach, or by heating the woman, prove a cause of fever, should certainly be strictly prohibited. But every patient, after

child-bearing ought not to be half-starved, as some recommend. Beef tea, veal or chicken broth, may be taken for dinner, for the first two or three days; but if the woman have been accustomed to a full rich diet, or if soups disagree with her, she may have something solid, as boiled fowl or chicken, white fish, or light pudding, from the beginning.

Proper regard in this respect should be paid to her habit, former manner of living, and present state. Too great indulgence, it must always be remembered, is more to be dreaded than too much abstinence, though both extremes should be equally avoided.

SECTION II.

REGULATIONS RESPECTING THE DRESS, AIR, AND EXERCISE PROPER FOR LYING-IN WOMEN.

IT was formerly the custom to apply very strait compresses to the belly, with a view to prevent it from continuing bulky after delivery. But this treatment has generally the opposite effect as may be observed in those women in low life, who still continue it. Some degree of compression is necessary and beneficial; and that can be obtained by the application of a table-napkin or appropriate roller.

The bed-linen, and also the body and head-dress of lying-in women, should be in general shifted immediately after delivery, and should afterwards be frequently changed, otherwise the smell that is occasioned will sufficiently indicate the dangers which must arise from stagnant animal effluvia. The bed-clothes and dress of women on such occasions should be light, in

order to prevent excessive sweating; they have naturally a tendency to perspire while in that state; but an excessive degree of perspiration is always productive of bad consequences.

It may perhaps be unnecessary to remark, that patients, during lying-in, should always be kept as free from moisture as possible.

The bad effects of confined or impure air, are now almost universally known; consequently the propriety and necessity of having the bed-curtains always open, of preventing many visitors from crowding the room, of removing as speedily as possible every thing which can contaminate the air, and of admitting occasionally the fresh air, by opening the windows and doors, must be very obvious.

Women were formerly obliged to remain in bed for a certain number of days after delivery, by which they were much weakened and fatigued. In modern times the practice has passed from one extreme to another.

This circumstance should surely be regulated according to the strength of the patient; hence no invariable rule can be established. When the woman feels that she can easily undergo the fatigue of rising, which, in ordinary cases, happens about the second, third, or fourth day, she ought to be taken out of bed, that it may be properly adjusted. On such occasions, women commonly sit upright, by which they suffer considerable uneasiness; and at the same time, by the bulky womb, (for that organ does not resume its natural state till two or three weeks after delivery,) pressing forcibly on the soft parts at the bottom of the basin, the foundation for a very troublesome, uncomfortable, and disagreeable complaint, already explained in the first part of this work, the falling down of the womb, must unavoidably be laid.

Women ought therefore to be placed in a position

half-sitting and half-lying; as long as the womb continues enlarged, by which means these inconveniencies will be avoided.

For the same reasons, walking even from one room to another, at least as long as the lochial discharge continues, and the womb is bulky, is highly improper. Many women boast, that they have been able to go through the whole house within eight or ten days after delivery; but they often find at a subsequent period of life, by the complaints which they suffer, that they had little cause to be satisfied with their own prudence, or the attention of the practitioner who indulged them in such liberties.

Confinement to one room for two or three weeks, especially in warm weather, may certainly be deemed improper, and therefore women may very safely, if well in other respects, be allowed to occupy the drawing-room through the day after the second week; but they ought for at least a certain time to be carried thither, and to be placed in a reclining posture on a sofa.

After the fourth week, in some cases sooner, the patient may be permitted to go abroad. The common practice on this occasion, of going first to a crowded church, cannot be reprobated in strong enough terms. It must be confessed, that the wish of returning thanks to the Author of our existence, for having preserved her life amidst the pains which she suffered, ought to be impressed on the mind of every pious woman. But the duty which she must naturally owe her family, should induce her not to expose herself to the hazard of having her perfect recovery interrupted; and hence till that be established, she ought to avoid all crowded places, where, from the heat, impure air, long confinement, &c. she might be injured.

Women on going abroad, should therefore, at first

take an airing in a carriage for two or three days, then walk a little when the weather is favourable, and defer going to church till they feel themselves in the natural state of good health.

SECTION III.

REGULATIONS OF THE MIND OF LYING-IN WOMEN.

FROM the view which has been given of the state of the mind after delivery, it must be obvious that every circumstance that tends to excite even the most trifling emotions when in health, should be cautiously guarded against during lying-in. For this reason, all the common and well known means to prevent noise being heard, should be employed.

It sometimes becomes necessary, from the situation of the bed-room, &c. to stuff the patient's ears with cotton; but this should be had recourse to only in very urgent cases; for the mind in such a situation is always kept in a state of anxiety, from the wish the woman has to understand what is going on among the attendants, and from the apprehensions which she may be led to entertain, if she be not indulged.

All visitors for the first ten or fifteen days ought to be denied access; for besides the hazard of their mentioning some piece of news which may hurt the patient, the fatigue of talking, &c. might be productive of the most serious consequences. A prudent cautious friend, however, should be allowed to sit by the woman, and she ought to be enjoined to give an agreeable turn to her ideas, while she prevents her from too

great exertions, and permits her to rest, when she seems to have an inclination for it.

The common practice of making the nurse sit all night by the patient, is always attended with much inconvenience, and is often the cause of many complaints. The experience of every lady who has adopted this practice, will confirm the observation; for the nurse must either continue awake, or fall asleep. In the former case, she will endeavour to shew her attention, by tormenting the patient with offers of meat or drink; and in the latter, by the noise which she may make while asleep, she will disturb the woman.

The nurse, therefore, (except on extraordinary occasions), ought to sleep in a bed next the room of the patient, so that she may be ready to assist on every necessary occasion.

The noise which children make during the operation of washing, dressing, &c. must certainly prove highly disagreeable to every mother; hence children should never be dressed in the room of the woman, till her strength be completely restored.

SECTION IV.

MANAGEMENT OF THE BREASTS.

WHEN the woman proposes to give suck, the child should be put to her breast as soon after delivery as her strength will permit, and the breasts should be previously gently washed with a little warm milk and water, in order to remove the bitter viscid substance, which is furnished round the nipple, to defend these parts from excoriations.

When the woman has never nursed before, the nipples at first are sometimes not sufficiently prominent to afford a proper hold for the child. In such cases, it has long been customary to have the breasts drawn, as it is termed, either by an adult, an old child, or even by the young of some of the brute species, as a whelp. In general, however, the degree of violence used on these occasions, is always productive of considerable injury, and therefore more gentle means ought to be employed.

For this purpose, the breasts should be fomented by flannels dipped in warm water, and then a glass or ivory cup, mounted on a bag of elastic gum, ought to be applied in such a manner to the nipple, that it shall draw it out gently and gradually, while, by moderate pressure on the sides of the breast with the hands, the milk is pushed forward.

Another instrument has lately been introduced into practice, which possessing more power, ought to be used with much caution; it consists of a glass-cup, adapted to receive the nipple, to which is added, an air-syringe, with a valve; by working this, the nipple may be drawn out with as great a degree of force as the operator may find necessary. This instrument should never be employed by unskilful people, otherwise it may injure the breast.

After this operation has been repeated two or three times, the child, except in extraordinary cases, will find no difficulty in sucking.

At first, the patient should not be fatigued by the long-continued or frequent application of the child; and when it is applied, she ought to be gently supported by pillows in bed, in a reclining posture, and every precaution must be used to guard against cold.

When the patient does not mean to give suck, every circumstance which can contribute to the secretion of milk should be carefully avoided. Great abstin-

nence should therefore be enjoined ; as little drink as possible taken, and ripe acid fruits, as apples, strawberries, &c. ought to be used, which will assuage thirst; and by proving laxative, will assist to carry off the milk, and prevent its secretion.

The breasts commonly are greatly distended for the first two or three days ; and in many cases, a considerable degree of pain, with sometimes a violent fever, are occasioned. These symptoms, however, are of short duration ; for they generally terminate after twenty-four or thirty-six hours, by a profuse sour-smelling sweat, a gentle looseness, or a copious discharge of milk from the breast.

Many practices have been adopted, with a view of preventing these painful sensations, (termed the Milk-fever) ; but they are more often productive of bad than of beneficial effects.

The best management appears to consist in gently rubbing the breasts, if they be much distended, with warm olive-oil, evening and morning, and covering them with flannel ; a practice which should be begun some time before delivery, whenever the milk is to be discouraged.

If the milk seem to be partially discharged from the breasts, the parts must be kept always dry, and the cup mounted on elastic gum, may be used as already directed.

When women suffer no uneasiness from the distention of the breasts, it would be absurd to have them drawn, either by natural or artificial means ; for such practices often occasion inflammation, with its painful consequences.

One or two doses of any cooling laxative will assist materially the expulsion of the milk, and ought not in such cases to be neglected.

SECTION V.

MEDICINES NECESSARY DURING LYING-IN.

IN some countries, it is customary to prescribe a great many different medicines for several days after delivery ; but in general, such practices occasion, instead of preventing, many disagreeable complaints, and therefore ought to be exploded.

All the temporary pains which the patient feels in consequence of labour, are more readily removed by rest, than by any other means ; hence that appears to be the circumstance which requires the principal attention. Where opium does not disagree with the patient, she should be given thirty drops of laudanum, or a grain opium pill, immediately after delivery. But where these cannot be prescribed from peculiarity of constitution, twenty or twenty-five grains of fine fresh powdered Russian Castor may be substituted in their stead, with the same good effects.

The calm refreshing sleep, to which the patient has a natural tendency after the fatigue of delivery, assisted by these means, will contribute much more to take off the soreness of the throat and breast, generally felt after labour, than any medicine that the shops can furnish.

But if the patient have been accustomed to take many medicines, or if she have great confidence in their powers, she should be allowed something simple ; which not possessing any active qualities, cannot hurt her, while her expectation of its supposed good effects, will make her fancy them really accomplished : an

emulsion of almonds will be found to answer this purpose very well.*

The opiates should be continued for several nights, till the woman can rest without them, and till the after-pains, to which many are subject, have entirely subsided.

Many troublesome and painful complaints unavoidably occur, if proper attention be not paid to the state of the belly during lying-in. In the evening of the second, or on the third day after delivery, a gentle laxative should be exhibited, if the patient have not had natural passage; and the same ought to be repeated every second day, if necessary.

Some of the common laxative medicines are improper in the child-bed state, from the sickness, pain in the belly, or fatigue which they induce, and therefore great caution is required in the choice of such medicines. Two tea-spoonfuls of calcined magnesia, or a dose of the laxative electuary, described in the forms of medicine at the end of this work, appear to me preferable to any other.

When the patient has not the common prejudice which prevails in Great Britain against the use of *Lavemens*, these, consisting of the most simple materials, as warm water, with a little fine olive-oil, and two tea-spoonfuls of salt, should be used occasionally for the first few days after delivery, instead of laxative medicines; as the effects of these latter, in the irritable state of the woman's stomach at that time, must be always somewhat uncertain.

* See forms of medicine at the end of this work.

CHAPTER II.

COMPLAINTS WHICH OCCUR AFTER DELIVERY.

FROM the view which has been exhibited of the situation of women during and after labour, it will appear evident, that under certain circumstances, many complaints must occur after delivery.

Some of these, though productive of much uneasiness, and apparently formidable, are attended with no danger, and yield to the most simple treatment; others, on their first approach insignificant and trifling in the opinion of superficial observers, suddenly terminate in the most alarming symptoms.

The former of these classes of disorders forms the subject of the present chapter.

SECTION I.

INJURIES IN CONSEQUENCE OF DELIVERY.

FROM the bruises occasioned by the passage of the child through parts which are very delicate, and easily injured, women are often subject to swellings externally, even in the most ordinary cases.

These in general subside soon after delivery, and require no particular management ; but wherever, from the sensation of throbbing pain, and great heat, there is reason to dread inflammation with its consequences, the most active means must be employed to prevent the threatening evil.

These parts seem to have a great tendency to supuration ; and therefore too much caution cannot be recommended, to avoid injuring them by officious interference during labour ; nor can too much attention be paid to prevent the bad consequences of inflammation, when it has been by any cause induced.

Women are sometimes torn by their delivery having been hurried on before the passages were properly prepared. When these injuries are slight, nothing more seems necessary than to keep the parts clean and dry ; but when they are considerable, they sometimes baffle every exertion of art, and prove the cause of the most uncomfortable state to which women can be reduced.

After difficult or tedious labours, the patient is in many cases rendered incapable of retaining her water, consequently she is kept in a very disagreeable situation. This complaint, on some occasions, continues for a few days only ; and in other cases it remains for many weeks.

When no injury has been done, either by the improper use of mechanical expedients, or by the long-continued pressure of the child on parts naturally of a delicate structure, by proper attention this very troublesome disease may be easily removed.

The use of the cold bath, as soon as the woman can bear it, or the application of cloths dipped in cold water and vinegar, in the most simple cases, will effect that purpose. But where the complaint is more obstinate, besides the use of internal strengthening reme-

dies, a blister should be applied to the under part of the back-bone.

When this disease proceeds from any cause which can occasion a loss of substance in these parts, the cure has been hitherto almost entirely left to nature ; or in other words, the patient has been allowed to suffer the disagreeable sensations attending such a state, without any attempts being made to alleviate them.

From my own practice in these cases, I have reason to believe, that it is very often in the power of a skilful practitioner, at least to palliate the troublesome symptoms, an object which ought always to be aimed at.

SECTION II.

FAINTINGS AFTER DELIVERY.

THE languid state in which many women are immediately after delivery, is sometimes succeeded by Faintings. If no injury have been done during labour, and if the pulse and breathing be distinct and regular, little hazard is to be dreaded. On such occasions, the complaint may be attributed to the peculiar state of the body and mind of the patient at that time.

These faintings are readily removed by the exhibition of any simple cordial, by keeping up a free circulation of air in the room, and by gentle pressure (by means of a soft warm compress) on the belly.

But when the faintings succeed any violent injury of the passages through which the child proceeds, or a profuse discharge of blood, or when they are attend-

ed with quick irregular pulse and cold extremities, the greatest danger is to be apprehended.

Recourse must then be immediately had to the advice of a skilful practitioner; and till that can be procured, the patient should be supported with light nourishment, and gentle cordials, if she can swallow; warm flannels ought to be applied to the stomach and belly; and bottles or bladders filled with warm water should be put to her feet.

In these cases, it is very common for the attendants to endeavour to rouse the patient, by the application of various substances to the nose, as smelling salts, hartshorn, spirits, &c. But such practices are very improper; for when the patient is in a languid irritable state, any stimulating medicine, rashly snuffed up, might endanger suffocation; or by exciting violent coughing or sneezing, would induce excessive flooding, which, in a few hours, might prove fatal.

When the faintings are accompanied with excessive discharge of blood, the patient should be exposed freely to the air, by opening the windows and doors of the room; cloths dipped in cold water should be kept constantly applied to the bottom of the belly; and in short, every means should be employed which can retard the circulation of the blood, and assist the contraction of the womb.

After the discharge, by a proper perseverance in these means, has been stopped or moderated, the patient must be kept very quiet, her drinks should be perfectly cold, and the room ought not to be heated, otherwise a return of the complaint may be dreaded.

SECTION III.

AFTER-PAINS.

FOR some time after delivery, the contractions of the womb frequently continue, and occasion pains, which in some cases are so violent, as to resemble the throes of labour. This complaint, termed *After-pains*, though productive of considerable uneasiness, is never to be considered as dangerous; for even in the most urgent cases, the sufferings of the patient from this cause are merely temporary.

After-pains are occasioned by clots of blood being formed in the cavity of the womb, and exciting contractions in that organ, by which they are expelled. They occur more seldom in first than in subsequent pregnancies; a circumstance that probably proceeds from the womb not contracting so readily and uniformly after several deliveries as at first.

As several other complaints may be mistaken for After-pains, by which the proper opportunity for endeavouring to prevent their progress may be lost, the circumstances that distinguish After-pains from every other disease, ought to be universally understood.

When the pains are alternated with intervals of ease, when the breathing is not impeded, when every pain is succeeded by the expulsion of coagulated blood, and when pressure on the belly does not excite nor aggravate the pains, even although a degree of sickness and fever attend, the complaint may be considered to be After-pains. But if the pain be constant, or if it shift its situation, some other disorder should be suspected.

The uneasy symptoms of this complaint may be

palliated by the application of warm flannel to the belly, or by fomentations with bladders, half-filled with warm water, and by opiates, (as thirty-five drops of laudanum) repeated every eight or ten hours. The belly should also be kept open by simple *Lavemens*.

When cholic or wind in the bowels are complicated with After-pains, asafoetida or laudanum may be added to the *Lavement*. In proportion as the red colour of the cleansings diminishes, the After-pains abate. But they generally return when the milk begins to distend the breasts.

SECTION IV.

IRREGULARITIES OF THE LOCHIAL DISCHARGE.

THE nature of the Lochial discharge has been already hinted at; but its appearance and duration vary so much in different women, and in the same woman on different occasions, that they cannot be accurately ascertained nor described.

The quantity of blood which was sent to the womb during the latter months of pregnancy, cannot be suddenly diminished, otherwise many complaints would be induced; hence this discharge for two or three days after delivery, has almost the appearance of pure blood, and furnishes an excellent means for carrying off the overload from the system.

By degrees, however, the size of the blood-vessels becomes diminished, their extremities contract, the thinner part of their contents is alone expelled, and at last, the evacuation ceases entirely.

In some cases this regular succession does not take place ; for the red colour of the discharge sometimes disappears, and recurs now and then, till the womb be reduced to its original size, and have again acquired its former structure.

The Cleansings in some women are very abundant, especially in those who do not nurse ; in others, they are in small quantity ; and yet, in general, neither of these circumstances seem to have much effect on the health of the patient, unless they occur in the extreme ; in which case, when too profuse, all the complaints originating from weakness are occasioned ; and when too scanty, if no other discharge be increased, all the consequences of too great fulness are felt.

When the Lochial Evacuation continues beyond the ordinary time, or is excessive, and seems to weaken the woman, it proceeds either from injuries done during delivery, or from a previous diseased state of the body.

Although in such cases the treatment must be varied according to the cause, and consequently a variety of management will often be necessary ; yet in general, by doses of Peruvian bark, either in the form of powder or of decoction,* along with the elixir of vitriol, the discharge may be moderated, and the strength of the patient supported.

When this complaint does not yield to such simple remedies, the advice of an experienced practitioner ought to be had recourse to, that means may be adopted for preventing the train of nervous disorders, which commonly succeeds profuse evacuations.

Deficient cleansings are more often the effect than the cause of other complaints, and therefore are remedied by the removal of the disorder from which they originate. It cannot, however, be denied, that ob-

* See Forms of Medicines in the Appendix.

struction of that discharge may be occasioned by sudden exposure to cold, or by irregularities in management, and is then an original disease. This may be distinguished from the former complaint, by the violent symptoms of fever which attend, and by the history of the previous state of the patient.

In these cases, the return of the evacuation is promoted by the application of warm fomentations to the belly, by the use of warm diluent drinks in small quantities often repeated, as gruel with a little wine, white-wine whey, &c.

When the symptoms of fever are alarming, doses of saline julep, with the addition of four or five drops of antimonial wine, every two or three hours, or three or four grains of genuine James's powder, repeated at the distance of seven or eight hours, afford the best means of relief.

The importance of *Cleanliness*, as long as the Lochial discharge continues, does not require being pointed out; but when the evacuation has a bad smell, common attention in that respect is not alone sufficient; for unless the most scrupulous regard be paid to prevent its stagnation in the passage of the womb, excoriations, or inflammation with all its formidable consequences, will ensue. The nurse must on such occasions be directed to wash that organ, by means of a proper apparatus, twice or thrice a-day with warm milk and water, or with an infusion of chamomile flowers.

SECTION V.

DISEASES OF THE BREASTS.

THE structure of the Breasts, already explained,* renders them the frequent seat of disease. Some of the disorders to which they are liable, can be readily removed when they first appear; but if neglected, become painful to the patient, and troublesome to the practitioner. Others can be more easily prevented than cured.

In a work of this kind, although the nature of all these diseases ought to be explained, the treatment of many of them must be necessarily passed over, as it should be referred to the care of medical practitioners, and ought never to be undertaken either by the patient herself or the attendants.

When, along with the symptoms which are occasioned by the determination of milk to the breasts, any hardness or painful swelling is felt in either of these organs, if these do not subside after the child has been applied, and the treatment formerly recommended has been pursued, immediate attempts ought to be made to prevent the progress of inflammation, by the use of a large poultice, formed of soft bread, and the preparation of sugar of lead, described in a former part of this work.†

If the feverish symptoms be very violent, and the patient be of a full habit, blood should be drawn from the arm, and some gentle cooling laxative ought to be prescribed. The child should be applied when necessary, with the precaution of previously washing the

* Page 31.

† See Page 62.

affected breast or breasts with a little warm milk and water, to prevent the infant from being injured by the medicine.

When, notwithstanding a continued perseverance in this plan, the swelling or inflammation increase, along with hardness, throbbing pain, and heat in the affected part, and general fever, a soft poultice of bread and milk, or of linseed, sufficiently large to cover it, ought to be applied, and renewed as often as it may be supposed to be cold; the breast should be supported by a handkerchief suspended from the neck.

Suppuration will in this manner be speedily promoted, (when that circumstance cannot be avoided); and the matter, as soon as it is well formed, should have an outlet by the use of the lancet; which, though apparently formidable, causes much less pain, than if the opening were trusted to nature.

The sore may be afterwards dressed by a pledgit formed of Basilicon or Spermaceti ointment, spread on soft charpee; and while pain, inflammation, or hardness continue, the poultice should be applied over the dressings.

It must not be concealed, that the cure of boils in the breasts will always be more or less troublesome, according to the seat of the disease; for when they are situated deep, they are generally tedious in their progress to suppuration, exceedingly painful, and attended with a considerable degree of fever, by which the constitution is often impaired, and great weakness induced. In such cases, the patient is unable to continue to nurse her child.

But if these boils be quite superficial, they soon suppurate, commonly burst spontaneously, and affording a free exit to the matter, heal kindly and speedily; and not only do not impede sucking, but often occasion little uneasiness.

The Nipples, from the delicacy of their structure,

are very liable to be injured by the action of the child's mouth in sucking, along with the irritation which the stagnant milk occasions, unless they be kept very dry.

The most simple and favourable disease proceeding from these causes, is excoriation, or great degree of tenderness in the nipples; which, although the source of considerable pain, ought not to prevent the patient from giving suck. Women are subject to this complaint more frequently while nursing their first or second child than afterwards; for the nipples lose much of their sensibility by use.

In the treatment of this disease, the great object to be attended to, is, to remove, as much as possible, every circumstance which can tend to irritate these parts.

With this view, the nipple ought to be washed frequently with any gently stimulating liquor, which can diminish its sensibility; as brandy and water, a weak solution of alum, or of sugar of lead in rose water, &c. The milk should be prevented from wetting these parts, by the application of broad breast glasses, or rings of boxwood, ivory, or lead: The latter of these are commonly used in this country; they are well adapted for keeping the nipples cool, as well as dry, and for defending them from injuries from the woman's clothes. All these rings should be constructed in such a manner, as to allow the nipple to protrude through them.

An artificial nipple, covered with a prepared cow's teat, has been lately invented, as a protection to the sore nipple; and where the child can suck through it, which is not always the case, it proves exceedingly useful, and saves the woman a great deal of pain.

The sore breast ought to be favoured as much as possible; and if both be affected, the same purpose may be accomplished, by procuring the assistance of

a milk-nurse, to take care of the child during the night. Whenever any medicine is applied to the breast, it must be carefully washed off with a little warm water before the child be allowed to suck.

When, instead of pursuing these means with proper perseverance, sore nipples are neglected at first, they often prove distressing in the highest degree to the patient, and it becomes very difficult to stop the progress of the disease. Deep sores are occasioned, which resist the power of every remedy in many cases, as long as the woman gives suck, and which may terminate in the total destruction of the nipple, if she persevere in nursing.

These sores or chops require very particular management. When the mother is anxious to nurse, if they be not very deep, although a cure cannot be soon obtained, the disease may be rendered supportable, and the pain considerably lessened, by proper dressings, till the sensibility of the parts be diminished, and a favourable turn given to the complaint.

The art of dressing these chops consists in applying to the sores a small strip of charpee, dipped in a solution of sugar of lead, or alum, and covering the whole with a piece of old clean linen, spread with a liniment, composed of white wax, spermaceti, and oil of almonds, or the common spermaceti ointment.

The dressing should be continued as long as possible, and ought to be removed only two or three times a-day, in order to allow the child to suck; before which, the precautions already suggested must be observed.

When the chops do not heal by these means, the child ought to be removed, and given to a milk-nurse, otherwise the whole breast may be destroyed.—In obstinate cases, the sores should be touched by means of a fine hair pencil, with the liniment described in the Forms of Medicine, which often produces a cure

in a very short time, after every other method has failed.

Women who have been subject to sore nipples should endeavour in future to diminish the sensibility of these parts, by applying to them, for several weeks previous to delivery, cloths dipped in alum-water, in strong spirits, or in the pickle of salted meat boiled; which latter has been recommended as an infallible specific for that purpose.

When little sores appear in the brown circle surrounding the nipple, and correspond with similar appearances in the child's mouth, or other parts of its body, a medical practitioner should be immediately consulted. The case is more urgent, if hard swellings in the arm-pits of the nurse have already begun to appear.

SECTION VI.

PAIN ABOUT THE LOWER PART OF THE BELLY, IN
THE LOWER EXTREMITIES, &c.

PAIN about the bones and fleshy parts at the bottom of the belly, and in the thighs, originates from rheumatism, separation of the share-bones, and an affection of the glands within the groin.

Rheumatic Pains—occur principally about the hips, the back part of the pelvis, and the thighs. They are known by the gnawing burning sensation which attends them, by their being most violent during the night, and by their not being invariably aggravated by moving. They are sometimes accompanied by feverish symptoms.

These pains are the effects of cold, and prove only of temporary duration. Different modes of treatment are required in different cases, such as bleeding, medicines which promote perspiration, and blisters. In every instance, rubbing the affected parts with Anodyne or Opodeldock balsam, and covering them with soft flannel, must prove beneficial.

Separation of the Share-Bones—is the effect of some former accident, of severe labour, or of inflammation within the joint which connects these bones. This affection is distinguished from every other, by the pain being uniformly increased or excited upon the slightest motion of the lower part of the body, and by feeling the share-bones rasp against each other when either leg is moved.

The treatment must depend upon the cause. Where these bones have been separated by a blow or a fall, at a former period of life, they only require being held together by means of a broad belt, till the patient have regained strength. The cold bath, whenever it is proper, should be used evening and morning, as it tends greatly to the accomplishment of that object.

Where the separation is the consequence of a hard labour, a variety of means must be adopted in different cases.

Suppuration within the joint is a very rare occurrence. Its progress is tedious, and its termination uncertain; and therefore very particular attention ought to be bestowed upon the case from the beginning.

The patient always continues lame till the bones be re-united.

Affection of the Glands within the Groin.—This consists of a swelling and inflammation of the glands near the flank, which arise from injuries during labour, or exposure to cold, or the inflammation of some neighbouring part, or the irritation of the cleansings.

This disease takes place at different periods after de-

livery, from the fourth or fifth day to the seventh week. It is ushered in with pain in the back, smart fever, and painful stiffness in one groin. Soon after these symptoms the thigh begins to swell, and gradually the swelling is extended to the whole limb, so that in a short time it is double the size of the sound limb. It is rather pale-coloured than red; and hence in some parts of England it is called the *white leg*. It is hot, shining, very painful on being touched or moved; and at first it does not pit when pressed upon by the finger.

When left to nature, this complaint generally proves tedious and distressing. The swelling begins to subside at the upper part of the thigh; hard knotty bumps can then be felt along the back part of the limb; many weeks elapse before the patient can use the leg; and most commonly great weakness of it remains for years. Some women have been rendered hectic, and others dropsical, by the long continuance of this disease.

By active treatment at the beginning of the complaint, its progress may be certainly stopped. The application of flannels soaked in hot vinegar, or of leeches, or of a blister, to the groin, brisk laxatives, friction with Anodyne balsam, &c. when the swelling begins to subside, the continued use of certain diuretic medicines, and attention to the state of the cleansings, are severally necessary, according to circumstances, of which a medical practitioner can alone be the proper judge.

Cramphish Pains—in the thighs and legs, sometimes attend after-pains, and sometimes arise from bilious cholic. The treatment of them must therefore be varied, according to the nature of their cause.

CHAPTER III.

FEVERS AND INFLAMMATORY COMPLAINTS
IN THE CHILDBED-STATE.

IF the management during labour, and after delivery, which has already been fully pointed out, be carefully observed, there is little hazard that fevers, from any cause, (unless the temporary symptoms induced by the milk be so styled), shall occur to interrupt the progress of recovery.

But when, by imprudent treatment, the patient is exposed to any exciting cause of fever or inflammation, it can be easily understood, that from her peculiar state after delivery, the danger arising from a disease, the event of which is always uncertain, must be proportionally increased.

In this chapter, the nature of the Fevers and Inflammations which originate from improper management is explained ; but as their treatment should be entrusted to skilful practitioners alone, the means for preventing their occurrence or progress, are more fully detailed, than the method of cure.

SECTION I.

IRREGULAR FEVERISH ATTACKS.

WOMEN are subject, for two or three weeks after delivery, to irregular feverish attacks, if they happen to be imprudently exposed to cold, or have not paid sufficient attention to those regulations in their management with respect to diet, repose, &c. already explained.

These feverish fits, styled in this country *Weeds*, differ from other fevers in duration, for they seldom continue above twenty-four or thirty-six hours.

They begin with universal cold, and violent shivering, accompanied with headach, pain in the back, and sometimes with sickness. After these symptoms have continued for some time, a great degree of heat succeeds, followed at last by a copious sweat, which terminates the disease, but leaves the patient considerably weakened.

Irregular fevers of this kind are seldom productive of any immediate danger ; but from the disposition to future attacks which is always induced, a foundation is laid for subsequent complaints, especially if proper treatment be not pursued.

Symptoms resembling these irregular feverish attacks precede inflammation of the breasts, or of some of the organs necessary to life, and have often been mistaken for them. There is, however, an obvious distinction between these disorders ; for when inflammation has taken place, there is always a fixed pain in the affected part, and the state of the pulse is very different in the irregular feverish complaints, which form the subject of this section.

In the treatment of weeds, little aid from medicine is in general necessary ; for proper attention to the following simple management will commonly be sufficient to overcome the disease, and prevent its return.

During the cold fit, the endeavours should be directed towards restoring warmth to the patient ; but the means usually pursued for this purpose are highly improper ; for ignorant attendants, with this view, heap on great loads of bed-clothes, and pour in quantities of heating and stimulating drinks, by way of cordials, which readily induce violent delirium, or a more obstinate fever. No real advantage can be derived from additional bed-clothes ; because, by their weight, difficult or oppressed respiration may be occasioned.

If the shivering be excessive, warm flannels should be applied to the stomach and belly, and the same, or bottles filled with warm water, ought to be put to the feet.

Warm diluent drinks, as orange-whey, barley-water, gruel, weak wine whey, &c. may be freely drank, and should be always prescribed. When the patient is very weak or low, a small proportion of wine is necessary ; but that ought to be avoided, if possible. If there be reason to believe that the stomach is disordered, which may be discovered by the appearance of the tongue, and by the sickness that attends, gentle vomits are necessary.

When the hot fit begins, the drinks should be continued, a free circulation of cool air in the room must be encouraged, and the patient should be lightly covered with bed-clothes. It is vulgarly imagined on such occasions, that heat is absolutely requisite to promote perspiration : but the very contrary is the case ; for when the pulse is very quick, and the body hot, sweat can only be induced by lessening the quickness of pulse, and heat of the body. This is to be accom-

plished by a strict observance of the cooling regimen ; and for this purpose, along with cold drinks and ripe fruits, the saline or nitrous julep will be found beneficial.

By these means, the burning heat and thirst of the woman will be removed, the pulse will become regularly moderate, a gentle moisture will appear over the whole body, and a complete relief from all uneasy sensations will be felt.

The perfect recovery of the patient, however, ought not to be considered as completely established when the sweat comes out ; for unless careful and judicious treatment be still pursued, a return of the disease may take place. For if excessive perspiration be protracted too long, or checked suddenly, the effects will be equally hazardous. In the former case, nervous complaints or eruptive fevers may be dreaded ; and in the latter, a second and more severe attack of the feverish symptoms may with reason be expected.

The sweating, when moderate, ought therefore to be encouraged, by warm diluent drinks, for six or eight hours ; and then if it do not stop, the drinks should be given in small quantity, very seldom, and made less warm. The bed and body linens must be shifted, and dry clothes (previously warmed, but not much heated) substituted in their stead.

When costiveness occurs during the course of the complaint, it may be obviated by gentle laxative *Lave-mens*.

The return of this disorder is to be prevented by an attention to proper management, and especially by guarding against those circumstances which probably occasioned the disease. The diet should therefore be suited to the constitution of the patient : food ought in general to be very light, and of easy digestion. Where a disposition to nervous affections prevails, and where the patient has been accustomed to a full

rich diet, the food must be more solid and nutritious than in other cases, and a moderate proportion of wine should be allowed.

The Peruvian bark, or preparation of myrrh, when any strengthening remedy is necessary, ought to be prescribed.

In the irritable state of lying-in women, passions of the mind prove a frequent cause of irregular feverish attacks: they may be moderated by opiates.

Many women are subject to these complaints, from the interruptions in their nights rest which arise from nursing. When this happens, the means for curing and preventing the disorder obviously consist in relinquishing a task for which such women are very unfit.

SECTION II.

ERUPTIVE OR RASH FEVER.*

THE improved method of treating lying-in women, now almost universally adopted in this island, fortunately renders the appearance of the *Rash Fever* much more uncommon than formerly.

This disease varies in its symptoms in different women, and even in the same woman on different occasions, where the repetition of improper treatment subjects the patient to another visit of the complaint in a subsequent lying-in.

The most rare form of the disease is ushered in with the following symptoms, viz. shivering, head-

* This complaint is styled in Medical language the MILIARY FEVER.

ach, sometimes vomiting, cold extremities, dull eyes, disturbed sleep, weak quick pulse, and an almost total stoppage or great diminution of the usual excretions. These complaints continue for a considerable time, and are attended with remarkable dejection of spirits, and excessive desponding anxiety, and at last are followed by a sudden and violent sour-smelling sweat, pricking of the skin, and an eruption. Some time before this appears, the pulse becomes more full and strong.

The eruption or rash is at first confined to the neck, breast, and arms, but it soon spreads over the whole body, and seldom affects any other part of the face than the brow. The appearance of the eruption varies according to the constitution of the patient, or rather according to the situation in which she is when the disease takes place: it most generally occurs in the form of red distinct very small pimples, which can be felt to be prominent, and are more perceptible to the touch than to the eye; but sometimes these are white or yellow, except at the base. The former of these eruptions, (commonly distinguished by the name of *Rush*,) is more favourable than the latter, which affects only those patients who are much weakened, and have a disposition to complaints attended with symptoms of putrescency.

The duration and consequences of this fever are as various as the constitutions of the patients whom it attacks. In the mildest species of the disease, the eruption and feverish symptoms continue three, four, or five days, and are followed by a considerable degree of weakness, which, however, yields in a short time to proper management. But when the pimples are white or yellow, they often continue a long time; for as one crop disappears, another, after some interval, is produced, even to the third or fourth succession:

In such cases, the weakness is much greater than in the other species of the eruption.

The event of Rash Fever may always be expected to be favourable, when the distressing symptoms abate on the appearance of the eruption ; but if this do not happen, if the pulse continue small and weak, if frequent cold fits occur, if fetid stools be passed involuntarily, and if convulsions attend, much danger is to be dreaded.

The cure of this disease, depending on a variety of circumstances, cannot be restricted to any particular method.

In the beginning of the fever, if sickness attend, a vomit should be prescribed ; and in every case, gentle laxatives are necessary and beneficial : Where the cold fits are very frequent, or there is reason to dread delirium, fomentations, by means of flannels, wrung out of warm water, applied to the legs and thighs, are often of service ; they should also be employed where the eruption suddenly recedes. These fomentations must not be used too hot, nor continued so long as to force out profuse sweats.

Every means which can moderate the heat of the body and the quickness of the pulse, ought to be used when the eruption comes out ; a free application of cool air is therefore particularly necessary : If the woman have been previously kept very hot, the change must be made in a gradual manner. The nitrous mixture, cool acid drinks, ripe fruits, and a light diet, should be recommended.

When the patient is much weakened, and the rash is white or yellow, the Peruvian bark ought to be given in suitable doses.

If the pulse continue weak after the eruption, wine, along with the bark, in a quantity proportionate to the state of the patient, will be found useful.

The most common varieties are, where the erup-

tion follows continued sweating, or the sweating stage of the milk-fever, or some disease productive of great weakness, or where it is preceded by violent fever, pain in the head, chest, or bowels, and evident symptoms of some internal inflammatory affection.

The circumstances which occasion these varieties of the disease, certainly originate from improper treatment after delivery ; for whenever a woman in such a situation is confined within a heated room, oppressed with a great quantity of bed-clothes, and forced to drink stimulating liquors, with the view of promoting a sweat, according to the absurd and pernicious customs formerly observed in the treatment of lying-in patients, she is almost always seized with Rash Fever. A disease of the same nature, it may be mentioned, in confirmation of this opinion, sometimes succeeds the same treatment of men who have been weakened by profuse evacuations.

These varieties of Rash Fever can therefore be generally prevented, though when they have taken place, they are not easily remedied. If any arguments in addition to those already adduced, were necessary to enforce the observance of the plan formerly suggested, for the treatment of women after delivery, the history of this complaint would furnish some very powerful ones.

In some *rare* cases, *Blood-letting* is necessary ; but much judgment is required to distinguish the propriety of having recourse to such a practice ; because, if it be employed where the symptoms of inflammation are not violent, it is a very dangerous expedient. The fulness of the pulse when the eruption appears, is apt to impose on inattentive practitioners, and to lead them into much error.

The Peruvian bark, opening medicines, cordials, blisters, and a variety of other means suited to the exigency of the particular case, must be had recourse to.

SECTION III.

INFLAMMATION OF THE WOMB.

INFLAMMATION of the womb commonly occurs at some time between immediately after delivery and the fifth day, though in some cases later. It is generally preceded by shivering, which is followed by intense heat, quick hard pulse, great thirst, &c. A violent pain in the womb is felt from the beginning: it gives the sensation of fulness and weight, with throbbing and burning heat in the part. The immediate seat of the pain depends on the particular part of the womb which is affected. In some cases, therefore, it extends towards the navel, or is confined to above or below the share-bones; in others, it strikes backwards, or down both thighs; and when that part of the uterus in contact with the bladder is the seat of the disease, great pain and difficulty in making water are felt, and sometimes even a total suppression is occasioned.

When inflammation of the womb takes place during the red-coloured lochial evacuation, that discharge is soon sensibly diminished, or ceases entirely.

This disease is distinguished from after-pains, by the pain being constant, and not, as in that complaint, alternated with intervals of ease; and by the sensation occasioned being very different from that of after-pains; for along with these, no throbbing pain, attended with burning heat, is felt, but merely grinding-pains, like the throes of labour.

Many causes tend to induce inflammation of the womb; such as, difficult or tedious labour, artificial efforts to contract the child and its appendages impro-

perly conducted, the exhibition of heating and stimulating drinks, &c. during or after labour, exposure to cold after delivery while the woman perspires freely, or the immediate application of cold to the womb while the cleansings flow.

Inflammation of the uterus terminates as the same disease in other parts of the body ; but from the great sensibility of the womb, and its extensive influence on other parts, together with the state of the contiguous organs in the belly after delivery, its event must be always very precarious, even where suppuration takes place. When mortification is the consequence of this formidable complaint, the fatal termination happens within a short time from the beginning of the disease.

As the progress of inflammation of the womb is always rapid, if not stopped when it first appears, the life of the patient must often depend on the original symptoms being properly understood.

If the fixed throbbing pain, along with hard quick pulse, increased heat, thirst, &c. be disregarded at first, it will not be easy even to moderate the distress, or lessen the danger of the woman. Nurses and attendants should be therefore taught not only to guard against the exciting causes of this disease, but also to dread the occurrence of these symptoms, and to take the earliest opportunity to mention them to the medical assistant.

When the practitioner is called in at the beginning of inflammation of the womb, its progress may be not unfrequently stopped by blood-letting, the injunction of a very spare diet, plentiful dilution with cool acid drinks, by clearing out the bowels by means of gentle laxative medicines, or *Lavemens*, and by fomentations applied to the belly. When this treatment is successful, an universal sweat takes place, with an evident remission of the painful symptoms.

But if this do not happen, and on the contrary,

the pain become more acute, with increased throbbing, and a greater degree of fever, together with sickness, delirium, or much restlessness, the inflammation may then be expected to terminate either in mortification or suppuration. In the former case, the languid state of the pulse, the low delirium, and clammy sweat, will sufficiently indicate the event : But in the latter, the pulse continuing firm and full, and the throbbing pain becoming more violent, shew that suppuration will ensue.

Mortification most generally occurs where the body has been previously much weakened, or where the habit is very bad. Practitioners who are not called till the disease have continued for some time, should pay much attention to the situation of the patient. If they mistake the fulness of the pulse which takes place while the suppuration is going on, and order blood-letting at that stage of the complaint, the suppurative process will be either interrupted, and gangrene induced, or from the weakness that will unavoidably ensue, the unfortunate woman will be rendered unable to resist the debilitating effects of the discharge of matter.

The best outlet for the matter, is by the passage of the womb : But this favourable event does not always happen ; for sometimes it is discharged through the straight gut, but more often by an abscess in the groin, in which case the cure is tedious, and a considerable lameness for a long time is frequently the consequence.

During the discharge, the Peruvian bark, in substance or decoction, should be taken twice a-day ; nourishing diet, with plenty of ripe fruit, ought to be recommended ; the belly must be kept open ; and if the matter come off by the vagina, that organ must be often washed, in the manner already mentioned, in order to prevent excoriation.

SECTION IV.

MALIGNANT CHILDBED FEVER.

PRACTITIONERS differ much in the description of this disease, and in the method of cure which they adopt.

That this fever frequently occurs in consequence of mismanagement, there can be no doubt; but notwithstanding the opinion of many respectable authors, there is reason to believe that it does not *always* originate from improper treatment after delivery.

In opposition to this opinion, it may be urged with much plausibility, that the malignant childbed fever does not take place so often in patients who are under the care of judicious practitioners, as in those who are unfortunately committed to the charge of unskilful persons.

This circumstance, however, can be perhaps explained in a manner which will confirm, instead of refuting the opinion. For it is more than probable, that by proper attention to the first symptoms of this fever, the progress of the disease may be often completely prevented.

Every woman, therefore, should be acquainted with the symptoms which indicate the approach of this disease; for it is only by calling in proper assistance at the beginning, in many cases, that the fatal effects can be obviated.

The malignant childbed fever generally occurs about the evening of the second or third day after delivery; but in some cases, later: The woman is commonly seized with shivering, attended with pain in the head, especially above the eye-brows. This is

followed by a hot fit, succeeded sometimes by a partial moisture on the skin, but much more frequently by several loose stools, which seem to relieve all the symptoms; this however is often a delusive appearance, for a second attack ensues, and the slight remission is only a prelude to an increase of complaints.

After the shivering, the belly becomes universally sore to the touch, which in many cases renders the weight of the bed-clothes intolerable: The soreness is frequently more considerable in one part than another; no swelling nor hardness can generally be at first perceived.

The breathing of the patient, although not oppressed nor interrupted by wheezing or coughing, is very uneasy; for as she feels the pain in the belly always sensibly increased every time she breathes fully, she endeavours to obtain relief, by only half-breathing as it were.

The pulse is quick, in general full and strong at first, but afterwards weak.

These are the principal characteristic marks of this disease; but in every case, other symptoms attend, which vary according to the constitution of the patient, and many other circumstances.

On some occasions, this fever begins with violent sickness and vomiting, or severe looseness; and in other cases, the belly is quite bound for the first day or two. When vomiting occurs, the matter thrown up at the beginning is yellowish; but when this symptom takes place towards the fatal termination of the complaint, it is somewhat like coffee-grounds; the stools, commonly loose, are always very fetid.

The urine is at first passed with difficulty, or totally suppressed till after a stool or two; it is of a dark colour; and on being set at rest, a sediment appears half floating near the bottom of the glass.

In many cases the Milk and Lochial discharge ap-

pear to be natural for the first day or two of the disease. Sometimes there is no secretion of the former ; but the latter is very seldom suddenly stopped.

The skin in some patients is in the ordinary state ; both with respect to heat and moisture ; but in others it is very hot and dry at first, and afterwards in the upper parts of the body is covered with a clammy sweat.

The face is commonly flushed, the eyes sunk, and the patient seems remarkably dejected. She has usually thirst, and is so uneasy that she can only lie on her back.

After a day or two, the belly begins to be swelled, and becomes tense.

If the woman have been costive at first, the looseness which succeeds generally occasions much immediate relief. But the ease is merely temporary ; for the pulse continues quick ; the pain of the head, uneasy breathing, soreness of the belly, soon return with increased violence ; the teeth become covered with a black or brown crust ; and sometimes delirium supervenes. Little white spots, too, sometimes appear in the mouth and throat.

These symptoms, or many of them, continue for some days ; the patient at last passes several fetid stools, usually involuntarily. She then imagines that she is free from all danger, as she feels completely relieved from all pain ; but the increased quickness of her pulse, cold extremities, &c. announce to the practitioner the approaching fatal termination of this dangerous disease. When this happens, it takes place at different periods of the fever, most commonly from the fifth to the twelfth or fourteenth day.

But when the malignant childbed fever does not prove fatal, although all the complaints are milder, yet there is no distinctly-marked critical termination, as in other fevers ; for the symptoms abate very gradually, and the patient can never be pronounced out

of danger for a great many days. She is at last left in a state very much weakened, but relieved from all the uneasy sensations which she formerly suffered.

The nature of this disease cannot be explained, nor the means of cure detailed, in this work. As the complaint is always attended with much danger, and as the treatment in such cases depends on the general principles of cure of fever produced by extensive inflammation, occurring in a state of weakness of the system, it is obvious, that the most skilful practitioner who can be procured ought always to be had recourse to.

The malignant childbed fever occurs frequently in hospitals, when the wards are not kept sufficiently ventilated: On these occasions, the symptoms of the disease are somewhat different from those observed in private families; the event is more generally fatal; and, till the wards be completely purified, every woman delivered in them is seized with the fever.

In every lying-in hospital, therefore, one or more spare wards should be provided, in order to prevent that particular vitiated state of air which originates from a room being occupied by a number of persons for a long continuance of time, even although every precaution with respect to the usual method of ventilation be adopted.

SECTION V.

ACCIDENTAL FEVERISH AND INFLAMMATORY AFFECTIONS.

THE common *low fever* sometimes accidentally happens during lying-in. It is distinguished from other fevers by pain in the head and back, frequency of pulse, foulness of the tongue, and great general weakness, without any affection of the belly or of the lungs occurring at the beginning of the disease.

Notwithstanding the delicate state of women after delivery, *low fever* appears most commonly in them in its mildest form; and therefore hectic or dropsical symptoms are more to be dreaded as the result of the disease, than any immediate danger, though sometimes, as in other cases, it proves fatal.

The treatment must be regulated according to the particular circumstances of the individual case.

Anomalous feverish symptoms are on some occasions the consequence of accumulations of bile, and are known by the attending symptoms of nausea, oppression of the stomach, distention or pain of the belly, &c.

The symptoms are merely temporary; but they are always productive of much uneasiness to the patient, and of considerable anxiety to the attendants.

The cure of these complaints depends upon the expulsion of the bile, and on the adoption of proper means to prevent its being again accumulated.

Inflammation of the *Bowels* is very apt to occur during any period after lying-in. It is attended with violent pain in the belly, particularly about the navel, striking towards the back, sometimes relieved by the expulsion of wind, and always increased on being

pressed upon by the hand, with sickness, thirst, feverish heat, and generally with costiveness.

This is one of the most alarming diseases which attacks the human constitution, as it sometimes runs through its course to a fatal termination within a few hours ; and even where its progress is not so rapid, it often baffles every exertion of professional skill.

Immediate assistance should therefore be procured whenever this disease even threatens, and the most active treatment, to allay the inflammation, ought to be pursued.

Inflammation of the *Lungs*, or of the parts lining the *Chest*, is also a very common occurrence in the lying-in state. It generally begins with some degree of shivering, followed by fixed pain in the chest, inability to take in a full breathing, commonly frequent cough, and great heat and restlessness.

This, as well as inflammation of the bowels, is a most fatal complaint. Both are occasioned by exposure to cold, or irregularities of diet.

The treatment of this disease requires the most serious attention, and the most active exertions. If bleeding, and the other means necessary to check the progress of the inflammation, be delayed for even a few hours, the patient may be irrecoverably lost.

Several slight feverish and inflammatory complaints, besides those above enumerated, are from time to time met with in lying-in women, the treatment of which must be conducted upon general principles, and ought to be confided to regular practitioners.

CHAPTER III.

ANOMALOUS COMPLAINTS INCIDENT TO
LYING-IN WOMEN.

FROM the description already given of the condition of women after delivery, it may be readily understood, that various anomalous complaints may take place. In this chapter, those which most usually occur, or which are particularly deserving of attention from their alarming nature, are detailed. But for very obvious reasons, their symptoms and causes are chiefly explained.

SECTION I.

SPASMODIC AFFECTIONS.

CHOLIC is one of the most common diseases of lying-in women. It is distinguished from inflammation of the bowels, by the pain being alternated with intervals of ease, or being aggravated by fits ; by the belly being much distended, and by the pulse being (commonly at least) regular. It must at the same time be remembered, not only that it often requires much attention and practical knowledge to distinguish the two diseases, but also that the one sometimes pre-

cedes the other. The safe rule therefore is, that wherever what appears to be cholic is very violent, medical assistance should be immediately had recourse to.

Cholic is generally the effect of previous costiveness, though, like inflammation, it certainly is sometimes produced by exposure to cold and irregularities of diet.

Laxatives, emollient *Lavemens*, fomentations of the belly, medicines calculated to expel wind, and where inflammatory symptoms threaten, blood-letting, with a variety of other means, must be employed.

Cramp of the stomach or bowels is most apt to take place within ten or twelve days after delivery. It is always occasioned by drinking *cold* or acid liquors.

This disease is so fatal, and so rapid in its progress, that it has been known to destroy life within little more than an hour from the first attack. It ought to be universally known, that the longer it is allowed to continue, the more difficult it is to check its progress.

If cramp of the *stomach* be attended with deadly sickness, a large dose (i. e. two tea-spoonfuls) of spirit of hartshorn, mixed with some hot water, ought to be instantly swallowed; and if that prove of no avail, seventy or eighty drops of laudanum ought to be given, while flannel soaked in hot spirits should be applied to the pit of the stomach. These means may be employed until medical assistance be procured; for although in some cases the cramp is relieved by this practice, it sometimes proves so violent as to require the most active medicines in the most powerful doses, and consequently any delay or trifling may render the situation of the patient desperate.

Cramp of the *bowels* is seldom so suddenly fatal as that of the stomach, but it ought to be treated in nearly a similar way.

SECTION II.

ALVINE FLUXES.

LOOSENESS and *Cholera* sometimes attack lying-in women.

The former of these complaints is to be regarded as serious, only where it has been preceded by costiveness, or where it is attended with pain in the back, and alternated with excessive discharges of blood from the womb.

In either case the disease requires the utmost attention, as its removal must depend upon the cause being ascertained and counteracted. Many deplorable cases have occurred, where inattention to this obvious principle has occasioned the loss of valuable lives.

When costiveness has preceded the looseness, pain generally attends every stool, and a continued irritation is kept up. In such cases, laxative medicines, glysters, and mucilaginous drinks, furnish the best means of cure.

If violent discharges of blood from the womb be alternated with looseness, the cause will be found to be some great irregularity in the diet or conduct of the patient. As the utmost danger is to be apprehended, every possible attention ought to be paid from the beginning. Cooling laxative salts dissolved in a very large proportion of water, and given in frequent doses, with weak nourishment, great quiet, and firm compression of the belly, by means of a flannel roller, sometimes have the effect of stopping the progress of this alarming complaint. But more active and varied treatment is often necessary.

Notwithstanding the great quantity of bile formed during the latter months of pregnancy, *Cholera* is a very rare occurrence during lying-in. The violent vomiting and purging of bilious matter, with the great pain in the bowels and cramps in the limbs, and excessive weakness which attend this disease, characterise it from every other complaint.

Cholera in weakly constitutions is always precarious in its event; but in general, during lying-in, it is more alarming than really dangerous.

Diluents, consisting chiefly of weak beef or veal, or chicken broth, and opiates frequently repeated, are in general sufficient to allay the violence of this disorder.

SECTION III.

DELIRIUM.

DELIRIUM, or wandering of the mind, sometimes accompanies the milk fever, or the weed, and is then only a temporary symptom, which ceases upon the original disease being removed. But sometimes it is the effect of phrensy, or what is vulgarly called Brain fever, or of real mental derangement.

Phrensy is not a common occurrence in this climate. When it does happen, it takes place within two or three days after delivery, and is preceded by restlessness, pain in the head, hurried mode of speaking, great susceptibility of impression in the eyes and ears, and very frequent pulse. Outrageous raving follows, while the appearance of the countenance remains quite natural, and the ordinary excretions go on as usual.

In this, as well as in all serious inflammatory or feverish complaints, the breasts soon grow flaccid, the milk being no longer formed.

This disease proves fatal about the third or fourth day after the attack ; but sometimes its progress is not so rapid, though it is equally mortal. Before death, the raving ceases, the features shrink, the eyes seem glazed, clammy sweat covers the upper parts of the body, the lower extremities grow cold, stertorous breathing supervenes, and convulsions commonly close the scene.

The great circumstance which distinguishes this alarming disease from madness, is, that the ideas are quite incoherent, the patient being incapable of attending to, or comprehending any connected reasoning, and appearing quite unconscious of surrounding objects ; whereas in madness, she can always be awed for a time at least into calmness, and seems to comprehend whatever is going on among those about her.

The threatening symptoms of phrensy can certainly be discovered by an attentive practitioner, and their progress may be checked by active means. But where this disease has been allowed to take place, it has, hitherto at least, baffled all human art.

Mental Derangement, although a most serious affliction, is of short duration when it occurs in lying-in women, if proper management be adopted.

It seldom happens sooner than eight or ten days after delivery, and then appears in the form of a fright from a dream, or some accidental cause of alarm, or in that of some incongruous wish or action. It is commonly unattended with fever, and very rarely at first (unless the wishes of the woman be much thwarted) with outrageous raving. Where this latter circumstance takes place, the violence of temper is exerted against some particular object, and not indiscriminately against whatever presents itself. The reasoning, too,

is rather founded upon erroneous principles, than inconsistent or incongruous.

In some constitutions, very trifling irregularities of diet, or in the regulation of the mind, are apt to occasion this most deplorable malady ; and it is not easy to specify any obvious marks by which this tendency can be discovered. But where the patient has been formerly afflicted with this visitation, there is little doubt, that certain means may be adopted to prevent its recurrence.

Where madness has actually happened, the treatment must be varied according to the circumstances of the case. The most soothing mild conduct ought to be observed towards the patient, and every means calculated to restore good health, and particularly to remove the increased susceptibility of impression of the nervous system, must be carefully adopted.

SECTION IV.

COMPLAINTS AGGRAVATED BY LYING-IN, AND DISORDERS INDUCED BY NURSING.

EVERY disease productive of great weakness, is increased by the state of the system which follows childbearing. Of this description are consumption, dropsy, vitiated condition of the fluids, &c.

Where any of these complaints have certainly preceded delivery, there is every reason to dread their fatal termination before the end of the month. But sometimes symptoms resembling them, arising merely from nervous affections, occur in lying-in women. It is of great consequence, therefore, to distinguish such

cases, in order that complaints which may yield to suitable treatment, may not be neglected, from being considered desperate.

Nurses are liable to two disorders in consequence of the drain of milk proving too weakening for their constitution, viz. constant weakness of the back, excessive languor through the day, violent sweating during the night, gummy eyes, and total loss of appetite; and actual inflammation of the eyes.

These complaints are in some women the natural effects of attempting to give suck; but in general, they may with propriety be attributed to some inattention on the part of the woman; such as allowing the infant to sleep with the nipple constantly in its mouth, not studying regularity in the hours of rest, not adapting her food to the supply of milk which the child may require, &c.

Delicate women, for the purpose of guarding against such disorders, should employ an assistant to give suck to the child during the night, for at least two or three months. It is a mistaken notion, that two kinds of milk are hurtful to the infant.

But where these affections have actually happened, they can only be removed by giving up all attempts at nursing.

MANAGEMENT
OF
INFANTS AND CHILDREN.

INTRODUCTION.

THE Child, when in the womb, surrounded by a fluid which defends it from external accidents, and supplies it with an equable degree of heat, nourished by a somewhat which its own organs do not prepare, and furnished with the vivifying principle of air, by a beautiful and wonderful machinery, may be said to vegetate only.

But when separated from the mother by the process of delivery, it undergoes a great and important revolution. The supply of heat, and protection from injury, must depend on the attention of others; nourishment must be prepared by the digestion of food received into its own stomach; and the benefits of air can be obtained by the operation of breathing only.

Had not Nature bountifully provided for these changes, the human race must have become extinct.

The bodies of infants differ from those of grown persons in many respects, besides the size and external form. A knowledge of these will elucidate the manner of treatment of children in health, and during disease, and ought therefore to be acquired before that subject be considered.

In infants, the nerves are in larger proportion: their powers also are greater: hence many circumstances, as cold, heat, &c. have considerable influence on them, which do not seem to affect grown persons.

All the vessels are much more numerous; their action is more frequently repeated; and therefore the pulse of infants is always very quick, and all the secretions and excretions are more speedily performed, and in greater quantity.

The fleshy parts are more soft, and less distinctly marked; their actions are consequently not so powerful.

The bones are soft, spongy, and imperfect. Those which are afterwards single are generally divided into several portions; and almost all the bones have their extremities or edges in the state of gristle. The bodies of infants, therefore, have not an exact regularity of shape, and are not well supported. Their different parts are not so steadily moved; and the organs lodged in the cavities are not so well defended.

The appendages of the bones are in much larger proportion: hence the moveable and immoveable articulations are less firm.

The cellular substance is also in a greater proportion, which occasions the irregularity in the shape of the soft parts.

All the fluids are more mild and watery, and furnished in greater quantity. The chyle and blood are

more nutritious, and the latter is less acrid. The slimy and gelatinous fluids are more bland ; the bile and urine have very little acrimony.

The skin is more delicate, and beautifully coloured : it is more sensible to external impressions, for the scarf skin is very thin and soft.

The head is large in proportion to the body. Its bones are not indented into each other, but connected by membranous layers : hence the brain, which is very soft, may be readily compressed and injured.

The face has not the expression which it afterwards assumes. The eyes at first have no power of distinguishing objects. They, and their appendages, are remarkably delicate ; and therefore suffer from the slightest accidents. The nose, from the state of its bones, is also much more exposed to injuries ; and the sensibility of its nerves renders it highly irritable : but the bad effects which would often be the consequence of this structure are probably counteracted by the mucus with which its inside is constantly lubricated. The ears for some time, like the eyes, do not appear to possess much power. The mouth is not usually supplied with teeth till some months after birth ; for although formed, they remain under the gums till that time. The lower jaw-bone is divided by a portion of gristle into two pieces.

The trunk of the body is not so firm as to support properly the superincumbent parts, nor to defend the organs contained in it ; for a great part of the spine is gristly, and the breast is entirely so. The ribs indeed are more perfect than many of the other bones ; but they can easily be made to yield from the state of the breast : and the fleshy parts, &c. which surround the belly, being soft and delicate, cannot afford resistance to any circumstance that may injure the bowels.

The lungs, hitherto small, collapsed, and supplied with little blood, immediately after birth begin to perform the operation of breathing, and to receive the whole blood of the body ; which functions continue during life. These organs are at first weak and irritable. The heart acts with considerable force and quickness.

The liver is of a remarkably large size in proportion to other parts, and is not so well defended as afterwards. The gall-bladder is nearly in the same proportion. The stomach differs only in size, and in delicacy of structure ; and the same may be said of the intestinal canal. But in the great guts, a substance different from what is observed in grown persons is lodged : it is a black, viscid, tenacious matter, called in medical language the *Meconium*. The kidneys are lobulated ; and the renal glands are larger in proportion. The urinary bladder, and other organs in the bason, are differently placed, as that cavity is very imperfect, from the gristly state of the bones of which it is composed.

The extremities are weak, and almost useless. The condition of the articulations, and quantity of gristle on the superior and inferior extremities, render them incapable of performing their proper functions for a considerable time.

The changes by which the size and strength of every part of the body are increased, and the perfection of the several organs is completed, proceed gradually, and are not fully accomplished till the period of puberty.

CHAPTER I.

ORDINARY MANAGEMENT OF INFANTS.

FROM the view which has been exhibited of the state of infants after birth, it will be obvious that much attention must be paid to circumstances which in grown persons almost escape notice.

The great mortality of children that prevails among the poor in large cities may perhaps be attributed chiefly to the neglect of the treatment recommended in this chapter; and therefore it cannot be too minutely detailed, nor too implicitly followed.

The circumstances chiefly to be attended to in the ordinary management of infants, relate to cleanliness, clothing, food, air, and exercise.

SECTION I.

CLEANLINESS.

THE skin at birth is covered in many places with a thick glutinous matter, which may perhaps be designed to defend the infant from injuries during its residence in the womb.

The first washing should be performed with very great gentleness and caution, by means of warm water, which is preferable to any of the washes often employed. Spirits are highly pernicious; and great

sy substances can never be useful, and may perhaps prove hurtful. The neck, arm-pits, and groins, commonly require more attention than any other part, because the scurf is thicker on them; and rough rubbing, especially on the latter parts, might be very injurious. Long continued attempts to bring off every supposed impurity, however gentle, should never be allowed; for what remains will readily yield to the next washing.

The most scrupulous attention to cleanliness in other respects, not only after birth, but during the whole period of childhood, cannot be too strongly inculcated. For the first two or three weeks, the infant should be bathed, morning and evening, in tepid water, and afterwards in cold water. The whole body ought to be washed in the morning, and the lower half at night.

The advantages of the cold bath have been long almost universally understood in Great Britain; and in this part of it at least, children are very properly bathed in it every morning till two or three years of age. Speculative philosophers only have objected to a practice which is highly beneficial to health.

Every part should be kept quite dry; and all accidental impurities, as wet cloths, &c. must be removed as soon as discovered.

By a very little attention, infants may be taught to make water and to expel the excrements at stated times; and therefore, except in cases of disease, the cloths should never be wet nor dirty. A little timber pot may be employed to receive the natural discharges from within a fortnight after birth.

SECTION II.

CLOTHING OF INFANTS.

THE unnatural tight swathing in which children were formerly incased is now fortunately exploded ; and long established custom has in this respect happily yielded to the suggestions of reason and experience. The stricture of bonds and rollers must not only be painful, but hazardous ; for by these means the circulation is interrupted, and the growth in some parts is suddenly checked ; while in others it is improperly directed.

Perhaps, however, theoretical reasoning might lead into an opposite error to what is now abolished ; for the wish to allow the child all the ease possible, may make those precautions in the dress which the experience of nurses teaches them, appear unnecessary or improper.

The disposition, therefore, which infants usually have to rub their eyes with their little hands, renders the simple contrivance of the women to prevent this circumstance essentially requisite, otherwise the eyes may be much injured.

The cries of the child are very apt to occasion a protrusion of the intestines at the navel. This disagreeable accident may be often prevented by the application of a soft broad piece of thin flannel, in the form of a roller. It should never be made too tight, otherwise it may not only hurt the bowels, but perhaps induce ruptures at the lower part of the belly.

With these precautions, the clothing of infants should be light and simple, constructed in such a

manner that it may be easily and readily applied. It ought to be suitably adapted to the climate and season, and should always be at first made to afford a considerable degree of warmth, that the change from the warm situation in which the child was formerly placed, to the comparatively cold one in which it is after birth, may not be so sensibly felt as to occasion pain.

Tape should be used as much as possible, instead of pins; and the whole dress ought to be so loose, that the child may have free liberty to move and stretch its little limbs, as far as that is consistent with its welfare.

The linens, next the skin especially, should be often changed; and the infant ought never to have on the same dress for twenty-four hours continued.

The night-clothes must not be equal in quantity to those which are worn during the day; otherwise the child will be continually disposed to be affected with colds, &c.

An unnatural custom has been introduced by nurses which ought to be guarded against by every parent who regards the future health of his offspring, the practice of confining the limbs of the child much more strictly by the clothes during the night than in the day. By such means the purposes of rest are defeated, and sleep is even often interrupted.

The night-clothes ought therefore to be quite loose, and as much lighter than those which are put on during the day, as the difference of situation shall render necessary, so that the infant may be placed in nearly the same degree of heat at all times. For the same reason, when the child sleeps in his day-clothes, he should be very slightly covered.

SECTION III.

NUTRITION OF INFANTS.

THE experience of many ages, as well as the arguments which may be adduced from analogy, have proved to the conviction of every candid inquirer, that MILK is the most natural and wholesome food for children in early infancy. The attempts which speculative philosophers have from time to time made, to substitute other kinds of food to that prepared by Nature for the purpose of nutrition, have only furnished many melancholy proofs of their errors, or shewn that the powers implanted in the human constitution sometimes overcome even the dangerous effects of inconsiderate prejudice.

The important advantages which result from nursing, both to the mother and child, have been so often explained, and are so generally understood, that they do not require any illustration on this occasion.

It has been improperly imagined, that all mothers ought to be nurses. By this opinion, many children have been destroyed, and a greater number have only lived to regret their existence ; the weakness of their frames having made them incapable of enjoying the comforts of good health.

The luxuries which refinement has introduced in the manner of living, although they do not prevent every woman from being a mother, certainly render many very unfit for the office of a nurse. A delicate woman, necessarily involved in the dissipations of high life, and confined to a crowded city, cannot be

supposed capable of furnishing milk in due quantity, or of a proper quality. Her child must either be almost starved, or the deficiencies of his mother's breast must be supplied by unnatural and hurtful food.

These are not the only disadvantages which arise from such ladies becoming nurses; for they themselves, as well as their children, suffer considerably. Obligated to submit to the regulations with respect to the hours appropriated to recruit the body by food or sleep, that fashion and long custom must have rendered habitual, while at the same time they attempt a task for which the delicacy of their frame ill adapts them, their health must be impaired.

When, therefore, ladies of this description wish to suckle their own infants, they ought to retire to the country, where, remote from the impure air of crowded cities, and removed from the allurements of fashionable amusements, they should endeavour, by the most scrupulous attention to regularity in diet, and hours of rest, and to moderate exercise in the open air, to repair their constitutions, and to fulfil the duties which they owe their offspring.

Women in high rank, however, are not the only mothers who ought not to become nurses; for some diseases, although originally induced by improper modes of living, are hereditary in families. The prejudices of the bulk of mankind are so much against women who seem to have any hereditary disease, that in the choice of a hired nurse they are always carefully avoided. A pretended discovery has led many medical practitioners to disregard such opinions; and the belief that these diseases, from being seated in the solids, cannot be communicated by the fluids, has induced them to imagine, that such disorders can never be derived from a nurse. But if the state of the fluids have any effect on that of

the solids, if, in other words, the condition of the body depend on that of the juices which supply the continual waste of its various parts, the common sense of the uninstructed multitude will be found far superior to the refined theories of dreaming philosophers.

It is therefore incumbent on every practitioner to advise seriously parents who unfortunately are afflicted with any hereditary disorder, to send their infants to be nursed in the country by a healthy woman, and to protract the period of nursing for some months beyond the usual time.

When, however, the mother is of a robust healthy constitution, she is certainly the most proper nurse, and ought to be advised to undertake the task, on account of her own health, as well as that of her infant.

The infant should be put to the breast as soon after birth as the situation of the woman will allow; by which the black viscid substance contained in the intestines will be better evacuated than by any means which art can furnish. The pernicious practice of giving infants purging medicines as soon as born, cannot be too much reprobated; for the retention of the meconium for some hours after birth certainly produces less inconvenience than is occasioned by the acrimony of the substances which the child is often forced to swallow.

The most simple artificial means for removing this matter, are Lisbon sugar dissolved in water, or a solution of manna.

Although those infants are most healthy and thriving who are least restricted, and who are permitted to take the breast at pleasure; yet every woman should avoid becoming the slave of her child, as many unguardedly do. The infant ought therefore never to be allowed to sleep at the breast, nor accus-

tomed constantly to overload the stomach by sucking till vomiting ensues. A disposition to regularity in the periods of sucking will soon be observed in infants and ought to be encouraged.

Women should always remember, that the mode of life most conducive to health will afford the best milk, and the most plentiful supply; and therefore nurses ought never to eat at irregular times, nor in a quantity which the appetite does not demand; and they should guard equally against abstinence and over-feeding. Fatigue, indolence, or inactivity, and every irregularity, must be carefully avoided.*

Although Nature seldom renders any other food than milk during early infancy necessary, yet, with the view of introducing a change of diet by degrees, the practice of early beginning to give the child daily a little pap or panada, appears to be rational; for when it is neglected till the time of weaning approaches, the habit is with difficulty established; and here is great hazard that the infant may suffer from the sudden change. At first, food should be given only once a-day; by degrees it may be increased to two meals; and before weaning three ought to be allowed.

Many women begin to give spoon-meat to the infant a few hours after birth: A practice which seldom fails to occasion sore mouth, violent bowel-complaints, &c. and which therefore should never be encouraged, notwithstanding the arguments of dry nurses.

If bad effects follow the use of such apparently harmless materials as bread and water, what must be the consequence of the pernicious custom of giving infants spirits in the form of toddy, with the supposed view of preventing gripes? Such liquors,

* For the qualifications of a *Hired Nurse*, see the *Appendix*.

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as its tender lungs may be irreparably injured by the cold air.

When the child has acquired so much strength as to be able to withstand exposure in the open air, he should be carried out every good day, at the time the sun has most influence. At first he ought only to be kept without doors for a very short time; and the person who has charge of him should walk slowly and gently, and avoid standing, especially in a current of air. By degrees, he may be sent abroad twice a-day, when the weather is favourable, and may be kept out gradually for a longer space of time.

The importance of pure air to children cannot be better illustrated, than by comparing the health of those who are nursed in great towns with that of those reared in the country. "In the year 1767, in consequence of the humane suggestions of Mr. Jonas Hanway, an act of parliament was passed, obliging the parish-officers of London and Westminster to send their infant poor to be nursed in the country, at proper distances from town. Before this benevolent measure took place, not above *one* in *twenty-four* of the poor children received into the work-houses lived to be a year old; so that out of two thousand eight hundred, the average annual number admitted, two thousand six hundred and ninety died; whereas since this measure was adopted, only four hundred and fifty out of the whole number die; and the greatest part of those deaths happen during the three weeks that the children are kept in the work-houses."*

Although certainly other circumstances besides impure air, such as carelessness, &c. must have contributed to this dreadful mortality; yet the prefer-

* Examination of Dr. Price's Essay on Population, by the Reverend John Howlet, A. B.

ence of the country air over that of large cities is clearly proved by this fact, and may be confirmed by the meagre looks, sallow complexion, and feeble limbs, of children reared in town, even where the greatest attention has been paid.

On the proper *Exercise* of children, more depends than superficial observers would imagine ; for by inattention to this circumstance, a foundation is often not only laid for deformities that may destroy the beautiful symmetry bestowed on the human body by the Author of nature, and consequently may injure the health, but also, for diseases which, though their first approaches be slow and gradual, terminate suddenly in a fatal manner.

During the first week or two after birth, the infant sleeps naturally more than two-thirds of his time ; and therefore the fatigue which he undergoes, from being washed, dressed, &c. morning and evening, and occasionally raised to be cleaned during the day and night, may be considered as sufficient exercise at that period.

The remarkable delicacy of infants, and the gristly state of their bones, would render any violent agitation of the body for the first weeks highly dangerous ; but in proportion as the child advances in age, the bones become gradually more complete, and the other solid parts more firm : hence a gentle degree of motion, by promoting the free circulation of the fluids, will be highly beneficial.

Every restriction to one particular position, in whatever situation the child may be, ought to be constantly guarded against ; for as the softness of the bones renders them easily moulded into an improper shape, deformities which may destroy the health, or prove the source of much future distress, will, if this caution be not observed, be readily induced.

An infant should not therefore be laid always on the same side, nor carried constantly on the same arm.

The use of cradles is not now so universal as formerly ; and it is to be hoped will not again become fashionable. Nature never intended that children should have exercise during sleep, after they have breathed : therefore the idea, that rocking in a cradle resembles the motion to which infants have been accustomed when in the womb, is an erroneous one. The young of other animated beings sleep quietly and profoundly for a great part of their time without any rocking, although they also were habituated to a gentle waving motion before birth.

It has been urged that objections to the employment of cradles, deduced from the abuses which may attend this practice, are inadmissible. But certainly no prudent person would recommend any unnecessary expedient which may, through inattention, be improperly used.

The charge of the cradle is not always undertaken by the mother ; the nurse, therefore, on many occasions, may agitate the infant more violently than is consistent with its safety, and by such practices must injure some of its delicate parts, especially the head.

Infants, for these reasons, ought to sleep in bed from the time of birth, although some inconveniences, and even dangers, attend this custom ; for it may often perhaps be inconvenient for the mother to carry her infant to the bed-chamber every time he falls asleep ; and during the night, if the woman have been unaccustomed to sleep with a child, she may readily overlay it : An accident which unfortunately happens more frequently than is imagined.

Every inconvenience and danger may be avoided by adopting a very simple expedient. A crib or cradle may be so constructed as to be fixed to the side of the

bed during the night, and to be easily carried from one room to another during the day. It must not be made to rock. But in cold weather the infant ought never to be allowed to sleep by itself, as heat is absolutely necessary.

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CHAPTER II.

DISORDERS OF NEW-BORN CHILDREN.

THE complaints to which new-born children are liable arise generally in consequence of some injury received during birth, of original imperfections, or of carelessness in the articles of dress, cleanliness, &c.

Some of these disorders are attended with much danger ; and others, being only trifling and temporary, yield to the most simple treatment.

SECTION I.

MEANS TO BE USED FOR THE RECOVERY OF STILL-BORN CHILDREN.

THE laudable and active exertion of the HUMANE SOCIETY, by having been the means of restoring life on many occasions where it was formerly thought impossible, have proved to the world, that apparent death happens more often than was hitherto believed.

The occasional recovery of still-born children, under circumstances where experience alone could have encouraged such hopes, ought to teach Practitioners of Midwifery the importance of employing, with patience and attention, the means conducive to this purpose.

Still-born children are found in three different states ; for there is either no pulsation in the umbilical cord ; or the pulsation is soft and distinct, and the infant has the natural appearance ; or the pulsation is oppressed, the shape of the head is deranged, and the face of the infant is livid. The following means, suited to each of these states, are pursued in the Edinburgh General Lying-in Hospital.

I. When no pulsation is felt in the cord.*

1. The infant is to be instantly separated from the mother, the cord being tied by a slip knot.

2. It is to be immersed in warm water, with its head placed uppermost.

3. The lungs are to be filled with air by means of a bag of elastic gum, or a common syringe, (the pipe of which is to be inserted into one nostril, while the other and the mouth are carefully closed), and are then, by gentle pressure on the breast, to be emptied. In this way the lungs are to be alternately distended and compressed for some time.

4. Should the action of the heart be now perceived, the same means are to be continued until the infant exhibit the usual marks of beginning respiration, when the artificial distention of the lungs is to be only occasionally repeated, and all pressure on the breast is to be avoided.

5. But if, notwithstanding these means, the pulsation in the heart be not restored, the infant should be taken out of the warm water, placed before the fire, carefully rubbed, and then wrapped in warm flannel.

6. A glyster, consisting of a table-spoonful of spirits, and two or three table-spoonfuls of warm water, should then be exhibited, and the temples, nostrils,

* If there be marks of putrefaction, it is unnecessary to observe, no attempts should be made.

and teguments of the face round the mouth, should be gently touched with a feather dipped in vitriolic æther, or spirits of hartshorn.

7. In the event of the failure of all these means, if the infant be apparently full, the effects of a small discharge of blood may be tried, by replacing it in the warm water, and removing the ligature from the cord.

II. When the pulsation in the cord is soft and distinct, and the infant has the natural appearance.

1. So long as the placenta remains attached to the uterus, the child ought not to be separated from the mother.

2. The body should be carefully wrapped in warm flannel, the nostrils and fauces should be touched with a feather dipt in vitriolic æther, a little spirits should be poured on the breast, and the buttocks and soles of the feet should be slapped with the palm of the hand.

3. If the after-birth become detached, (which is known by the lengthening of the cord), the child must be immediately separated, and the above (2) means employed.

4. Should the process of breathing commence after these means have been used for a few minutes, nothing else is to be done than keeping the infant warm, with its face freely exposed to the air.

5. But should this event not take place, the lungs are to be distended, &c. as in the former case.

III. When the pulsation in the cord is oppressed, the shape of the head is deranged, and the face of the infant is livid.

1. The infant is to be immediately separated from the mother, the cord being loosely tied with a single knot.

2. Blood is to be allowed to issue from the cord until breathing begin, or until the natural colour of

the face be nearly restored; a table-spoonful or two is the quantity commonly required for this purpose.

3. Should the beginning process of breathing proceed slowly, very gentle means may be employed to restore the proper shape of the head, but otherwise the efforts of nature alone are to be relied on.

4. If no signs of breathing be perceived, the cord is to be tied, the infant placed in warm water, and the lungs are to be from time to time distended with air, by means of the bag with elastic gum, and the additional discharge of a small quantity of blood may be tried.

5. The use of every thing irritating must be carefully avoided.

SECTION II.

RETENTION OF THE MECONIUM.

THE black viscid substance, called Meconium, is usually expelled from the bowels a few hours after the child has been put to the breast, if he be suckled by his own mother. But sometimes it is so tenacious, that it adheres to the intestines, and cannot be thrown off; and sometimes the milk is not sufficiently active for that purpose.

The impatience of nurses to get rid of this substance by means of nauseating medicines, has often been the cause of many dangerous complaints. Instead of medicines, a little sugar and water should be given from time to time, till the bowels be freely opened.

The retention of the Meconium, for a few hours,

ought not therefore to be much regarded, unless the child be at the same time indisposed. But when, along with the retention, there are evident signs of oppression, of pain in the bowels, or of irritation of the general system, then some more powerful means to induce the discharge ought to be adopted.

Nothing is found to effect this purpose better than a strong solution of manna in water, given in the dose of four or five tea-spoonfuls every hour, till it operate; while at the same time a simple *Lavement*, consisting merely of a very small cupful of warm water, should be exhibited, or a suppository, formed by rolling up into a conical shape, a small bit of writing paper, and covering it with a little pomatum or unsalted butter, may be used. If these means fail, a tea-spoonful of *cold drawn* castor-oil may be given.

The Meconium is in some rare cases retained in consequence of the natural passage being closed up; a circumstance which is always attended with much danger, and which requires the immediate assistance of a skilful surgeon.

SECTION III.

ORIGINAL IMPERFECTIONS.

CHILDREN are not always born in a state of perfection with respect to the structure of their bodies; for sometimes they have deficient, superfluous, or misplaced parts, natural passages closed, and marks on various parts.

Many of these imperfections admit of no remedy, while others may be easily rectified.

It would be inconsistent with the nature of this work to describe minutely all the species of malconformation which occasionally occur; and therefore the following observations relate only to those most frequently met with.

There are sometimes blemishes about the mouth, which may prevent sucking. Of these, fissures in the lips always constitute the most remarkable deformity.

These imperfections appear in many different forms; for sometimes the fissure exists only in one lip, generally the upper one, and is occasioned merely by a division of the parts. In other cases, there is a considerable loss of substance between the divided parts. In some instances there are two fissures in one lip, or both lips are affected; and in others the fissure is not confined to the lips, but extends along the roof of the mouth. All these different species of the same deformity receive the general name of Hare-lip.

The treatment of the harelip must be varied according to many circumstances, which can only be determined by an experienced surgeon. If the child can suck, the operation by which alone the blemish can be removed, should be deferred till he be several months old at least, as then the parts will be better adapted for retaining the pins by which the cure is accomplished. But when sucking is prevented, the operation may be tried, though it affords only a forlorn hope.

The *tongue*, it was formerly observed, is bound down to the lower part of the mouth, by a membranous cord, to prevent it from too great a degree of motion. Sometimes, however, the cord fixes it so much, that the infant cannot suck; in which case he is commonly said to be tongue-tied.

Women very often imagine that their children have this defect when it does not really exist; and perhaps

one instance of it does not occur in several hundreds of those who are born.

The disease may be always readily discovered by putting a finger gently into the child's mouth ; for if he be able to grasp it as he would do the nipple in sucking, or if the tip of the tongue appear disengaged, the membrane does not require being cut.

The operation of cutting the tongue, though very simple, may prove fatal, if the surgeon be inattentive ; for so great a quantity of blood may be lost as to destroy the infant.

When the tongue is not bound down sufficiently, the tip may be turned back, and close up the throat ; an accident that must soon occasion death. It may be discovered by the threatening suffocation, or convulsions, and by the introduction of the finger into the mouth.

The melancholy consequences of this disease can only be prevented by pulling back the tongue, or exciting vomiting by tickling the throat. This, however, is a very rare accident.

If the infant cannot suck, although the tongue appear to be in a natural state, weakness of the lower jaw, thickness or swelling of the glands in the under part of the mouth, or some defect about the nurse's nipple, may be suspected.

The *natural passages* of children are sometimes shut up, and prevent the usual excretions. This is known by examining the cloths. In some cases slime alone proves the obstacle ; but in others membranous substances close up the passages.

In every instance where any thing uncommon is observed, the child should be carefully examined by a skilful surgeon, that the proper means for affording relief may not be too long delayed. In some rare cases, it unfortunately happens that no assistance can be given.

Deformities in the lower extremities, styled *club-*

feet, sometimes occur. These often become very troublesome at a future period of life, and are always very justly considered to be great blemishes. Every parent, therefore, is interested in their removal.

The gristly state of the bones of the foot renders a cure in most cases practicable, when the proper means are begun immediately after birth; but if the deformity be not attended to till the infant be some months old, it will be difficult and precarious. Practitioners should, therefore, carefully examine every part of new-born children, that they may not, by any neglect, render their future lives uncomfortable.

The method by which this disease can be removed is very simple. It is merely the application of proper means to reduce the foot, in the most gradual manner, to its natural situation. These should be continued not only till this is effected, but ought to be kept applied constantly for several weeks after, in order that the deformity may be completely removed.

In the most favourable cases the cure cannot be completed within less than several months, and it often requires even a much longer time.

Tumours about the *belly*, consisting of portions of the intestines forced out of their natural situation, are in some cases curable, but in others they baffle all human art.

Tumours about the *back-bone* are always dangerous. If they be soft, transparent, and evidently situated upon the back-bone, they must inevitably prove fatal, as no method of treatment hitherto contrived has been found in the smallest degree serviceable. It must be at the same time admitted, that the progress to the fatal event, has in some instances been so extremely slow, that the child has attained the thirteenth year notwithstanding this complaint. Fortunately, however, it terminates generally within some months after birth; for where it is protracted the individual is in a miser-

able state, being paralytic in his lower limbs, &c. An experienced practitioner can commonly foretel the period at which the disease is to terminate.

Flesh marks, when above the surface of the skin, can always be in a great measure removed without the assistance of the knife; and even when they are on the level of the skin, their ugliness may be often greatly diminished by early attention on the part of the practitioner.

Ruptures in different parts, especially at the navel, are very common complaints among infants; but are fortunately not attended with so much danger as similar disorders in grown people.

In such cases, bandages are in general inadmissible, from the difficulty with which they are retained, and the delicacy of the parts on which they must necessarily press. Where the disease is confined to the navel, however, a broad piece of flannel, in the form of a roller, together with a piece of adhesive plaster applied over the part, by affording a safe and firm support, proves extremely useful.

In proportion as the child acquires strength, these troublesome complaints disappear. Nothing is more conducive to this than the continued use of the cold bath, as already recommended.

Great attention ought constantly to be paid to the state of the belly of those who are subject to ruptures, as costiveness always aggravates the disease.

SECTION IV.

INJURIES IN CONSEQUENCE OF BIRTH.

WHEN the infant has been detained a long time in the passage, he is liable to a variety of complaints, according to the situation in which he was placed.

The most common of these are swellings on the head, or alteration of the shape of that organ.

First born children are generally affected with some degree of *swelling* on the crown of the *head*. This, however, usually disappears in a few days, and requires no other treatment than the ordinary means employed by the nurse, viz. rubbing very gently a small quantity of weak spirits on it.

But when the tumour continues for two or three weeks, cloths dipped in lime-water should be applied to it, which will at least prevent officious attendants from using more hazardous remedies.

On some occasions, these swellings contain a fluid, which it has been proposed should be evacuated, otherwise the bones of the head may be injured. But these cases must be trusted to the care of a surgeon.

Although the shape of the head be much altered, in consequence of long-continued pressure during the passage of the child, it will soon recover the natural form, without any assistance. The practice among nurses, therefore, of endeavouring to give the head a proper shape, by squeezing and pressing it with the hands, &c. is unnecessary, and ought never to be allowed, on account of the dangers which may be the consequence.

Scratches on the head, like the marks caused by a whip-cord, frequently occur after tedious or difficult labours; but they require no particular attention, as they soon disappear.

In some cases, where the child has come down in an unusual direction, the *face* is much affected; for the eyes are inflamed, the nose flattened, the lips swelled, the features distorted, and the colour of the countenance livid. These frightful appearances usually go off in a few days, when no violence has been done by improper interference during the delivery.

Other parts of the child than those already mentioned are likewise liable to swelling and discoloration from the same causes; but as they seldom prove troublesome, no other management is necessary than allowing the umbilical cord to bleed a spoonful or two before it be tied.

The *limbs* of the infant are in some cases *fractured* or *dislocated* by the rashness and awkwardness of the practitioner. These accidents, on some rare occasions, unavoidably happen from the situation of the child; but are most frequently to be attributed to ill-directed attempts to accomplish the delivery.

From whatever cause these disagreeable occurrences originate, they should never be concealed from the attendants, but on the contrary the proper means to remedy them should be immediately adopted. Many children have been rendered lame for life, from the practitioner by whom they were brought into the world having allowed a dislocated or fractured limb to pass unobserved, in order to conceal his own awkwardness.

SECTION V.

ULCERATIONS AND EXCORIATIONS.

THE common method of treating the *navel* is so universally understood, that it requires no particular description in this work. The portion of cord which is left next the child drops off within five or six days after birth, and leaves a tenderness, that is generally entirely removed in two or three weeks, by the ordinary means which nurses employ.

But sometimes, whatever precautions be used, a rawness round the edges, or degree of ulceration, remain, and prove very difficult of cure.

As the most unfortunate consequences have often been occasioned by neglect in such cases, and as a great variety of treatment is necessary under different circumstances, a practitioner should always be consulted.

From the delicate structure of the skin of infants, *excoriations* readily take place wherever one part of it is in constant contact with another, unless the most careful attention be paid to keep every part dry. The ears, neck, armpits, and groins, are chiefly liable to be affected in this manner.

When the excoriations are not allowed to continue for a considerable length of time, they seldom require any other treatment than being dusted, morning and evening, with prepared tutty, or calamine, or with common ashes, finely powdered.

But when a discharge of matter is the consequence of neglected excoriations, a cure can only be obtained by much care and attention; for it is often very difficult to stop these runnings.

Some practitioners have objected to such attempts, on the false supposition, that the discharge is a salutary outlet for an over-load of the system. These opinions, admirably well calculated to favour the carelessness of nurses, are founded on improper views of the operations of nature.

Many different remedies will be found beneficial in different cases; such as, washing the excoriations daily with brandy and water, lime-water, a weak solution of sugar of lead, or of white vitriol, and dressing them with spermaceti ointment, or Turner's cerate, thinly spread on linen. The solution of white vitriol, described in the appendix under the title of Astringents for external use, is the best lotion for these excoriations.

While these means are pursued, the bowels should be kept open, by the occasional exhibition of any gentle laxative, as manna dissolved in water, &c.

There can be no doubt, that in general excoriations are the effects of inattention to cleanliness; but sometimes in gross children no ordinary care can altogether prevent them.

SECTION VI.

SWELLING OF THE BREASTS.

NEW-BORN infants, of both sexes, are liable to an accumulation of a milky-like fluid in the breasts, which often produces painful swellings and inflammation. These are frequently relieved by the spontaneous discharge of the fluid.

The uneasy sensations occasioned by these swellings seldom continue above a few days, and generally are removed by bathing the parts with warm milk and water, or rubbing them very gently with warm olive oil, evening and morning.

Emollient poultices are rarely necessary ; but should be applied when the swelling and inflammation are considerable.

The unnatural but common practice of forcibly squeezing the delicate breasts of a new-born infant, by the rough hand of the nurse, is the most general cause of inflammations in these parts. The consequence of this practice is often suppuration and abscess ; and hence, besides the hazard of disagreeable marks in the bosoms of girls, the future woman may be prevented from ever fulfilling the duties of nursing. Parents cannot therefore be too careful in watching against this unnatural and improper custom.

SECTION VII.

SORE EYES.

INFANTS, a few days or weeks after birth, are subject to Sore Eyes, which not only render them fretful and uneasy, but sometimes also induce disagreeable blemishes if neglected, or even almost total blindness.

This complaint is often occasioned by the imprudent exposure of the infant to large fires or much light. It is also frequently caused by cold ; and when it occurs in a more advanced period of life, it may originate from teething.

The mildest species of this disease appears under the form of an increased secretion from the eye-lids, gluing them as it were together, which becoming hardened, must occasion considerable uneasiness.

The cure of this complaint consists in guarding against exposure to large fires or much light, and to cold, and in bathing the eyes morning and evening with a little warm milk and water, and twice or thrice through the day with the weak solution of sugar of lead, diluted by the addition of an equal quantity of rose-water.

But when the eyes, and their appendages, are so much swelled that the infant cannot open them, a violent inflammation having taken place, succeeded by the constant discharge of matter, the eye may be completely destroyed, if proper assistance be not had recourse to.

As the treatment in such cases must necessarily vary according to circumstances, it cannot be detailed in this work.

When children are affected with habitual weakness of the eyes, the cold bath, and frequent exposure in the open air, afford the best means of relief.

CHAPTER III.

COMPLAINTS WHICH OCCUR MOST FREQUENTLY WITHIN THREE OR FOUR MONTHS AFTER BIRTH.

THE diseases incident to infants hitherto enumerated are so distinctly marked, that they are obvious to the most superficial observer; but some of those included in this and the subsequent chapter can only be distinguished by symptoms which may be overlooked by the attendants.

The improper idea, that the knowledge of the nature of the disorders of infancy is merely conjectural, may perhaps be attributed to this circumstance.

Although infants cannot describe their complaints, as grown persons do, by words; yet an attentive observer will find them perhaps more accurately pointed out by natural signs than they could possibly be by language.

The causes of infantile diseases have been hitherto traced by authors and practitioners to a few sources only, such as, a prevailing acid in the stomach, great irritability of the system, &c. A fondness for simple views of the operations of Nature has long impeded the progress of medical knowledge; but it is to be hoped, that such prejudices will soon cease, and that the effects which any derangement of one part of the human body must produce on other parts will be more fully understood than they are at present.

All the diseases included in this chapter, commonly occur within three or four months after birth, though occasionally exceptions in this respect may be met with.

SECTION I.

RED GUM.

INFANTS are much subject to Eruptions on the skin, which assume a variety of appearances, and proceed from many different causes. The most harmless of these is the Red Gum. It appears frequently a short time after birth, and occasionally recurs during the period of nursing.

The Red Gum occurs most commonly in the form of a great many small distinct red pimples, which can be felt above the skin; but sometimes these have a yellowish or pearly colour. The eruption is often general over the whole body, like the measles; in other cases, it appears only on the face, or extremities, and is frequently confined within large patches.

The infant does not seem to suffer any uneasiness, or derangement in his usual functions, from this eruption; a circumstance that sufficiently distinguishes it from the measles.

One variety of this disease resembles so much the itch, that the principal mark by which it can be distinguished from that disease, is, the nurse not being affected with a similar eruption.

The only danger to be dreaded from the Red Gum, is its sudden repulsion, which is immediately followed

by violent affections of the bowels, attended with screamings, and even in some cases with fits.

The cause of Red Gum is a determination of blood to the papillæ of the skin ; but the circumstances occasioning this have not yet been ascertained.

In the management of this disease, the chief object ought to be to guard against the eruption being repelled ; for which purpose, the bowels are to be kept moderately loose, the skin is to be frequently washed with milk-warm water, and exposure to cold is to be particularly avoided. The nurse's diet too, should be properly regulated.

Should the eruption by any accident recede, the warm bath, and in some cases an emetic, cordials, and even blisters, must be had recourse to.

SECTION II.

YELLOW GUM.

THE Yellow Gum is a disease which requires much more attention than the Red Gum, as it is frequently fatal.

The appearance of children affected with this complaint at once points out the nature of the disorder. They are yellow over the whole surface of the body ; and the same colour is observed in the eyes.

In some cases, no symptoms but the yellow tinge indicate any thing uncommon ; but on other occasions, the great derangement in the several functions of the infant proves incontestibly that the whole system is in disorder.

Thus sometimes the child is unable to suck, sleeps constantly, and all his functions appear to be suspended.

In other cases, the most violent colic pains, or frightful convulsions, are occasioned, which carry off the infant in the course of a few hours.

The causes of the Yellow Gum are various and numerous ; a circumstance which, it may be easily explained, depends on the particular structure of children.

The bile, it has been remarked, is conveyed from the liver and gall-bladder, by a single conduit, into the intestinal canal a little below the stomach. Any obstacle which may prevent the passage of the bile in this manner, induces a yellowness of the skin, &c. termed Jaundice. In grown people, the liver is pretty well defended from external injuries ; but in infants, it has been observed, it is larger in proportion, and not so well protected. The intestinal canal in them also is more readily deranged than afterwards : hence the flow of bile in children may be interrupted by external pressure on the liver, by distention of that portion of the intestine into which the bile passes, or by any of the causes that occasion the same accident in grown persons. The retention of the meconium, it has also been alleged, is a very frequent cause of this disease ; but may it not rather be considered to be merely a consequence of the particular state of the system which induces the Yellow Gum ?

There is no doubt that this complaint is often occasioned by the nurse's milk. This may proceed from its not proving sufficiently laxative, or from other circumstances that have not yet been clearly explained.

The mode of cure of the Yellow Gum must be regulated by the symptoms and causes of the disease ; and therefore cannot be minutely described in this work.

When the child seems to suffer no uneasiness, although his skin is quite yellow, if his bowels be open, it would be absurd to prescribe any medicines.

But if he be unable to suck, and have a disposition to constant sleep, then the most active means should be adopted, otherwise the disease may soon prove fatal. Vomits, consisting of a grain or two of Ipecacuan, rubbed finely with a little sugar and water, and brisk laxatives, as a dose of calomel, and frequent doses of the solution of manna, will then be found necessary; and their effects may be much promoted by the warm bath.

If the infant be nursed by a woman whose milk is old, a change of nurse will, in many cases, alone cure the disease.

When violent colic pains or convulsions accompany the Yellow Gum, a practitioner ought to be immediately sent for, as it requires a great deal of judgment to determine the proper means which should be employed in such cases.

SECTION III.

THRUSH.*

THE THRUSH is so common a disease in early infancy, that many have imagined it to be a salutary effort of Nature to expel some hurtful matter from the system, which might otherwise be productive of many complaints at a future period. This opinion, however, is merely a vulgar prejudice, founded neither on reason nor experience.

* This is termed, in medical language, APHTHÆ.

As the Thrush is in some cases very mild, and in others very unfavourable, the symptoms and danger attending the disease vary on different occasions.

This complaint appears in the form of small white spots on the corners of the lips, tongue, and inside of the cheeks and throat, resembling little pieces of coagulated milk. These spots begin in the mouth, and gradually spread over the lips, palate, &c.; and it has been alleged with apparent probability, that in some cases they are continued from the gullet through the stomach, and the whole tract of the intestinal canal.

When the disease is favourable, the spots are few in number, and are confined to the mouth; and the child seems to suffer little inconvenience from them.

But in the more malignant species of Thrush, the spots are so close and numerous, that they run into each other, forming one uniform tenacious crust, covering the whole mouth, palate, and throat; and hence they render the infant incapable of sucking. In such cases, before the spots appear, the child is generally much depressed, and disposed to sleep; his pulse is almost imperceptible, his extremities cold, and he appears at the point of death. When the spots are perceived, the pulse gradually rises; feverish heat, and increased action of the blood-vessels succeed, attended with great restlessness; and the mouth becomes so tender, that the infant is incapable of grasping the nipple, or of swallowing the mildest food; and in making the attempt, fits are sometimes induced.

In the progress of this disease, the spots change their appearance considerably. In favourable cases, they gradually become yellow, and the intermediate parts have generally an inflamed red colour; but when the disease is of the malignant species, the spots have a purple or livid hue, which commonly terminates in a gangrenous or mortified appearance.

When the Thrush is to be considered as a disease, it is usually preceded or attended by complaints in the stomach and bowels, as vomiting, colic, and violent looseness.

The nature of this disorder is different in different cases. When the infant suffers little uneasiness except what proceeds from the soreness in the mouth, it may be looked upon as a local disease, induced by some irritation applied to the delicate parts which are affected, as very warm spoon-meat, &c.

But when disorders in the stomach and bowels, or feverish symptoms, precede or accompany the Thrush, it may then be considered as the effects of a general derangement of the system; and its termination may be expected to be more or less favourable, according to the degree of strength of the infant, and to the violence of the attending symptoms.

The exciting causes of the Thrush are various, as improper nourishment,* confinement in impure air, in some cases specific contagion, and exposure to cold or moisture.

The means of cure in the mild species of this complaint, although simple and obvious, require some attention; for as the spots are quite superficial, they may be readily removed by the application of any astringent medicine; but if they be forced off prematurely, a second crop, in greater quantity, more obstinate in duration and more deeply seated, will succeed; and if the same improper treatment be repeated, a new series of spots will invariably recur, attended with increasing violence, in proportion to the frequency of repetition.

No astringent lotion or powder ought therefore to

* Children who are brought up by the hand, as it is called, are very much subject to this disease; and in them it often proves fatal.

be employed, till the spots change from a white to a yellow colour, when the common remedy of borax, mixed with sugar or honey,* may be safely allowed.

The ordinary practice of washing the spots with a rag-mope is always productive of bad consequences.

It is in this species of the complaint alone that a solution of currant-jelly, in water, or syrup of roses, with spirit of vitriol, &c. are admissible. Bad consequences often follow the indiscriminate use of jelly and chalk, which many prescribe.

In the treatment of the malignant kinds of Thrush, the great object to be aimed at should be, to support or restore the strength, and to correct the disorders in the stomach or bowels.

With these views, when the infant cannot suck, he should be fed with weak beef-tea; and thin panada with a small proportion of wine, or beef-tea with a little bread broken down in it, ought to be given, by way of *lavement*, every three or four hours. In the most malignant species of the disease, Peruvian bark, in decoction, or mixed with thin starch, should be exhibited frequently in the same manner.

Blisters applied to the back and legs, in succession, are useful in some cases.

For the purpose of correcting the disorders in the stomach and bowels, magnesia and prepared crabs eyes, in the forms recommended in the Appendix, must be prescribed.

When the stools are very loose, have the appearance of dirty water, or are fetid, opiates should be had recourse to.

The particular state of the system in these cases often renders the fluids in all the passages highly irritating, which tends much to aggravate the complaint.

* *viz.* In the proportion of an eighth or sixteenth part of Borax, powdered, to one of sugar or honey.

To remedy this, some means should be used, such as putting into the mouth, from time to time, a teaspoonful of thin mucilage of Gum Arabic, or of liquor prepared with the white of an egg, beat up with a little water and sugar, to which a single drop of oil of anise may be added.

In these cases, nothing should be applied to the spots, till they become yellow, and the strength of the child be restored.

When there is reason to consider the milk of the nurse to be the exciting cause of the Thrush, she ought to be immediately changed.

The nipples of the nurse are often injured by the sore mouth of children, if they be not defended with a little mucilage before the infant is allowed to suck, and washed with weak brandy, or spirits and water, immediately after he is taken off the breast.

SECTION IV.

BOWEL COMPLAINTS.

INFANTS and children, from the delicate structure of their digestive organs, are much subject to disorders in the bowels, which frequently assume the most alarming appearances.

Nature has very fortunately rendered the stomach of infants so irritable, that when it is overfilled, or loaded with indigestible substances, *vomiting* is usually induced; but as habitual vomiting gradually impairs the vigour of the stomach, every precaution which can be suggested should be employed to guard against the causes of this complaint.

For this reason, infants, as has been already advised, ought not to be permitted to suck too much at a time; and large quantities of spoon-meat should never be given in the early months. The intention of spoon-meat at that period is not to appease hunger, but to accustom the infant to a gradual change of diet. A small proportion only, therefore, ought to be allowed, till towards the period of weaning; and although it must necessarily be given when the infant is hungry, to induce him to take it, his appetite should never be completely satiated.

When the infant appears much oppressed, is unable to suck, has a heavy eye, and a strong-smelling breath, there is reason to believe that his stomach is disordered; and therefore, if he do not vomit naturally, a simple emetic should be given; and even although he do vomit spontaneously, in many cases a small dose of Ipecacuan will be beneficial.

After the stomach is in this manner emptied, the contents of the bowels should be evacuated by proper doses of any gentle laxative.

Infants are liable to *Colic Pains*, which often occasion the most threatening symptoms; for in some cases the child suddenly cries incessantly, or by starts, loses his colour entirely, has oppressed breathing, coldness in the extremities, and a variety of other alarming complaints. If in these cases the infant draw up his little limbs to his belly, or wreath his body, if his belly be swelled, and he have a partial looseness, the cause of his sufferings is readily discovered to proceed from colic.

The delicacy of the bowels of infants renders them affected by the most apparently trifling causes; and hence many circumstances induce colic pains in them. Exposure to cold, inattention to changing the cloths when they become wet, too great a quantity of spoon-meat, too large doses of magnesia, a collection of acid

slime or of air in the stomach or bowels, and some fault in the milk, may severally be productive of this complaint.

The cure of colic is by no means so simple as many have imagined ; for not only must the exciting cause of the complaint be removed, but also the effects which are communicated to the whole system from the derangement of the digestive organs.

When this disease proceeds from exposure to cold, or from the long continued application of wet cloths from carelessness of the nurse, the infant should be put into warm water up to the arm-pits, and kept there for ten minutes, or a quarter of an hour. He ought then to be well rubbed, till he be quite dry, wrapped in warm flannel, without the intervention of linen, and laid in bed. By this treatment, if the complaint be not complicated with disordered stomach or bowels, he will soon fall asleep, and awake in perfect health.

The impatience of nurses induces them to have recourse to spoon-meat whenever the infant is fretful, instead of employing other means, which would indeed give themselves more trouble. The consequence of this is, that the stomach, unable to digest it, becomes filled with air and sour meat. It is therefore painfully distended, and the bowels are irritated by the acid contents of the stomach passing into them.

In such cases, the cure must consist in the exhibition of vomits and gentle laxatives ; and after the stomach and bowels are emptied, the warm bath, as already directed, will contribute greatly to restore to the general system its former regularity.

Many infants have their stomach and intestines often painfully distended with air, where nothing but the mother's milk is allowed them. It has been long the custom to give spirits and water, or Carminative medicines, in these cases ; but although the latter, as a little anise, sugar, &c. may be necessary on some oc-

casions, yet the former should be had recourse to with great reluctance ; for by proper exercise the process of digestion is much better promoted than by any artificial means applied to the stomach ; and flatulencies never take place where that important function is duly performed.

Many women, from the best motives, but the most improper views, torment their infants with the frequent exhibition of magnesia ; because that medicine has little taste, they foolishly imagine that it can do no injury. But the operation of Magnesia depends on that substance undergoing a change in the stomach or bowels, which gives it the same properties as the laxative salts ; and therefore, if too large a dose of these occasion colic pains in grown persons, the Magnesia must, when given in too great quantity, produce the same effects in infants.

If the colic be discovered to proceed from this cause, a tea-spoonful of weak beef-tea should be given from time to time, and a small quantity of Laudanum, by way of *Lavement* will generally relieve the pain.

The internal surface of the stomach and alimentary canal is constantly lubricated with slimy fluids, which defend it from injuries, and accomplish the digestion of the food.

Any irritating substance applied to the delicate parts that furnish these fluids, increases the quantity ; and hence the digestion is interrupted, because the collection of slime prevents the due preparation of the food, by constantly exciting the action of the organs in which that process is carried on.

Nothing contributes more to increase the quantity of slimy fluids than the common pernicious habit of giving much sugar in the meat of children. A little of that substance is proper and necessary ; but the meat ought never to be what can be termed sweet ; for the taste of the sugar should scarcely be perceived.

In cases where slime is accumulated in the stomach or bowels, it soon becomes acid, and consequently the stools have a green colour and sour smell.

The cure of colic originating from this cause may be effected by the exhibition of what are styled absorbent medicines, after the stomach has been emptied by a vomit. Magnesia, prepared crabs eyes, &c. may be occasionally used, singly, or united, with these views.*

When colic occurs along with violent fever, and constipated state of the belly, the event is often precarious. The warm bath, emollient *Lavemens*, gentle laxatives by the mouth, sometimes bleeding with leeches, and a variety of other means, must be had recourse to; but as these cases ought always to be committed to the charge of a practitioner, it would be unnecessary to detail in this work the particular circumstances which require the use of each of these remedies.

The milk of the nurse sometimes causes gripes. The common opinion, that passions of the mind affect the state of the milk, seems well founded. The obvious cure of this kind of colic is, to prevent the infant from sucking when the mind of the nurse is agitated, and where gripes are induced, to put him into the warm bath.

Looseness of the bowels in children frequently occurs, independent of colic, and sometimes proceeds from the same causes.

When the health of the infant is not injured by this circumstance, and what is passed has a natural appearance, it is not to be considered as a complaint, and is often a salutary and critical evacuation.

But when the child becomes emaciated, his flesh flabby, his colour pale, and his vigour impaired, the

* For the forms in which absorbent medicines may be given, see the APPENDIX.

looseness, whatever the appearance of the discharge may be, ought to be moderated, but not suddenly checked.

For this purpose, in most cases, a vomit should be first exhibited, and then absorbents, or, according to the circumstances of the case, medicines calculated to correct the irregular action of the bowels, may be given ; while at the same time proper precautions are adopted, to prevent the recurrence of the same cause which originally induced the complaint.

When the stools are very watery, of a blackish colour, and having an offensive smell, *Lavemens*, consisting of thin starch or rice gruel, with laudanum, prove the best palliatives. But in these cases, the disorder frequently continues till the child is exhausted, unless proper attention be paid to his diet. Many delicate puny infants have been saved from threatening death by the use of weak veal or beef tea, given twice a-day, without any bread. Country air and the cold bath are on such occasions highly beneficial.

Astringent medicines ought never to be prescribed to children without the greatest caution, as the worst effects have often followed their use.

From the view thus exhibited of the disorders in the stomach and bowels to which infants are liable, it must be obvious, that much judgment is in many cases necessary to distinguish the source of the complaint, and to determine the method of cure ; and therefore it is incumbent on parents to pay the greatest attention to such diseases, and never to delay consulting a practitioner till the general system be so much deranged as to render his assistance ineffectual.

SECTION V.

MILK BLOTCHES.*

A WHITE or dusky scabby eruption, principally affecting the brow, or some part of the head or face, in many cases appearing in different distinct patches, in others spreading considerably in one continued crust, is known to nurses by the name of Milk Blotches.

These scabs are always superficial; consequently never leave any scar, unless they be improperly treated. They are attended with no fever, nor obvious derangement of the system, although they often continue for weeks or months.

Eruptions of this kind generally only occur in gross children, and seem to proceed from too rich milk. The cure, therefore, commonly depends on the abstinence of the nurse from much animal food, and from all fermented liquors.

The anxiety parents and nurses often express to have these ugly appearances removed, has induced many practitioners to interfere unnecessarily and improperly.

It should always be remembered, that these eruptions are critical and salutary; and therefore, when

* This complaint is called, in medical language, the LACTUMEN, or CRUSTA LACTEA.

from excessive itching it becomes necessary to apply to them a weak solution of sugar of lead, or what is preferable, the weak astringent lotion, formed by a solution of white vitriol, the bowels should be opened, and a looseness occasioned.

Every active medicine, such as large doses of sweet mercury, waters impregnated with sulphur, &c. ought, if possible, to be avoided; but in some cases, it must be admitted, medicines of that nature afford the only means of cure.

CHAPTER IV.

DISEASES WHICH OCCUR BETWEEN THREE OR FOUR MONTHS AFTER BIRTH, AND THE END OF THE SECOND YEAR.

THE diseases included in this chapter do not comprehend every complaint to which infants are liable during the period mentioned ; they are only the most common that occur.

As the duty of medical practitioners consists as much in the prevention as the cure of diseases, a few directions respecting the proper method of weaning children, and the age at which that important change should be made, form the last section of this chapter.

SECTION I.

TEETHING.

INFANTS seem to feel a variety of complaints in consequence of Teething. Many suffer much less than others ; but all are affected in some degree.

It appears very wonderful, that pain should attend a natural and necessary operation ; and therefore the circumstance has been denied. But no reasoning can overturn matters of fact ; for the experience of every

nurse proves, that the most vigorous and healthy children feel much uneasiness during the period of Teething.

Although infants are sometimes born with two or four teeth, these generally continue within the gums, as was formerly remarked, till five, six, or seven months after birth, when the two middle fore-teeth of the lower, and then, in a few days or weeks, the corresponding ones of the upper jaw appear.

After this an interval of several weeks commonly takes place, before the remaining fore-teeth, which usually are cut in the same order as the former, succeed.

During the ordinary period of sucking, children seldom cut more teeth than these ; though at the end of the second year they have ten in each jaw.

The symptoms which precede and accompany the eruption of the teeth are more or less violent, according to the succession in which the teething proceeds, to the resistance which the gums make, to the irritability of the infant's constitution, &c.

In the most favourable cases, the pressure of the teeth on the gums occasions some pain, and causes an increased flow of the fluids furnished by the mouth : hence the child is fretful, restless during the night, frequently thrusts his little hands, or whatever he can get hold of, into his mouth to rub his gums, slavers continually, and from the passage of some of the spit-tle into the stomach and bowels, he has occasionally sickness, gripes, and looseness.

At last the corner of a tooth is perceived ; but the uneasiness still continues for some days, when a second one is cut.

During the interval between the eruption of the lower and upper teeth, the child recovers his strength and usual good health ; but is soon again subjected to the same uneasiness.

Were these the only complaints which attend Teething, little danger might be apprehended; but sometimes, instead of these, a train of the most formidable symptoms occurs. In strong robust children, a violent fever frequently precedes the eruption of every tooth; the gums are swelled and inflamed, the eyes much affected, the belly bound, the skin hot; and the infant cries incessantly, is unable to suck, and never enjoys uninterrupted sleep for any length of time.

Weakly children, where teething is painful and difficult, are oppressed with sickness, loath all kinds of food, lose their colour, fret perpetually, have a constant looseness, and become quite emaciated. Irritable infants, under the same circumstances, besides these symptoms, are subject to convulsions, which recur from time to time, till the tooth or teeth are above the gum.

All the symptoms in children of every description are much aggravated, if several teeth cut at once, or in immediate succession; cases which sometimes happen.

The treatment of the ordinary complaints attending teething should consist in moderating the pain, in regulating the state of the belly, and in the continued employment of every means calculated to promote the general health of the infant.

With these views, small quantities of anodyne balsam should be rubbed on the back-bone at bed-time, when the child seems greatly pained. He ought to be fed with beef-tea twice a-day, if weakly and if his bowels be very loose, and should be kept as much as possible in the open air, when the weather is favourable. The cold bath ought never to be laid aside in these cases, as nothing is more conducive to strengthen the child. Looseness, if excessive, must be mo-

derated, and if the belly be bound, should be artificially induced by gentle laxative medicines.

Children feel an urgent desire, during teething, to rub their gums; and, under certain regulations, it may be safely indulged. But the common substances put into their hands for this purpose, as coral, &c. by bruising the gums, may occasion violent inflammation in these parts; and therefore the softest materials should be selected, such as a small piece of fresh liquorish root, or, as the vulgar employ, a piece of wax-candle.

The management where alarming symptoms occur is more complicated, as it must be varied according to circumstances.

When fulness and quickness of the pulse, increased heat, flushed face, frequent startings, oppressed breathings, immoderate fits of crying, &c. indicate a violent fever, the application of leeches becomes indispensable; after which the warm bath is useful. The belly should be opened by laxative medicines and emollient *Lavemens*; and every means ought to be pursued which can diminish the action of the heart and arteries. In these cases, however, unless the irritation on the gums be removed, the feverish symptoms often resist every treatment which can be suggested.

The most effectual method to accomplish this desirable object is, to cut the gum down to the teeth. This should be performed with a gum-lancet, and not by the nails of a nurse, nor by a sixpenny-piece, nor by a thimble, as many female practitioners of midwifery advise.

This operation ought never to be delayed, when the infant is seized with convulsions about the period of teething, even although the protrusion of the gum do not announce the approaching eruption of the teeth. On these occasions, the under jaw must be first cut; and if, by dividing the gum at that part where the first

teeth commonly appear, the lancet be found to rasp against a hard substance, the removal of the fits will shew, that the practice has been successful. But if no teeth be felt, and the convulsions recur, then the upper jaw should be cut in the same manner. I have often known fits which had daily attacked infants for many weeks, and had resisted the power of every other remedy, disappear entirely after cutting the gums. As no danger can follow this simple operation, it ought to be had recourse to more frequently than practitioners seem willing to allow.

When troublesome cough, soreness of the eyes, &c. attend teething, they can seldom be perfectly cured, till after the painful stage of that process.

As children are always exposed to much danger when the symptoms of teething are violent, proper assistance should be had recourse to; for parents are not capable of directing the management in such cases.

SECTION II.

CONVULSIONS.

THE nerves in children are in greater proportion, and more easily affected, than in grown people: hence infants and children are more liable to CONVULSIONS; for as these complaints depend on an excitement of the nervous system, causes which can produce no such effect in adults occasion it in children.

Convulsions, at all times alarming and hazardous, originate from many different causes, and require a

very great variety of treatment : therefore proper assistance should be always procured in such cases.

But although it be inconsistent with the design of this book to explain minutely the principles on which the cure of convulsions ought to be conducted, yet it may be of great importance to point out the nature of the disease, that many of the occasioning causes may be avoided. As the event is often very sudden, it may also prove useful to direct the means which may be employed with advantage before the practitioner can be had.—With these views the following observations are offered.

In some cases convulsions come on suddenly, in others the attack is gradual, and the first symptoms not easily discerned by the attendants. In the former, the infant, from being in the most perfect health, turns in a moment livid, his eyes and features are contorted, and his limbs and whole frame are thrown into violent agitations. These symptoms are succeeded by a suspension of vital powers, as in faintings, from which the child gradually recovers, or which may be fatal. In the latter cases, the infant shews some degree of uneasiness : he suddenly changes colour, his lips quiver, his eyes are turned upwards, and he unexpectedly, as it were, stretches himself out, or his hands become clenched.

Sometimes the child has a rapid and continued succession of violent or trifling fits, and sometimes they recur at distant intervals.

Convulsions in infants are induced by every circumstance which can affect the nervous system in general, or which can produce a violent irritation on any particular nerve.

The sudden repulsion of an eruption, or stoppage of an habitual evacuation, confinement in impure air, pressure on the brain, and the particular state of the body previous to some eruptive diseases, as the small-

pox and measles, act in the former way ; and irritating substances applied to the stomach or bowels, as improper food or medicines, worms, &c. the cutting of the teeth, as it is termed, and wounds in any sensible part, &c. operate in the latter manner.

The necessity for the most guarded caution in the treatment of children cannot be too strongly inculcated ; for on many occasions the most trifling neglect will produce frightful convulsions. Infants are often seized with this disease, from having received a small quantity of spirits and water, or from being permitted to swallow improper substances ; and in many cases the cause can be traced to the prick of a pin.

The danger in every case of convulsion is in proportion to the violence of fits, and also depends on the cause which induced them. When they precede eruptive diseases, they generally go off when the eruption appears ; and when they occur in consequence of repelled rashes, or suppressed evacuations, their return is prevented by the eruptions being made to recur, or by the substitution of artificial discharges.

But when the fits are violent and frequent, and when they proceed from pressure on the brain, or any cause which tends to keep up the irritation in the system, they generally terminate fatally. The same event often follows a single fit, by whatever cause the disease is occasioned ; and when one attack has been long continued, and attended with alarming symptoms, much may be dreaded from its recurrence.

As the cure of convulsions must be necessarily very different in different cases, it is impossible to describe any means which can be successful on every occasion.

When an infant is siezed with a violent fit, without any previous complaint, he ought to be exposed freely to the open air. After this, if his pulse be strong and quick, blood-letting, by the application of leeches to

the temple or feet, will be found useful ; but if he appear sick and oppressed, loath the breast, or exhibit any signs of a disordered stomach, a vomit should immediately be given, and the bowels ought to be opened by an emollient *Lavement*.

In cases where there are no symptoms of increased action of the blood-vessels, nor of any derangement of the stomach or bowels, the cause of the fit must be searched for, otherwise no probable means of relief can be adopted. For this purpose, the infant ought to be made quite naked, and placed in the warm bath, while every part of his body should be carefully examined, that any wound or other injury may be discovered.

The precaution of stripping the child should be observed on every occasion where the cause of the convulsion is not very obvious, as the fits may originate not only from a fall, which the nurse endeavours to conceal, but even, as has already been remarked, from the prick of a pin.

Where, from the previous indisposition of the infant, there is reason to believe that the convulsions precede some eruptive disease, he should be immediately put in the warm bath, after having been exposed for a minute or two to the open air, and then ought to receive from time to time small doses of any gentle cordial.* By these means the eruption is usually soon promoted, and the child consequently is relieved from the fits ; but in some cases a blister on the back or legs must be applied before this favourable event can be effected.

The treatment when convulsions depend on the cutting of teeth, has been already directed.

When a child seems to be suddenly deprived of life by one or two fits, if he appeared previously in good

* See in the APPENDIX the proper Cordials for Children.

health, he ought on no account to be considered as irrecoverably lost ; but the common means for restoring suspended animation should be carefully employed as long as his colour is not entirely changed ; and in every case of apparent sudden death from this cause, these means ought to be continued with patient perseverance for some time.

SECTION III.

ERUPTIVE COMPLAINTS UNACCOMPANIED BY FEVER.

INFANTS during teething, and in many instances till a later period, are liable to various eruptive affections, which resemble in some cases the itch, in others the small-pox or measles, in others scarlet fever, and in others the dusky pustules, styled in grown persons scorbutic.

Although some derangement of the general health generally precedes the appearance of the affection of the skin, those symptoms are merely temporary, so that infants and children commonly enjoy most excellent health during the continuance of the eruption ; a circumstance which sufficiently distinguishes such complaints from many of those imitated by them. The only certain method of ascertaining the itch is, by observing that it is communicated to those accustomed to handle the child.

The causes of those anomalous eruptions (a very good description of which is contained in Dr. Under-

wood's Treatise, vol. 1. page 89.) have not hitherto been discovered.

The only danger to be dreaded from them is the sudden repulsion of the eruption, (as in the red gum); for that accident is always followed by alarming fever, or affections of the bowels, or great inflammation of the eyes, or even convulsions.

During the course of the eruption, all which seems necessary is to keep the bowels in a state of moderate looseness, to regulate carefully the diet, to wash the whole surface of the skin twice or thrice a-day with tepid water, and to guard against such exposure to cold, as may probably repel the eruption. In obstinate cases, sea-bathing, washing the skin daily with lime-water, or with a weak solution of potash; giving small doses of calomel, or antimonial wine, and establishing an issue in some convenient part of the body, or putting a burgundy pitch plaster between the shoulders, are severally found useful, according to circumstances, of which the practitioner can alone judge.

If at any time the eruption be suddenly repelled, a little warm wine and water, the warm bath, opening the bowels, and the application of blisters, must be had recourse to.

SECTION IV.

DIRECTIONS RESPECTING THE METHOD OF WEANING CHILDREN.

WEANING forms an important æra in the life of an infant, as on the proper regulation of this great revolution in his mode of living, his future health often depends.

Although different countries adopt different practices with respect to weaning ; yet it is a rule almost universally established, never to deprive a child of the breast if he do not thrive, unless his indisposition seem to originate from the milk. This is not an uncommon occurrence ; for when women give suck too long, a natural change takes place in their system, which renders the milk no longer possessed of qualities proper for nourishment.

The time of weaning must be influenced by a variety of circumstances besides the health of the child, as, season of the year, constitution of the parents, period of teething, &c. The winter, for obvious reasons, is a very improper time for this purpose.

When the parents have a scrophulous habit, the child should be sent to a healthy country-woman, as already recommended ; and he ought not to be weaned till at least eighteen months old. If the nurse become unfit for her duty before that time, another should be procured.

With these exceptions, infants may in general be weaned at any time between nine and twelve months after birth. Too early and too late weaning should be equally guarded against.

Many errors are daily committed in the method of weaning children. Some women deprive the infant of the breast at once ; and others, by the application of mustard, or any nauseous substance, to the nipples, endeavour to make him desert the breast of his own accord.

Both practices are equally cruel and improper. A change in diet should be introduced by slow degrees ; and therefore, for some time previous to weaning, the child ought to receive an increased quantity of spoon-meat, and should be allowed a smaller proportion of milk. But unless the latter precaution be attended to, the former practice ought not to be adopted.

When an infant is weaned, it is too common for nurses to give doses of laudanum, or syrup of poppies, (which has the same effects), every night for a considerable time, with the plausible view of obviating restlessness. But these medicines should never be allowed ; where restlessness occurs, a little anodyne balsam may be rubbed on the back-bone. The indiscriminate use of laxatives is also a prevalent custom among women, and cannot be condemned in strong enough terms. If the bowels be not sufficiently open, laxatives must be had recourse to ; but otherwise they ought not to be prescribed.

The infant should be accustomed, when weaned, to receive food or drink at stated periods, and not according to the caprice of nurses. Although this task will at first be somewhat difficult, it can always be accomplished by perseverance ; and the benefits which the child himself, and his attendants, derive from this circumstance, will more than compensate for the trouble attending the attempt. As little drink or food ought to be given during the night as possible ; for a bad habit may be induced, which may lay the foundation for many future complaints.

The impropriety of indulging infants with spirits and water, wine-whey, &c. has already been explained.

After weaning, the food of children should consist of weak beef-tea, panada, light puddings, and the various preparations of milk. Rusk biscuit ought generally to be used, instead of ordinary bread. The common preparation of oat-meal, (called pottage or porridge), till within these few years much used in this part of Great Britain, is undoubtedly too difficult of digestion for infants, unless a proportion of barley-meal be mixed with the oat-meal.

Frequent exposure in the open air when the weather is favourable, and an increased degree of exercise, are highly beneficial to newly-weaned children.

CHAPTER V.

DISEASES COMMON TO INFANCY AND
CHILDHOOD.

THE diseases described in the following sections, with the exception of the eruptive disorders attended with fever, are perhaps the most frequent to which infants and children are liable.

With respect to the eruptive affections accompanied with fever, viz. the small-pox, chicken-pox, measles, and scarlet fever, the limits and object of this work do not permit any detail. Directions for inoculating the small-pox were inserted in the former editions; but the introduction of the cow-pox, the utility of which is now completely established, not only supersedes the old practice, but also holds out to mankind the reasonable expectation of eradicating a disease which has for some centuries proved so extensively destructive.

SECTION I.

CROUP.

OF the diseases incident to infancy and childhood the Croup is perhaps the most alarming, for it often proves fatal within thirty-six hours from the first attack.

This disease may be said to be peculiar to marshy countries, and those situated in the neighbourhood of the sea, so that in the inland and dry situations of this island it is quite unknown. Although it has certainly prevailed in this city and its neighbourhood from time immemorial, the first accurate description of it was published by Dr. Francis Home about forty years ago.

It occurs most frequently during winter and spring; but it is found to take place at any season of the year, when damp cold easterly winds prevail.

It has been by some practitioners supposed to be contagious; for two or three children in the same family have fallen victims to it within one week. But this should be attributed to their having been all exposed to the same exciting cause of the disease.

The true croup is preceded commonly for some days, and always for a day or two, by a hoarse cough; but the first symptom that proves alarming to one unacquainted with the disease, is a difficulty of breathing, which comes on towards night. The breathing is very hurried, and in many instances so noisy that it can be heard at the distance of several yards.

After this state of the breathing is observed, the fits of coughing become more frequent, and have a very peculiar sound, resembling the loud crowing of a roupy cock. Generally the coughing occurs in redoubled fits, the second fit being more violent than the first. Some viscid phlegm is forced up by the cough; but it reaches no farther than the mouth, being retracted when the cough ceases.

If the countenance of the child be examined at this time, it will be found flushed and swelled, in a degree proportioned to the constitution of the individual; consequently, in some cases the eyes appear bloodshot, watery, and swelled as it were, and the whole face is very red, except that round the mouth there is an evident whiteness; but in other cases there are only

watery eyes, and an obscure blush over the face, with a slight paleness round the mouth.

The child sleeps during the intervals between the fits of coughing ; but there is no material alteration in the state of breathing while it is asleep. Those in whom the face is very much flushed seem overpowered by a heavy sleep, from which they are roused only by the violent fits of coughing. Food and drink are readily swallowed without difficulty, and the natural evacuations go on as usual.

In proportion as the disease continues, the fits of coughing return more frequently, and are attended with an uncommon degree of agitation throughout the whole frame ; and in some cases the breathing becomes more and more noisy. At last the appearance of the countenance changes, the lips growing livid, the pallidness round the mouth more striking, and the whole face pale. Where the child unfortunately dies, that event is occasioned by a fit of suffocation ; and this often happens quite unexpectedly to the attendants.

During the whole course of the disease the child is extremely fretful ; but when irritated it seldom cries for any length of time. This seems to arise partly from the uneasiness in breathing being aggravated by the fits of crying, and partly from the child being unable to direct its attention to any object whatever above a few minutes at a time.

The progress of the disease is very different in different cases, for it sometimes runs through its course in twenty-four hours, and sometimes it is protracted even to the tenth day. The progress seems to correspond with the frequency and violence of the fits of coughing.

When a child happily recovers from this disease, it continues for some time extremely liable to a return of the disorder ; and if a second attack should occur

within a few days from the cessation of the former, there is very great risk of its proving suddenly and rapidly fatal.

The true croup occurs only during cold damp weather, except in marshy places, where it is apt to happen at any time when a foggy state of the atmosphere prevails. The ordinary subjects of the disease are those children who have enjoyed the best health; and the most common period of life at which it takes place, is from the fifth month to the fifth or sixth year.

The immediate cause of this disease is an inflammation of the membrane which lines the windpipe. In consequence of this, matter is formed, which concretes and choaks up the passage to the lungs. This concreted matter has been, on some rare occasions, thrown off by vomiting, and has relieved the child from threatening suffocation.

There is an affection resembling this disease, which may be styled *spurious croup*, and which is very analogous to the asthma of grown people. It comes on suddenly, without any previous indisposition, in the form of very difficult breathing, occasioning fits of croupy coughing, unaccompanied with the appearance of tough phlegm in the throat or mouth. The countenance is little altered during this affection; and during the fits of coughing there is not that excessive agitation which is so strongly marked in the true croup.

This disease attacks delicate, much more frequently than robust children, and occurs during any state of the weather. Its duration is in general limited to a few hours; and in many instances it ceases entirely for many hours, or even for a day or two, and then recurs, so that a child may have several attacks within a short time. There can be no doubt that the spurious croup has on some very rare occasions proved fatal;

but in general it is unattended with danger. It seems to arise from a spasmodic affection of the wind-pipe. As it is extremely difficult in some cases to distinguish, at the beginning, the true from the spurious croup, it is a fortunate circumstance, that the following method of treatment is applicable to both diseases.

Immediately upon the attack, the child must be put into a tub of water, heated to the ninety-sixth degree of Fahrenheit's thermometer, (that is, to the degree which the hand immersed in it can easily bear), or must be wrapped up in a blanket wrung out of hot water. Whether the bath or the fomentation be employed, it ought to be continued for at least ten minutes ; and then the child should be carefully rubbed dry, wrapped up in warm flannel, and put to bed.

A dose of calomel is now to be given, and repeated every hour till the breathing be evidently relieved ; when it is to be gradually discontinued, allowing at first two, then three, and finally four or five hours to intervene between each dose, according to the state of symptoms.

This medicine commonly occasions both vomiting and purging ; and in true croup, the first alleviation of symptoms, generally follows the discharge of a great quantity of dark green coloured matter (like boiled spinage) by stool ; but if the attack have been that of spurious croup, the breathlessness ceases after vomiting has occurred.

The dose of calomel is to be regulated principally by the age of the little patient. During the first year it should be from one to two grains, during the second two grains and an half, during the third and fourth years from three to four grains, and during the fifth and sixth from four to five grains. It may be given mixed with a little sugar as a dry powder, or it may be mixed with currant jelly, or honey, or treacle, or pottage, or panada, or light pudding, or with any

thing which is thick ; but it cannot be given in drink.

During the course of the disease, nothing else than liquids ought to be allowed to the child. These should consist of cow milk whey, very weak tea, thin barley gruel, fig tea, apple tea, milk and water, or toast and water. It may be unnecessary to remark, that if the child be not weaned, nothing but the nurse's milk should be given. The room in which the little sufferer is kept ought to be moderately warm.

When the disease has begun to yield to this treatment, nourishment suited to the habits and circumstances of the child is to be exhibited in small quantities, and often repeated. In some cases considerable weakness remains after the crouping has ceased, in consequence partly of the violence of the symptoms, and partly of the operation of the calomel. Under such circumstances, cordials, particularly weak white wine whey, and a blister to the breast, become necessary. But if proper attention have been paid to the precaution of lessening the number of doses of calomel, whenever the disease is in the least alleviated, the ordinary health of the child will be found restored within a very short time after the symptoms of croup have disappeared.

For the cure of this formidable disease, practitioners formerly trusted chiefly to bleeding, with the use of vomits and blisters as auxiliaries ; but the result of the practice was, in the more favourable cases, a very considerable shock to the constitution, and in the majority of instances the death of the child. These circumstances rendered it fair to make a trial of the practice of giving calomel, first suggested by some American physicians. Accordingly, a very deserving surgeon of this city, Mr. James Anderson senior, began it some years ago, and recommended it to the notice of the present Professor of Midwifery in the Uni-

versity. After two years most accurate and careful attention to its effects, he considers himself fully warranted in giving the above directions. He has had the happiness of seeing the disease yield where its violence seemed to threaten almost immediate death; and among the little patients on whom it has been successfully tried, he has directed to one of five months old, (the child of the Rev. Mr. Sydney Smith), thirty-two grains of calomel within twenty-four hours, and to another of the same age, the child of an officer of excise, eighty-four grains within seventy-two hours. A girl, the daughter of a respectable tradesman in College Street, seven years of age, had within little more than sixty hours an hundred and thirty-three grains, and two days after appeared as if she had never had a complaint. In every case where he has employed it previous to the occurrence of lividness of the lips and other mortal symptoms, (amounting now to seventeen), he has completely succeeded both in curing the disease and in preventing any shock to the child's constitution. In three instances where the case seemed desperate, he thought it his duty to try its effects, rather than leave the patient to his fate. It neither aggravated nor mitigated the symptoms.

SECTION II.

IRREGULAR FEVERS.

THE feverish complaints which attack children are generally merely symptoms of some other disease. Their duration is seldom considerable; and although violent while they continue, they are not frequently productive of danger, if properly treated.

The causes of infantile fevers, therefore, are very numerous. Exposure to cold, disordered stomach or bowels, teething, and, in short, every thing which can excite an increased action in the heart and blood-vessels, readily induce them.

The treatment of these complaints must depend entirely on the causes; and the proper method for remedying most of them has already been detailed.

When the cause of irregular fevers, as sometimes happens, cannot be discovered, attention should be paid to moderate the symptoms. For this purpose, vomits, gentle cordials, the warm bath, or leeches, and blisters, must be occasionally necessary.

Parents ought to be encouraged never to lose hopes of the recovery of children in these complaints; for many cases have occurred, where the disease terminated favourably, after the most eminent practitioners had deserted the patients as lost. The most unremitting attention should therefore be constantly paid to infants affected with fever, as long as life continues. When food cannot be given by the mouth, a child may be nourished for many days by *Lavemens*, composed of panada and wine, or beef-tea.

SECTION III.

HOOPING COUGH.

THE Hooping Cough, or what is called in Scotland the Chincough or Kinkcough, begins like a common cold, attended in some cases with fever, and frequently with little derangement of the system. By degrees the symptoms of cold cease, but the cough

continues, and is accompanied with circumstances which mark its nature.

These are the suddenness of the fits of coughing : the great agitation the child feels during the cough, which leads him, at the instant it comes on, to lay hold of what is nearest, in order to support himself, the coughing being excited by emotions of the mind, and by any considerable exertion, and each fit of cough ending in vomiting or in hooping, (called also back-draught), which resembles threatening suffocation, and seems to arise from a convulsive action of the upper part of the windpipe.

In the favourable cases of this disease, there is no fever, no diminution of the appetite for food, no apparent deviation from the ordinary health ; and the fits of coughing occur only twice or thrice during the night, and during the day take place only after a full meal, or violent exercise, or emotions of the mind. If hooping follow the cough, it is in a very trifling degree.

But in the unfavourable cases, great fever and weakness, or feverish heat, with evident determination to the head, occur at the commencement of the disease, accompanied with various symptoms of derangement, according to the constitution of the individual. The fits of coughing are very frequent, of long continuance, sometimes preceded by breathlessness, but more often followed by that circumstance, and sometimes ending in excessive discharges of blood from the nose or from the bowels. The hooping in such cases renders the face quite livid, and not unfrequently terminates in convulsions or in faints. It always seems to threaten instant suffocation.

Nothing is more uncertain than the duration and event of this disease. In the mildest form in which it occurs, it generally continues for two or three months ; and often, after it has apparently ceased, an accidental

exposure to cold occasions a return and an aggravation of the symptoms. In the violent degrees, many months elapse before the symptoms seem to be mitigated; and the return to strength where the child recovers is very tardy. It is almost impossible in any case to foretel with certainty the event; for in many instances the child has been suddenly carried off, after it had for several days, or even weeks, had the most complete mitigation of all the symptoms; while in other cases, every circumstance which commonly indicates approaching death, has been observed for a very considerable time, and yet the child has eventually struggled through. Where fatal event takes place, it is in consequence either of exhaustion, in which case the feet are commonly much swelled for some time before death, or of a fit of suffocation, or a convulsion.

Some estimate of the danger may be formed by attending to the age, constitution, and symptoms of the patient, and the season of the year. Experience proves too, that it is more fatal in some years than in others.

The Hooping Cough occurs only once during the life of the individual; but in some children, even for years after this disease, every common cold is attended by a cough which seems somewhat like the Hooping Cough. During teething too, there is sometimes a kind of crowing, which to a superficial observer seems to resemble the back-draught.

Infants and children of every age and constitution are liable to this disease; and contrary to what happens with respect to other infectious diseases, the youngest infant is as subject to it as the oldest child.

The cause of the Hooping Cough is a contagious matter, which, although so subtile as to elude the cognisance of the senses, may nevertheless be conveyed from one child to another, at a very considerable distance, through the medium of a third person. Infants, a few days after birth, have become affected with the

disease, in consequence of being handled by those who had been in a house where the Hooping Cough was prevailing. There is reason to believe, that after the original cause has ceased to have effect, the disease is continued merely from habit.

In the treatment of the Hooping Cough, the great objects to be aimed at are, to remove the habit on which the duration of the complaint depends, to restore or support strength, and to palliate troublesome or alarming symptoms. If any medicine should be discovered, which could at once destroy the contagion of Hooping Cough, all other means might be superseded; but hitherto no such discovery has been made.

For accomplishing the first of the above purposes, vomits repeated daily, or oftener according to the exigency of the case, and frequent change of air, are to be chiefly trusted. It may be known when the air disagrees, by observing that the child is more and more fretful and restless during the night; and in many cases it is found necessary to change the child's residence weekly.

The strength is to be supported by suitable nourishment. Where inflammatory symptoms attend at the beginning, the diet should consist almost entirely of milk and vegetables; but when much debility takes place, animal food in various forms, and cordials adapted to the age and constitution, are indispensable. The Peruvian bark is in many of those cases extremely useful.

For palliating alarming or troublesome symptoms, a variety of treatment is required in different cases. In general, the chief symptoms of that description are the inflammatory and feverish affections, and the hooping. The inflammatory symptoms, excepting when very violent, are best moderated by regulation of diet and by keeping the bowels open. On some rare occasions, bleeding must be had recourse to; but

it requires much discernment to judge of this, and irreparable mischief may be done by the subtraction of blood. The feverish symptoms are mitigated by frequent ablution with tepid water, by the use of emetics, and by the change of air. When they are attended with great debility, cordials, and occasional blisters, must be employed.

The most formidable symptom of this disease is the hooping, as it always when violent threatens immediate death. Where it is not alleviated by the means already recommended, particularly frequent emetics and change of air, stimulant substances must be rubbed over the ribs, or breast, or belly, evening and morning. The rectified oil of amber answers for this purpose very well. Roche's royal embrocation is used with the same intention. Garlic ointment, rubbed on the soles of the feet, seems particularly efficacious, where uneasiness in breathing continues during the intervals between the fits of coughing. Narcotic medicines, given internally, such as the Hemlock and Henbane, are sometimes useful in lessening the violence and frequency of the hooping; but such means are too dangerous to be had recourse to, except by the special direction of a regular practitioner.

SECTION IV.

WATER IN THE HEAD.

UNDER the title of Water in the Head, three diseases, different from each other in their nature, although similar in one respect, have been generally comprehended.

The first is an affection of the head, coeval with birth, which may be styled the *Congenite Water in the Head*. Of this disease the chief mark is, an evident enlargement of the head, with uncommon openness of its sutures, or the connections between its bones. This is met with in various degrees; for sometimes the size of the head is so great, and the collection of water so enormous, that the infant cannot be born alive: in other cases, the enlargement is just perceptible, and seems to have little influence upon the health of the infant; and between these extremities every intermediate degree has occurred. In general, where the disease is quite evident at birth, the size of the head continues increasing for ten or twelve months; and then the child is destroyed by convulsions. But cases have occurred where life has been protracted for several years, notwithstanding this disease. Under such circumstances, the sufferer has dragged out a most miserable existence, having been incapable of any mental exertion, and also in most instances of any bodily exercise.

This disease seems to be owing to some original imperfection in the structure of the individual; and as far as human experience has hitherto evinced, it is quite incurable. Blisters to the head, issues in different parts of the body, the various preparations of mercury, and other active means, have been often tried without any appearance of even mitigating the symptoms.

The second disease known by this name, may be termed the *Symptomatic Water in the Head*. It is the natural effect of any weakening disease in infancy or childhood, just as swelling of the feet and ancles take place in grown persons who are much debilitated.

In consequence of the large proportion of blood which circulates through the head of infants and children, every complaint which occasions any irregularity or inequality in the action of the heart and blood-

vessels, produces an effusion of watery fluid into the cavities of the brain, more readily than in any other part of the body. The effect of this effusion is commonly stupor, and eventually convulsions. In this way, fevers, many inflammatory complaints, and in short all diseases which are protracted for any length of time, terminate; and as it is found after death, that water is accumulated within the brain, superficial observers are apt to imagine, that what in fact is the effect of the previous indisposition, had been the original cause.

Symptomatic water in the head has been often cured by supporting the strength, and at the same time employing the powerful remedies for dropsical affections. The means for both purposes ought to be exceedingly active, as there is generally no time for trifling.

The third disease known by this title has been usually called the *Idiopathic Water in the Head*, and more often takes place in childhood than in infancy, although instances of its occurrence in the latter are occasionally met with.

When infants are afflicted with this disease, the first symptoms are commonly those of teething, after which a great degree of torpor, with obstinate costiveness, frequent startings, and in some cases convulsions, suddenly come on. The fatal event often follows with great rapidity, so that an infant who had been observed to be only a little indisposed, has been known to die of this disease within the course of three or four days.

In children, the approaches of this formidable complaint are more gradual and more insidious. Slight headach, or pain about the shoulders, attended with languor, dulness of the eyes, and costiveness, with disturbed sleep, now and then take place for many weeks, often while the general health does not appear affected; so that the first circumstance which alarms

the attendants in many cases, is an aggravation of the headach, accompanied by sickness and constipation, or frequent screaming during the night, as if from being awakened by a frightful dream, or irregular feverish symptoms, with considerable dilatation of the pupils, and occasional squinting. Soon after this, the pulse becomes evidently affected, being either preternaturally slow or intermitting. The child now complains almost constantly of pain in the head, commonly confined to one part, and of intolerance of light, and has also frequent retching, and most obstinate constipation. Some time after this, the inequality of the pulse ceases, and is succeeded by great frequency and feebleness; the appetite for food returns, inso-much, that whatever is offered is greedily swallowed; the pupils of the eyes are more and more dilated, and the vision proportionally impaired, till at last double vision, and finally blindness ensue. Stupor, with stertorous breathing and horrible screamings follow, and are terminated by convulsions, which soon destroy the child.

The progress and combination of these symptoms are very different in different cases. Sometimes the disease has proved fatal in the course of a few weeks, and sometimes it has been protracted for several months.

It is often extremely difficult to distinguish this disease, for many of the symptoms resemble those occasioned by worms, or by irregular fevers. The only marks which can be depended on are, unusual slowness or inequality of the pulse, and excessive torpor of the bowels, for these occur in every case.

This disease is occasioned by an increased determination of blood to the head; and as this is often the effect of very slight injuries from falls or blows, parents, and those who have the charge of children, ought to attend most particularly to every accident of

that kind, however trifling it may appear at the time to be. The application of leeches to the temples, opening the bowels by some cooling medicine, and keeping the child upon a milk and vegetable diet for some days, can almost never do any harm, and may often prevent the most serious complaints.

In the treatment of Idiopathic Water in the Head, the most active means ought to be employed as early as possible ; for after a certain time the disease is quite incurable. Bleeding, blistering, preparations of mercury, and in some cases the foxglove, are severally necessary ; but as such powerful remedies ought never to be employed by any other than regular practitioners, it would be improper to detail the method of treatment in this work.

When parents have unfortunately lost one or two children in consequence of this disease, it is a good precautionary measure to direct, that in future every child shall have, during the period of teething, an issue established on the head or back.

APPENDIX.

FORMS OF MEDICINES.

OBSERVATIONS ON THE DOSES OF MEDICINES.

MEDICAL practitioners commonly prescribe liquid medicines in the doses of table-spoonful, tea-spoonful, or drops. But an exact dose can never be given by these measures ; for table and tea spoons are very various in size ; and fluids poured from a phial fall out in large or small drops, according to the thickness of its edges or to the quantity of its contents.

The doses of medicines recommended in this Work are regulated by a graduated glass-measure, which every family can procure for a trifle. A table-spoonful is supposed to contain half an ounce ; a tea-spoonful a drachm ; and the latter is considered to be equal to seventy drops. When therefore any medicine is regulated in the dose of ten drops, a drachm may be diluted with six times the quantity water, and a tea-spoonful will furnish the exact proportion ; and the same rule may be applied to every other dose of fluids by drops.

The doses of the pills are always specified.

The doses of powders and electuaries should be ascertained by weight, for which purpose every family ought to be provided with a set of apothecaries weights.

When any of the following medicines is suited both to grown persons and to children, the doses proper for each are mentioned ; but when they are only designed for one or other, the dose for either alone is marked.

ABSORBENTS.

MAGNESIA—may be mixed with water or milk.

The dose for grown persons is half a drachm every four or six hours, when necessary ; for children, twenty grains once in eight or ten hours.

PREPARED CRABS EYES—may be given in the same manner as magnesia.

The dose for grown persons is fifteen or twenty grains every hour or two ; for children, ten grains every two hours.

LIME WATER.—The dose for grown persons is four ounces twice or thrice a-day ; for children, two tea-spoonfuls or a table-spoonful, (according to their age,) diluted with common water.

ABSORBENT MIXTURE.—Take of

Refined Sugar one drachm,

Prepared Crabs Eyes,

Magnesia, of each two drachms.

Rub them well together into a fine powder. Then add of

Simple Cinnamon-water two tea-spoonfuls.

Common water five table-spoonfuls.

Dose : For grown persons a table-spoonful, and for children a tea-spoonful, every two hours.*

ANODYNES.

OPIUM.—Dose, One grain for grown persons.

OPIATE PILLS.—Take of

Pure Opium, and

Powder of Cinnamon, equal parts.

Form these, by means of Syrup, into pills of one grain each.

Dose for grown persons, Two at bed-time, and in particular cases one in the morning.

LAUDANUM.—Dose for grown persons, thirty or thirty-five drops once in twenty-four hours. When it disagrees in the ordinary quantity, it may often be given with much advantage in doses of five drops every hour till the proper effect be produced.

As Laudanum is extremely prejudicial to children,† it ought never to be prescribed to them except under very peculiar circumstances. Instead of its internal use, a little of it should be rubbed on the back-bone ; or the same effects will be produced by rubbing on that part a tea-spoonful of anodyne balsam.

When Laudanum is prescribed by way of *Lavement*, the proportion must be more than double what can be given by the mouth.

PAREGORIC ELIXIR.—Dose for grown persons, from seventy to an hundred and forty drops in a cup of water or gruel.

RUSSIAN CASTOR.—This medicine must be always

* This mixture should be kept in a phial in a cool place, and the glass ought to be well shaken every time it is used.

† The author has been consulted in two cases where four drops proved fatal to children some months old.

used fresh powdered.—The dose for grown persons is twenty or thirty grains once in twenty-four hours, given in marmalade or jelly.

ANODYNE DRAUGHT.—Take of
Laudanum thirty-five drops,
Common Syrup two tea-spoonfuls,
Simple Cinnamon-water a table-spoonful.

Mix them together.

This medicine, to be taken at once, is only adapted for grown persons.

ANODYNE MIXTURE.—Take of
Laudanum one drachm,
Tincture of Saffron a table-spoonful,
Common Syrup two table-spoonfuls,
Water four table-spoonfuls.

Mix them together.

Dose, two table-spoonfuls at bed-time and one every five or six hours while pained, for grown persons.

OPIUM PLASTER.—To two ounces of the Stomach-plaster of the London Dispensary, add two drachms of pure Opium.

To be spread on a piece of leather.

ASTRINGENTS.

For Internal Use.

OAK BARK (in powder).—Dose, twenty grains twice a-day, for grown persons, in jelly or marmalade.

PERUVIAN BARK.—Dose, from half a drachm to two drachms twice a-day, for grown persons, in water, port-wine, in jelly, or in a piece of sheet-wafer.—For children, from ten to twenty grains.

ELIXIR OF VITRIOL.—Dose, fifteen or twenty drops twice a-day, for grown persons, in a glass of spring-

water, taking care to rince out the mouth after every dose.

ASTRINGENT DECOCTION.—Take of

Cinnamon two drachms,

Peruvian Bark one ounce,

Spring Water three English pints.

Boil these together till only one half remains; then strain the liquor off clear after it has cooled, and add,

Weak Acid of Vitriol one drachm,

Nutmeg-water, or Dutch Cinnamon-water, one ounce.

Dose, two ounces twice a-day, for grown persons.

STRONG ASTRINGENT DECOCTION.—Take of

Canella Alba two drachms,

Peruvian Bark,

Oak Bark, of each half an ounce,

Spring Water two English pints.

Boil these till one pint remains, pour the liquor clear off, and add the same materials as to the former decoction.

Dose, two ounces, twice a-day, for grown persons.

ASTRINGENT INFUSION.—Take of

Dried Scarlet Roses a handful.

Pour on these a pint of boiling water.

After four hours, strain off the liquor, and add—

Weak Acid of Vitriol one drachm,

Syrup of Roses one ounce.

Mix them together.

Dose, one or two table-spoonfuls, for grown persons, every two or three hours, according to circumstances.

ASTRINGENT MIXTURE.—Take of

Laudanum one drachm,

Japonic Confection,

Refined sugar, of each two drachms.

Rub these together in a glass mortar, and add,

Of simple Cinnamon-water one ounce,

Spring Water three ounces.

Mix them.

Dose, a table-spoonful every three hours for grown persons, and for infants a tea-spoonful, diluted with as much water.

ASTRINGENT POWDER.—Take of

Powdered Ginger fifteen grains,

Rock Alum half a drachm,

Kino (*Gum Kino*) two drachms,

Catechu (*Japonic Earth*) one drachm.

Rub these together into a very fine powder.

Dose for grown persons, ten grains every two or three hours, in marmalade or conserve of roses.

For External Use.

SOLUTIONS OF SUGAR OF LEAD. See page 62.

WEAK ASTRINGENT LOTION.—Dissolve half a drachm of White Vitriol in a pint of spring water.

STRONG ASTRINGENT LOTION.—Dissolve two drachms of Common Alum in one pint of spring water.

ASTRINGENT DECOCTION.—Take of

Oak Bark two ounces,

Spring Water two pounds.

Boil into one pound; to which, when strained, add,

One drachm of Alum.

BITTERS.

COLUMBO POWDER.—Dose for grown persons, ten grains twice a-day, in marmalade.

INFUSION OF CHAMOMILE.—Take of

Chamomile Flowers, dried, a handful,

Pour on them a quart of spring cold water.

After twenty-four hours, strain off the liquor.

Dose for grown persons, a small tea-cupful twice a-day ; for children of five or six years of age half that quantity.

BITTERS FOR INFUSION IN WATER.—Take of

Dried Yellow Rind of Seville Orange two drachms,

Root of Sweet-scented Flag,

Peruvian Bark, of each half an ounce.

Pour on these one quart of boiling water, and strain off, after thirty-six hours.

Dose for grown persons, a small tea-cupful.

BITTERS FOR INFUSION IN WINE.—Take of

Lesser Cardamom Seeds, bruised, one drachm,
Peruvian Bark,

Gentian Root, of each half an ounce.

Pour on these a quart-bottle of red port wine, and filter off the liquor after four days.

Dose for grown persons, a small wine-glassful twice a-day.

CARMINATIVES.

ANISE SUGAR.—Dose for children, six or eight grains.

ESSENCE OF PEPPERMINT.—Dose for grown persons, four or five drops on a small piece of sugar. For infants, half a drop on sugar dissolved in water.

CORDIALS.

ÆTHER.—Dose for grown persons, a tea-spoonful every hour or two, in a glass of spring water.

BARLEY CINNAMON WATER.—Dose, a table-spoonful for grown persons, and for children a tea-spoonful, diluted in as much water, every hour.

CORDIAL DRAUGHT —Take of

 Volatile Tincture of Valerian thirty-five drops,
 Simple Cinnamon Water,
 Syrup, of each three tea-spoonfuls.

 Mix them together.

 To be taken at once for grown persons.

CORDIAL DROPS.—Take of

 Paregoric Elixir,
 Volatile Tincture of Valerian, of each equal parts.

 Mix them together.

 Dose, one tea-spoonful in a glass of water for grown persons.

CORDIAL MIXTURE.—Take of

 Compound Spirit of Lavender,
 Tincture of Saffron, each one tea-spoonful.
 Syrup,
 Simple Cinnamon Water, of each half an ounce,
 Spring Water one ounce.

 Mix them together.

 Dose for grown persons, a table-spoonful every hour or two; for children, a tea-spoonful diluted with water.

CORDIAL MIXTURE FOR CHILDREN.—Take of

 Aromatic Spirit of Ammonia half a drachm,
 Simple Syrup an ounce,
 Rose-water three ounces.

 Mix them.

 Dose, a tea-spoonful every hour while awake.

DIAPHORETICS.

ANTIMONIAL WINE.—Dose for grown persons, twenty drops every hour or two, in gruel, till the proper effect be produced; for children, four or five drops every two hours.

DOVER'S POWDER.—Dose for grown persons, twenty grains in gruel or honey

JAMES'S POWDER.—Dose for grown persons, seven or eight grains, divided into two parts, the one to be given an hour or two after the other, in marmalade or conserve of roses.

DIAPHORETIC DRAUGHT.—Take of

Laudanum,

Antimonial Wine, of each twenty-five drops,

Simple Cinnamon Water,

Syrup, of each three tea-spoonfuls.

Mix them.

To be taken at bed-time, for grown persons.

SALINE JULEP.—Take of

Lemon Juice one ounce,

Volatile Sal. Ammoniac. one drachm, or Salt of
Tartar four scruples.

After the effervescence, add,

Syrup, two tea-spoonfuls,

Simple Cinnamon Water half an ounce,

Spring Water, three ounces.

Mix them.

Dose for grown persons, two table-spoonfuls every three hours.

DIURETICS.

CREAM OF TARTAR.—Dose for grown persons, half an ounce dissolved in a pint and a half of water, to be taken throughout the course of the day. It must be gradually increased as the stomach becomes accustomed to it.

OIL OF JUNIPER.—Dose for grown persons, ten drops in gruel; for children, one drop on a little sugar, which may then be mixed with panada.

NITRE.—Dose, ten grains mixed with sugar, and put into gruel, twice or thrice a-day, for grown persons.

DULCIFIED SPIRIT OF NITRE.—Dose for grown persons, a tea-spoonful, mixed with a small cupful of water.

DRIED SQUILL.—Dose for grown persons, a grain three or four times a-day, in the form of pills.

DRINKS.

ALMOND EMULSION.—Take of
Sweet Almonds, blanched, four ounces,
Refined Sugar two ounces,
Beat them well in a marble mortar, and then add,
by degrees,
Simple Cinnamon-water three ounces,
Spring Water a pint and a half.

Dose for grown persons, a tea-cupful every two hours.

IMPERIAL DRINK.—Take of
Cream of Tartar, Refined Sugar, each two
drachms.

Outer Rind of fresh Lemon one drachm.

Boiling water one quart.

After it is cool, strain off the liquor.

Dose, a tea-cupful every hour or two, for grown persons ; for children, a table-spoonful.

BARLEY WATER.

JELLY WATER.

LEMONADE.

RICE-GRUEL.

WATER-GRUEL.

WHITE-WINE WHEY.

The use of these is well known!

EMETICS.

ANTIMONIAL WINE.—Dose for grown persons, two tea-spoonfuls ; for children, ten or fifteen drops.

IPECACUAN. (in Powder.)—Dose for grown persons, fifteen or twenty grains, mixed with sugar and warm water ; for children, from three to ten grains, mixed with syrup.

IPECACUAN WINE.—Dose for children, one, two, or three tea-spoonfuls, according to the age.

EMETIC TARTAR.*—Dose for grown persons, two grains dissolved in warm water.

VOMITING MIXTURE.—Take of

Antimonial Wine one drachm,

Squill Vinegar two drachms,

Syrup one ounce,

Spring Water three ounces,

Mix them.

* Emetic Tartar must never be given to infants ; for alarming convulsions have often followed its use.

Dose for children, two tea-spoonfuls, or a table-spoonful, according to the age.*

LAXATIVES.

CALOMEL.—Dose for children, from one to four grains, according to the age, mixed with sugar or any thing but drinks.

CASTOR OIL.—Dose for grown persons, from two tea-spoonfuls to a table-spoonful every six hours, till it operate. To be given in a little cold brandy and water, or in coffee.

CREAM OF TARTAR.—Dose for grown persons, two or three tea-spoonfuls at bed-time, with a little Nutmeg, in water or gruel.

LAXATIVE ELECTUARY.—Take of

Powder of Jalap twenty grains,

Chrystals of Tartar,

Refined Sugar, each two drachms.

Rub them well together in a marble or glass mortar, then add,

Lenitive Electuary one ounce and an half,

Syrup of Roses, as much as will make the whole into a soft consistence.

Dose for grown persons, a drachm every two hours till it operate.

STRONG LAXATIVE ELECTUARY.—Take of

Powder of Ginger ten grains,

Powder of Jalap, in fine powder, one drachm,

Cream of Tartar one ounce,

Syrup, as much as will give the whole a proper consistence.

* This mixture is particularly useful when children are troubled with cough.

Dose for grown persons, two drachms in the morning.

LAXATIVE PILLS —Take of
Powder of Ginger ten grains,
Socotorine Aloes in finest powder,
Castile Soap, each one drachm.

Beat them together in a stone mortar, and then add two or three drops of syrup, so as to form a mass, which is to be made into thirty-two pills.

Dose for grown persons, two at bed-time.

STRONG LAXATIVE PILLS.—Take of

Powder of Ginger ten grains.
Calomel half a drachm.
Castile Soap forty grains,
Socotorine Aloes in the finest powder, one drachm and an half.

Form these, as directed in the preceding receipt, into forty-two pills.

Dose for grown persons, one or two at bed-time, according to the state of the belly.

LAXATIVE POWDER.—Take of

Calomel four grains,
Powder of Jalap fifteen grains.

Rub them well together in a glass-mortar.

To be taken in the morning in marmalade for grown persons.

LAXATIVE DRAUGHT.—To the above

Laxative Powder add,
Powder of Ginger three grains,
Syrup half an ounce.

Mix them.

To be taken in the morning. For grown persons.

LAXATIVE SALTS.—Of these the best are PHOSPHORATED SODA and BRASIL SALTS, to be given in Soup in which no Salt has been put.

Dose for grown persons, six drachms, or one ounce.

MAGNESIA.—Dose for children, a tea-spoonful in the morning.

MANNA.—Half an ounce, to be dissolved in three ounces boiling water.—Dose for children, Three or four tea-spoonfuls every two hours till it operate.

INFUSION OF RHUBARB.—Take of

Turkey Rhubarb in rough powder one drachm,
Refined Sugar a drachm and a half,
Salt of Tartar five grains,
Boiling Water two ounces.

After six hours strain off the liquor, and add

Simple Cinnamon Water a table-spoonful.

Dose for children, two tea-spoonfuls, or a table-spoonful in the morning, according to the age.

INFUSION OF SENNA.—Take of

Senna without the stalks three drachms,
Tamarinds half an ounce,
Boiling Water ten ounces.

After eight hours strain off the liquor.

Dose for grown persons, a small tea-cupful every hour and a half, till it operate.

LAVEMENS.*

For grown Persons.

EMOLLIENT LAVEMENT.—Take of

Common Salt,
Coarse Sugar, of each a table-spoonful,
Fine Olive Oil four ounces,
Warm Water fourteen ounces.

Mix them.

* **LAVEMENT** in the whole of this Work has been used for the English word **GLYSTER**.

ANODYNE LAVEMENT.—Take of
Laudanum one drachm,
Thin Starch moderately warm four ounces.
Mix them.

RESTRINGENT LAVEMENT.—Add to the preceding receipt of
Catechu (Japonic Earth) two drachms,
Peruvian Bark three drachms.
Mix them.

STRONG LAXATIVE LAVEMENT.*—Take of
Senna half an ounce,
Spring Water two pints.
Boil them till a pint only remains, and to the strained liquor add,
Common Salt two table-spoonfuls,
Fine Olive Oil four ounces.
Mix them.

For Children.

EMOLLIENT LAVEMENT.—Take of
Common Salt a tea-spoonful,
Fine Olive Oil a table-spoonful,
Warm Water from three to six ounces.
Mix them.

LAXATIVE LAVEMENT.—Take of
Phosphorated Soda two drachms,
Boiling Water four ounces.
Add, when nearly cool,
Castor Oil a table-spoonful,
Mix them.

* Nourishing Lavemens may be formed by adding to four ounces of beef-tea or thin gruel, five or ten drops of LAUDANUM.

N. B. The laudanum is added to prevent the glyster from being rejected.

ANODYNE LAVEMENT.—Take of
 Laudanum from five to twenty drops, (according
 to the age),
 Beef-tea half a small tea-cupful.
 Mix them.

RESTRINGENT LAVEMENT.—Take of
 Laudanum the same quantity as in the preceding
 receipt,
 Rice Gruel or thin starch half a small tea-cupful.
 Mix them.

LINIMENT.

FOR SORE NIPPLES.—Take of
 Litharge,
 Vinegar, each two drachms,
 Olive Oil six drachms.

To be made into a liniment, by adding the vinegar
 and oil alternately in small quantities to the powdered
 litharge, and rubbing the whole together till the lini-
 ment be of a pale flesh colour, and of the consistence
 of cream.

REFRIGERANTS.

ACIDULATED DRINKS.

RIPE ACESCENT FRUITS.

NITROUS MIXTURE.—Take of

Nitre one drachm,
 Refined Sugar two drachms,
 Distilled Vinegar a table-spoonful,
 Spring Water six ounces and a half.

Mix them.

Dose for grown persons, a table-spoonful every two
 hours when necessary.

STRENGTHENING MEDICINES.

BITTERS.—**ELIXIR OF VITRIOL, PERUVIAN BARK.** See page 306.

TINCTURE OF BARK.—Dose, a table-spoonful in a glass of wine, barley-cinnamon, or peppermint-water, twice a-day.

SUGAR OF STEEL, called here by the confectioners **Steel Carvey.**—Dose for children, a tea-spoonful once or twice a-day, according to the age.

TINCTURE OF STEEL.—Dose, fifteen or twenty drops twice a-day, in beef-tea or veal-broth, for grown persons.

RUST OF STEEL.—Dose for grown persons, half a drachm twice a-day in marmalade.

THE END.

STRENGTHENING MEDICINES

MILTERS.—SILK OF VIRIDIS, FERROUSIAN
 name. See page 306.
 Tincture of bark.—Dose, a table-spoonful in a
 glass of wine, barley-cinnamon, or pepper-mint-water,
 twice a-day.
 Symplic of steel, called here by the confectioners
 Steel Candy.—Dose for children, a tea-spoonful once
 or twice a-day, according to the age.
 Tincture of steel.—Dose, fifteen or twenty
 drops twice a-day, in beef-tea or teal-broth, for grown
 persons.
 Rust of steel.—Dose for grown persons, half a
 drachm twice a-day in manna.

THE END.



