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# THE YOUNG WIFE'S ADVICE BOOK;

A GUIDE FOR MOTHERS

ON

HEALTH AND SELF-MANAGEMENT.

BY

# GEORGE BLACK, M.B. EDIN.,

AUTHOR OF "FIRST AID IN ACCIDENT AND SUDDEN ILLNESS," "SICK NURSING," ETC.

Sixth Edition.

### WARD, LOCK AND CO.

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#### PREFACE.

THE first year of married life is to every woman a period of the greatest importance. During that time, brief though it may seem, she may lay the seeds of a future life of happiness or misery. Of happiness, by attending to Nature's dictates and obeying her laws; of misery, by disregarding these laws or setting them at defiance.

The bustle and excitement by which the newly-married woman is surrounded in these days are prejudicial to her in the extreme. Calm and quiet are what Nature indicates, but these she can seldom get. Crowded assemblies, overheated rooms, late hours, are what Nature warns her against, but too often in vain.

The following pages have been written with a view to supply the young wife and mother with a guide for the management of her health during the periods of pregnancy, parturition and suckling; and as the language employed is simple, it will be readily understood by all.

The author is persuaded that if greater knowledge prevailed in regard to such matters there would be more true happiness in the married life; but it is often only in after

#### PREFACE.

years, when life has become a burden, that a woman recognises the importance of knowing herself and attending to her health.

To be the mother of healthy children ought surely to be the desire of every married woman; and to know that this can only be attained by careful attention to the laws of health, should stimulate every right-thinking woman to give the subject the most painstaking consideration.

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INTRODUCTORY REMARKS.—MENSTRUATION.—PREGNANCY.— DISEASES OF PREGNANCY.—MISCARRIAGE.—CONFINE-MENT.—PREPARATIONS.—IN THE ABSENCE OF THE DOCTOR.—THE MOTHER.—THE CHILD.—TREATMENT AFTER DELIVERY.—NURSING.—BRINGING UP BY HAND. —HEALTH OF THE INFANT AND THE CHILD.

#### INTRODUCTORY REMARKS.

With the conviction that many women on entering into the state of matrimony do so ignorant of the position they are to occupy as young wives and expectant mothers, ignorant of their own constitution and of those laws by obedience to which their health can alone be maintained, and believing that in this ignorance is laid the foundation of much of that distress which embitters the after years of many a married woman, we write the following pages in the hope that they may be the means of enlightening some who still remain in darkness, and rendering their married life one of happiness and pleasure. It is our intention to throw out a few hints in regard to those matters which are daily influencing the health and lives of multitudes of our fellow-creatures, trusting that, in their endeavours to obey what is written, they may be enabled to live more happily because more in accordance with Nature's laws.

In knowledge there is safety, and to impart a correct understanding in regard to those laws which govern health is to give power, which, if rightly exercised, cannot fail to be productive

of the happiest results. For lack of this knowledge many women, ere they well know what they are about, have rendered their existence miserable; and with hopes blighted, and dreams of pleasure unfulfilled, they labour on in suffering and distress.

There is no time when more care is necessary on the part of a woman than *during the first few months of her married life*. Many a young wife has rendered the after years of her existence years of bitterness by thinking lightly of a miscarriage at this time. The custom, which is still a prevalent one, of spending the first few weeks of married life in a round of pleasure and gaiety, in excitement, and fatiguing journeys, is one which has been frequently spoken against, and which calls loudly for reform. Now it is, perhaps, more than any other time, that such things should be as far as possible avoided. The mind is already sufficiently excited, and the bodily powers sufficiently strained, without any additional mental stimulus or taxation of bodily strength being demanded.

Quiet is what is wanted at such a time, yet quiet away from the prying eyes of friends, and for this purpose some short journey should be taken to a place where the associations are such as will interest without producing undue excitement. Here, in each other's society, the newly-married pair can learn more and form a juster estimate of each other's character than they have hithert, been able to do. After a few weeks spent thus, the young wife will return to those domestic cares which must henceforth occupy so large a portion of her time, but she will do so not jaded and unfit for her duties, as is too frequently the case, but with a feeling of strength, and able to discharge them efficiently.

If strict attention has been paid prior to marriage to the carrying out of those hygienic rules so conducive to the maintenance of health, there is little fear that they will be neglected now.

They should, however, be even *more carefully* attended to by the young wife, as their violation *now* brings with it more serious consequences than formerly it might have done. The avoidance of late hours and of great excitement are both helpful in maintaining good health. Errors in diet may prove hurtful. It should therefore be simple and nutritious.

Indigestible articles of food should be avoided, as also heavy suppers taken late at night. In regard to drink, the strictest temperance should be observed. Alcoholic beverages are not as a rule required, and are better done without altogether. Out-ofdoor exercise should be taken daily. This tends to maintain the various organs of the body in a state of health, and prevents that listless habit of body being developed which is frequently found among the upper ranks of life where attention to this is neglected. Strict regard must be paid to the carrying out of personal cleanliness.

Baths and ablutions are powerful aids to the maintenance of health, and are as necessary now, or even more so, than they ever were. It is well that the young wife should know these things, and lay them to heart, that she should be keenly alive to the necessity there is of doing everything in her power to preserve a vigorous habit of body, and be the mother of strong and healthy children. By carelessness in regard to the rules of health she not only entails suffering apon herself, but she influences materially the condition of her offspring; and if the young wife would avoid being the mother of puny and delicate children, let her do everything in her power to avoid such an occurrence by attention to those laws which are the only sure safeguard against this taking place.

#### I.--MENSTRUATION.

The period of puberty in the girl is marked by the appearance of a discharge of blood at the external organs of generation. This discharge comes from the interior of the womb, and recurs in health with great regularity every twenty-eight days, or once a month, for a period of thirty years. The cause of this discharge is the ripening of what is known as a Graafian follicle, and the escape of an ovum or egg into the cavity of the womb. The podies concerned in the maturation or ripening of these follicles

are the ovaries, which are two in number, of an almond shape, and situated one on either side of the womb, with which they are connected by means of two tubes about four inches long. Down these tubes the discharged ovum travels till it reaches the interior of the womb, from which, unless impregnation occurs, it is washed away in the monthly discharge.

The time of life when menstruation begins varies; but may be said to occur in temperate climates between the fourteenth and sixteenth year. Cases, however, are on record in which children a few years or even a few months old have had a bloody discharge from the external organs of generation which continued to recur at regular intervals afterwards. These, as may be supposed, are cases of extreme rarity; but in our own country many cases are met with in which a girl has begun to menstruate when she was ten or twelve years old, and others in which the monthly discharge has been delayed till the twentieth year, or even longer.

The colour of the menstrual blood is at first dark, but becomes brighter as the period advances. It has this peculiarity as distinguishing it from ordinary blood, that it does not coagulate on exposure to the air. The reason of this is, that in its passage from the womb the blood becomes mixed with certain secretions which tend to prevent this occurring. The amount of blood lost at each monthly period varies, but usually it averages from three to four ounces. If the quantity become excessive, as it sometimes does, the health of the woman suffers. The flow is not, as a rule, established at once, sometimes several months elapse between the first and second menstrual period; but when a few months are over it recurs with great regularity, sometimes coming on even to the hour.

IN ACCELERATING OR RETARDING THE MENSTRUAL FLOW there are several circumstances which operate powerfully. Of these the influence of climate is most marked. In India and other countries where the heat is great, girls begin to menstruate earlier than they do in more temperate climates. They arrive at

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#### MENSTRUATION.

perfection sooner, but their beauty is more short-lived, and they soon become aged, while those who inhabit more northe."Iy climates, and are exposed to intense cold, are longer in coming to maturity, but they retain the characteristics of womanhood longer, and their beauty to a comparatively old age. But besides the influence which climate exerts, there are other circumstances at work which tend to hasten the occurrence of puberty in the girl. Thus anything which tends to produce effeminacy,—a lazy, listless life; undue mental excitement, either caused by the reading of sensational novels, by conversation or the like; late hours, irregular habits of sleep, highly seasoned articles of diet, and stimulants, have all a tendency to accelerate the occurrence of menstruation in the girl.

Among the upper classes of society, where most or all of these circumstances are at work, menstruation occurs earlier than it does in the lower classes, where muscular exercise is more frequently taken, where the articles of food are plainer, where the mental excitement is not so great, and where the whole surroundings are more conducive to the development of a healthier and a hardier frame. In towns where all the above influences are at work, girls menstruate earlier than they do in the country. It has been said that the monthly periods when once established continue to recur at regular intervals in a woman who is healthy for about thirty years, during which time she is capable of conceiving.

When a woman is said to be regular in regard to her courses, it is not merely meant that she is regular as to *time*, but that she is regular as to *quantity* and *quality* as well.

Menstruation ceases during pregnancy, and generally during the period of suckling as well. Diseases which exhaust the strength and impair the vital energies of the body, generally lead to a stoppage of the monthly discharge. This is frequently seen in the case of consumption and other diseases of a debilitating nature.

The appearance of menstruation in the girl is ushered in by

certain well-marked symptoms, the significance of which should not be overlooked. About this time languor and general unfitness for exertion are complained of; there are dull, aching pains in the region of the pelvis; a feeling of dragging and weight about the small of the back is also complained of. There is a dark ring under the eyes. These pass away as the menstrual function becomes established. The change which menstruation works upon the girl is great. Her frame becomes rounder and fuller, the hips broaden, fat becomes deposited in various parts of the body, the breasts enlarge, and in her manner she becomes more retiring. It seems as if a great mental change had come over the girl, and there had begun to dawn upon her mind the consciousness of that important mission she is destined to fulfil.

From this time her demeanour is altered, and around her person there gathers a sacredness hitherto unknown. Her bearing also becomes more dignified; she exchanges the pursuits of girlhood in which she has so long found pleasure for those of maturer years, and consciousness of the position she occupies now fills her mind.

#### II.—PREGNANCY.

#### 1. SIGNS OF PREGNANCY.

1. CEASING TO BE UNWELL.—One of the most presumptive signs that a woman has of her being with child, is the cessation of the monthly flow; it is also the first to manifest itself. Taken alone, the stoppage of the monthly discharge is not sufficient proof that pregnancy has occurred; but if a woman who has been menstruating regularly up to the time of her marriage ceases to be unwell shortly after, it is presumptive of her having conceived. A woman may, however, be unwell for one or two periods after conception has occurred; or, on the other hand, the monthly discharge may be in abeyance from the presence of disease, as in a woman suffering from consumption. Again, cold or severe mental emotion may produce the same effect.

It is also a well-known fact that many women conceive while they are nursing, during which time the monthly periods are

#### SIGNS OF PREGNANCY

generally absent. A woman may also conceive before she has begun to menstruate. Many cases are on record in which young women have conceived prior to the development of the menstrual flow, and have been the mothers of healthy children; so that while taken by itself, the absence of the monthly discharge cannot be looked upon as sufficient proof of the existence of pregnancy, it is, nevertheless, occurring in a healthy woman, who has menstruated regularly, a sign strongly presumptive of such having taken place, and in conjunction with others which we shall notice presently, greatly assists in coming to a right conclusion in regard to a case.

2. MORNING SICKNESS.—On getting up in the morning from the recumbent position, most pregnant women suffer from a certain degree of nausea, or even sickness. The period when this symptom manifests itself is generally a few weeks after the occurrence of conception. It may, however, appear earlier, in some cases coming on immediately after the woman has conceived, or its appearance may be delayed till the last few weeks of pregnancy. It may also last throughout the whole period of pregnancy. This morning sickness is due to the sympathy which exists between the stomach and the womb, and is entirely reflex in its nature.

How it differs from other forms of sickness, such as those which are due to disease of the stomach itself. It does so in this, that so soon as the sickness is over, the patient is perfectly well and can generally take food immediately after. Its appearance is generally regarded as favourable,—a sick pregnancy being looked upon as a safe one. The intensity of the sickness varies in individual cases ; in some it may only take the form of slight nausea, while in others it may continue with great severity, and even endanger life.

Taken by itself, we may not be able to attach much value to this any more than we were able to do to the cessation of the monthly periods, but taken together, and considering the period of its occurrence and the nature of the sickness, it forms undoubteily valuable proof of the existence of pregnancy.

3. CHANGES OCCURRING IN THE BREASTS.—About the second month of pregnancy certain well-marked changes may be observed taking place in the breasts. The patient generally computers of a feeling of fulness and tightness which she has not below e experienced, and a sensation of tingling or pricking is also for the the breasts of a woman who is thus suffering are examined, they will be found to be hard and knotty to the touch ; the nipple will be seen to be more prominent, and the flesh-coloured ring by which it is surrounded, and which is called the "areola," will be found to have assumed a much darker hue, and to have increased considerably in size.

A number of small prominences are now visible upon this darkened ring. The number of these prominences present on any single areola varies, but may be said to be from twelve to i As pregnancy advances, these little prominences increase both in number and in size. The areola also increases in its dimensions, and may be an inch or an inch and a half all round. The slin also covering the part becomes moist, and frequently stains the linen in immediate contact with it. As pregnancy advances, a number of white spots appear on the outer part of this dark circle. Milk also is generally found in the breasts, and the veins are marked and prominent.

The swelling and increased size of the breasts must not b taken as a sign of pregnancy by themselves, as they are frequently manifested in women who have ceased to be poorly from entirely different causes. If, however, the swelling of the breasts is due to any other cause than that of pregnancy, it will be transient in its nature, and they will soon again regain their normal size. Again, the dark circle which surrounds the nipple may manifest itself, though with nothing like the same intensity of colour in cases of enlargement of the womb from other causes. Milk also may be found in the breasts apart from pregnancy, and cases are recorded in which it was found in the breasts of young girls, and even the male breast has been known to secrete a olentiful supply of milk. In a first pregnancy these changes which take place in the nipple and breast are of very great value, and taken along with other sometimes go far to confirm the fact of the existence or nonexistence of pregnancy. The colour of the ring which surrounds the nipple varies much in its shade in different women, being much lippler in those who are fair-haired with blue eyes than in those who are black-haired with dark eyes. In some, also, this circle may not be present, although pregnancy exist; but when these changes have taken place in a female breast, it is strongly presumptive of the existence of pregnancy, especially if the women has not given birth to a child previously.

4. QUICKENING.—The next symptom we shall notice as giving evidence of the existence of pregnancy is one which isolated and viewed<sub>wd</sub>y itself fails to yield any proof beyond that which is presumptive, and consequently occupies a place in the same categorie, with those already mentioned when looked at individually. The term "quickening" is used to express the time in a pregnancy when a woman first becomes conscious of the movements of the child in the womb. The popular idea, that up to this time the child in the womb is dead, and that these movements are the first indications of life, is, it need hardly be said, erroneous.

The clild in the womb is alive from the time of conception, but it is onl<sup>34</sup> as the womb enlarges and comes into contact with the abdomin'al walls that the movements become appreciable to the woman herself. They may, however, be detected before the woman has felt them by the physician pressing his hand on the abdomen. The usual period of the occurrence of quickening is the eighteenth week of pregnancy, but it may occur earlier, in some so early as the third month, or it may not be felt till much later on. The sensation is described by women as resembling the fluttering of a bird; and on its first coming on the female usually experiences a feeling of faintness, and may exhibit symptoms of hysteria.

If the child is very feeble the movements may not be appre-

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ciable to the female. This sometimes gives rise to an unfounded dread lest the infant should be dead. A woman is frequently deceived in regard to this symptom, and many imagine that they have felt the movements of the child in the womb when all the while they have been suffering from flatulence. Again, involuntary contraction of the muscles of the abdominal walls may give rise to a sensation which may be mistaken for that of quickening, and some women possess the power of jerking their muscles, causing movements in them which may simulate the movements of the child in the womb, so that this symptom is only of value as a proof of the existence of pregnancy when taken along with others.

5. CHANGES IN THE ABDOMEN.—During the early months of pregnancy little appreciable enlargement of the abdomen takes place, and in some cases it is even less prominent than in the unimpregnated state. The reason of this is, that the womb being heavier than usual at first sinks in the pelvis instead of rising. After the third month, however, a swelling manifests itself of a rounded form at the lowest part of the belly, which goes on increasing until it occupies the whole abdominal cavity. As it ascends it pushes the navel before it, causing it to be on a level with the surrounding skin, and towards the end of pregnancy, to project beyond it as a distinct prominence.

Silvery lines may be seen extending over the abdomen from the stretching of the skin to which the growing womb gives rise. As the abdomen may enlarge from other causes, too much importance must not be placed upon the mere increase in size. Thus, collections of fluid in cases of dropsy may give rise to enlargement of the abdomen, and so also may gaseous accumulations in the intestines. In the case of the former the swelling will be found to alter its position according to the attitude assumed by the patient, from the fact that the fluid gravitates to the most dependent part of the body. Thus, when erect, the swelling will be found to project most at the lower part of the abdomen, while on assuming the recumbent position the anterior part which appeared most prominent when standing will now be found to have a flattened aspect and the fluid will be observed to cause a bulging on either side. The softness of the swelling due to flatulent accumulations in the intestines will serve to distinguish this condition from a case of enlargement of the abdomen, the result of pregnancy, in which case it is hard, tense and elastic to the feel.

Towards the close of the child-bearing period, and when menstruation is beginning to cease upon a woman, a deposit of fat frequently takes place in the abdomen, which may lead the female to imagine that she is pregnant. Especially is this the case with those who have never had children, and who are anxious to become mothers. The time of its occurrence, along with the absence of other symptoms, will preclude the possibility of error from this source.

6. LONGINGS.—By this term is popularly understood that craving for unnatural and unsuitable articles of diet, such as slate pencil, charcoal, and the like, which many women experience at this time. These longings are frequently of the most fanciful kind, a case being recorded by Smollett, in which a woman desired a hair from her husband's beard, which she wished to pluck herself.

**Considerable self-control will** be required on the part of the female who may happen to be the subject of these longings in order to overcome them, but they must be firmly resisted and fought against, the mind being meanwhile thoroughly occupied, and the food and daily exercise being carefully attended to.

7. MENTAL PECULIARITIES.—Certain mental peculiarities are far from uncommon in the pregnant female: thus many women who exhibited the mildest and most amiable of tempers before marriage, on becoming pregnant undergo a remarkable change in this respect, becoming at these times passionate, fretful, and irritable. On the other hand, pregnancy may exert a beneficial influence upon a woman, and many who before were fractious and ill to do with have their tempers frequently altered for the better on being with child.

There are other symptoms which might be enumerated among

the "sign\* of pregnancy,"—such as an unnatural flow of saliva, palpitation of the heart, toothache, sleepiness, heartburn, etc., which, however, are neither so constant in their occurrence nor of such importance as those already mentioned. Taken separately, these, like those we have just been considering, may not be of much value as proofs of the existence of pregnancy; but taken together, or in conjunction with those already mentioned, as signs of greater certainty, the woman may be sure that she is with child. There are other signs which are of very great value to the physician in ascertaining the existence of pregnancy; but as these require medical skill for their appreciation, they do not fall within the scope of the present work.

#### 2. DURATION OF PREGNANCY.

When a woman becomes pregnant, she is naturally anxious to know when she may expect her confinement. The usual methods of calculation are based upon the average duration of human gestation, which is 280 days, or forty weeks. As, however, a woman may carry beyond the 280th day, or may be delivered short of it, any method of calculation is necessarily only to be regarded as approximate, it being perfectly impossible to fix the time of delivery to any one day. Frequently, also, a woman forgets the date of her last monthly illness; and in the case of those who become pregnant while nursing, and in whom menstruation has not yet returned, we are deprived of a very important factor in calculating the time when a confinement may be expected to take place. In such cases the calculation must be made from the time of quickening.

Registration of monthly periods. It would be well if every married woman were to register her monthly periods in a book kept for the purpose, entering the day on which she began to be "poorly," and the day on which she ceased to be unwell. This would be found very useful, would save the possibility of forgetfulness; and as the time occupied in making the necessary entries is so short, it should commend itself to all. Usually the period of gestation terminates a day or two short of the 280 days, the confinement occurring in most cases on the 278th day after the cessation of menstruation.

Methods of calculation. Many different methods of calculation are in use among medical men, of which two only shall be mentioned here. The first is the one which goes by the name of Naecele's method, and consists in adding seven days to the commencement of the last menstrual period and counting back three months. Thus, suppose a woman ceased to menstruate on March 3rd, by adding seven days and subtracting three months we get the 10th December of the same year as the probable day of confinement. The second method is that recommended by Dr. Matthews Duncan, and consists in ascertaining the day on which the female ceased to be poorly, or the first day of her being again well, and is described in his own words, as follows :--" Taking that day nine months forward as 275, unless February is included, in which case it is taken as 273. To this add three days in the former case, or five, if February is in the count, to make up the 278. This 278th day should then be fixed as the middle of the week, or, to make the prediction more accurate, of the fortnight in which the confinement is likely to occur."

#### 3. MANAGEMENT OF THE HEALTH DURING PREGNANCY.

1. FOOD AND DRINK.—Many women when they become pregnant, forgetting that they have at the same time ceased to be unwell, imagine that the system requires an increased amount of nourishment; and acting upon this erroneous idea, they overload the stomach and do themselves an injury. If a woman has been careful previous to her marriage in regard to her diet, she will find little now to alter.

During the early months of pregnancy the food taken should be light and wholesome, while being at the same time easy of digestion. Owing to the irritable state of the stomach which prevails at this time, great caution should be exercised in avoiding those things which are likely to disagree,—such as pastry, made dishes, etc. Simplicity in diet combined with nutrition

should be aimed at rather than a gratification of the palate. The amount of food taken during the early months of pregnancy need not be greater than formerly.

In the later months the irritability of the stomach passes away, and the demands of the system become greater; but at this time, owing to the patient being restricted in her exercise, the expenditure of energy is less. The quantity of food taken at any one time should not be increased, but the intervals which elapse between one meal and another may be diminished. Fish, eggs, chicken, a moderate allowance of meat, light puddings, milk, vegetables, and ripe fruit, are all suitable articles of diet during the period of pregnancy.

Towards the close a woman will find stewed prunes and figs, roasted apples, oranges, etc., very wholesome and agreeable; and, in addition, having a gentle laxative effect upon the bowels, they greatly assist in overcoming that tendency to constipation, which is frequently so troublesome at this time. If the pregnant female has longings for particular articles of diet, unless these are likely to prove injurious, they may be gratified; but all such longings for what is simply absurd, and could not if gratified prove other than prejudicial, must not be yielded to. A cup of coffee taken in the morning some time before rising will often prove of great use in removing that disagreeable feeling of nausea from which females are so liable to suffer during the early months of pregnancy.

It should be remembered by all, that every error in diet which proves hurtful to them is not confined in its effect to themselves, but is shared in equally by the infant in the womb; and if young females desire to be the mothers of strong and healthy children, they must endeavour to avoid everything that is calculated to prevent the attainment of this end.

There is a practice which it is to be regretted is only too prevalent among pregnant women, and that is the indulging in alcoholic drinks and stimulants of various kinds under the impression that their condition demands it. They are under the belief that they will assist in relieving the irritability of stomach from which they suffer during the early months, or the feeling of faintness, debility, and languor that attacks them later on. It may be said, however, that the less the pregnant female has to do with stimulants of any kind the better will it be both for herself and her offspring.

Many cases indeed might be adduced to show how habits of drinking have been formed in this way, and to prove the injurious influence which this indulgence has upon the children that are born. These matters should receive the careful consideration of every female, and should not be passed over lightly as if they were too trivial to engage attention.

2. CLOTHING.—Throughout the whole period of pregnancy the clothing must be warm. More danger is likely to result at this time from insufficiency than from excess. But while the clothing must be warm, it should, as far as possible, combine the quality of lightness as well. For this purpose no material answers so well as flannel, and with it the pregnant female should be clothed from head to foot. The power which it possesses of keeping out the cold, while at the same time retaining the heat of the body, particularly recommends it at this time, and specially towards the later months, when the looseness of the garments renders the female particularly liable to suffer from rheumatism and the like.

The clothing of the pregnant woman must be adapted to her state, and the various articles of dress worn must be made sufficiently loose to admit of the free expansion of the growing womb, and must not press injuriously upon the breasts. If stays are worn, they should be made so as to admit of perfect freedom of movement, and anything like an attempt at making them fit neatly, at all times hurtful, will prove much more injurious now. So great a necessity was it deemed by the Romans to have the garments loose at this time, that they compelled their women when they became pregnant to lay aside the girdle. Tight clothing

during pregnancy, by pressing injuriously upon the womb, leads to the imperfect development of the child, and may give rise to miscarriage.

Depression of the nipples, and a consequent inability to suckle, is a frequent consequence in those women who have subjected their breasts to pressure throughout pregnancy. Garters and such-like must be worn quite loose. It may seem strange, but there are not wanting those, especially among women pregnant for the first time, who, from a false modesty, wear their dresses tight in order to conceal their state. This, it need hardly be said. should never be allowed to influence the mind of any right-thinking woman, especially when by so doing she is jeopardising both her own health and that of her offspring. Let, therefore, the articles of clothing worn at this time be made so as to adapt themselves comfortably to the body without pressing injuriously upon any part. By so doing a woman renders her present condition one of as little departure from health as it is possible for it to be, and takes the surest means of securing a safe and easy delivery.

3. EXERCISE.—For the maintenance of good health during the period of pregnancy, fresh air and exercise are necessary. Out-of-door exercise should be taken daily, and continued till as late a period of pregnancy as can conveniently be done. The best form of exercise is walking, but this must not be indulged in to excess. A woman must not fatigue herself at this time by taking too long walks; she should rather go a less distance and more frequently in a day than go so far that she is unfit for anything on her return home. As the later months of pregnancy are reached, and specially towards the close, the female naturally feels unable for much active exercise, and the amount should then diminish to her suit requirements; but as long as it is practicable she should be in the open air some part of every day.

The Amount. In regard to the amount of exercise which it is necessary for a woman to take when she becomes pregnant no rule can be laid down; it will vary in different constitutions. one woman being able to walk a considerable distance without feeling fatigue, while another is easily tired. Each woman must therefore act independently, and should always stop ere she experiences a feeling of fatigue.

The kind.—If walking exercise cannot be undertaken with any degree of comfort, which will frequently happen towards the end of pregnancy, moderate carriage exercise should be had recourse to instead. Exercise of this kind to be productive of a beneficial effect ought to be taken in an open carriage, and must be done slowly, and anything like a desire to get rapidly over the ground must be banished from the mind. The drive should be taken along a level piece of road, as all jolting is bad at such times. Exercise on horseback, dancing, lifting of heavy weights, and anything that demands an unusual expenditure of energy must be scrupulously avoided, as they are pernicious in the highest degree.

Crowded assemblies, theatres, ball-rooms, and the like, are injurious to the pregnant female, and should be avoided. Anything that greatly excites the mind, such as public spectacles of every kind, ought also to be avoided. From what has been said it will be seen that there are many things which formerly were indulged in and proved harmless which are now fraught with danger, and which it behoves every woman who values her health strictly to guard against.

4. ABLUTIONS.—When the young female has become pregnant she naturally asks herself the question whether it will be advisable for her to continue her baths as heretofore. This question we shall endeavour to answer for her in our remarks upon this subject. At no time is strict attention to personal cleanliness more necessary than it is now, but certain precautions had better be observed.

Any form of bathing that gives rise to severe shock is apt to prove hurtful, especially during the later months of pregnancy. For this reason it will be necessary to avoid bathing in the sea, although change to the seaside and daily sponging with salt water at home

are highly beneficial at this time. For the same reason the showerbath must not be employed. The best kind of bathing, and that which ought to be made use of by every pregnant female, is the daily sponging of the body with water. Especially during winter is this form of ablution to be recommended beyond all others, and the water employed at this season had better be made tepid. The surface of the body should be rapidly dried, sufficient friction being used in the process to cause a glow over the surface. If the female has been accustomed to a cold bath daily she may continue to sponge the body with cold water every morning during summer and autumn, but tepid should be substituted for cold during the winter months.

While drying the body it is well to protect it from the air, which may be effectually done by enveloping it in a sheet. Warm baths are too relaxing, and should not be employed at this time.

5. SLEEP.-A pregnant woman generally requires more sleep than usual, and owing to the naturally irritable state of her nervous system at this time it exercises a soothing influence upon her. Should difficulty in breathing comfortably be experienced on lying down, or should she suffer from a feeling of suffocation, as frequently happens during the later months of pregnancy, the shoulders and back ought to be well supported with pillows, and if this does not suffice, a bed-chair may be employed.

Late hours should be avoided as much as possible, and everything done to keep the mind calm and cheerful before retiring to rest. The amount of sleep at this time must not be stinted. Most women require eight hours, and are frequently the better, towards the close of pregnancy, for an afternoon's nap in addition. Of course it is not intended by this that a woman indulge in sleep to excess. Moderation in everything is always best, and those who pass eight hours in bed during the night, and spend the greater part of the day lolling upon sofas, will very soon develop a feeble habit of body, which it is most desirable to guard against.

The bed upon which the pregnant female sleeps should be free

#### HEALTH DURING PREGNANCY.

from curtains, should not be too abundantly supplied with bedclothes, and should have a light hair mattress, not a feather one. Feather beds are too heating, and have an enervating influence upon a woman, and ought on that account never to be employed.

6. VENTILATION.—Too much care cannot be taken to see that the bedroom occupied by the pregnant female be properly ventilated. If this is disregarded the sleep obtained will be unrefreshing, and the influence upon the body will be of a most unhealthy kind. The windows should be thrown wide open as soon as the sleeping apartment is left in the morning, and the mattress and blankets should be thoroughly exposed to the air. Frequently on going into a badly ventilated bedroom from the outer air one is conscious of a close, stuffy smell, far from agreeable, and anything but healthy, and yet those who occupy the room are unconscious of it, and we, if we remain sufficiently long in it, have our sense of smell so blunted that we fail to perceive the objectionable odour that arrested our attention at the first.

If the precaution were taken of keeping the window open an inch or so at the top this would be entirely obviated, the apartments would then be properly ventilated, and in the morning the atmosphere would be as sweet and fresh as it was on the previous evening. Should the current of air so admitted be too strong, it may be divided by placing a piece of perforated zinc along the upper part of the window. It is very essential to have in every room an open fire-place, and the chimney should on no account be stuffed with straw, etc., as is frequently done.

7. THE MIND.—Much might be said under this heading as to the supposed influence which the mind exerts upon the child in the womb in producing flesh-marks and malformations of different kinds; but the most patient researches go to prove that these occur frequently in the children of those who are quite unable to account in any way for their appearance, who can recollect no mental impression to which their occurrence might be

attributed, while, on the other hand, women who have been haunted by the idea that their children would be born with certain defects and blemishes, in consequence of having seen during their pregnancy these defects and blemishes upon others, have been both surprised and delighted to find themselves the mothers of healthy children, free from all those defects and blemishes they so much dreaded. One thing, however, is certain, and demands our more immediate attention in the present instance, and that is, that anything which causes a state of mental depression in the mother will operate injuriously upon the health of the child.

Constant worry and anxiety are hurtful, and so are all those sights which strongly impress the mind. They are bad for the pregnant woman, and alike bad for the child in her womb. A calm and equal frame of mind is greatly to be desired at such a time, and anything that is known to operate in the way of causing mental shock, mental depression or excitement, should be scrupulously avoided. Hence also the necessity there is for those at home doing everything in their power to prevent the occurrence of anything which they know would have an irritating influence upon the pregnant female.

Cheerfulness. Let everything also be done by the woman herself to maintain a cheerful state of mind; let her banish every gloomy thought and fear as to the issue, and let her look forward to her approaching confinement hopefully. Let not the present condition be regarded as one of disease, and the period of delivery be regarded with gloomy forebodings; but look rather upon pregnancy and labour as parts of a natural process, and anticipate the best results.

If a woman has been careful to attend to such ordinary hygienic rules as have already been laid down, if she suffers from no deformity, if she enjoys good health, and has not married either too early or too late in life, she may look forward to the time of her confinement hopefully, and anticipate both for herself and her offspring a happy issue.

#### DISEASES OF PREGNANCY.

#### 4. DISEASES OF PREGNANCY.

1. EXCESSIVE VOMITING.—Mention was made when speaking of the signs of pregnancy of nausea or sickness being an ordinary symptom by which, along with others, the presence of pregnancy might be determined, and it was then pointed out that its occurrence was more to be desired than its absence, since a sick pregnancy was generally regarded as a safe one. Occasionally, however, instead of the morning sickness as ordinarily understood, the pregnant female is the subject of excessive vomiting, which, if allowed to go on unchecked, may seriously impair her general health and give rise to symptoms of impending miscarriage.

The cause of the sickness, as was then pointed out, is sympathy between the stomach and the womb, the irritable state of the latter organ being shared in by the former. Sometimes, however, the symptoms are aggravated, and the patient's misery increased, by the stomach being allowed to get into a disordered state and from the bowels having become constipated. These conditions manifest themselves by furred tongue and foul breath, and whenever these exist along with the vomiting recourse should be had to gentle aperients, such as the confection of senna, of which a teaspoonful may be taken for a dose in a little water.

How to relieve it. Morning sickness may frequently be greatly relieved by the patient taking a cup of coffee the first thing when she awakes in the morning, and before she leaves bed. Instead of this a cup of milk with some soda-water added may be given, and frequently proves very beneficial. A walk before breakfast is also to be recommended as useful for this purpose. Usually this condition calls for little active interference beyond the simple means that have just been recommended. It generally passes off, in those cases where nothing has been done, about the period of quickening, and leaving the patient as it does, about mid day or earlier, permits of her obtaining sufficient nourish-

ment throughout the remainder of the day not to cause any appreciable effect to be produced upon her system in consequence.

The cases which demand prompt attention are those in which the nausea and vomiting instead of passing off about noon persist throughout the whole day. When this occurs, unless it is attended to, a serious state of inanition will be developed from want of nourishment, and unless means are employed to relieve the sickness the health of the female will become greatly impaired. If the sickness in the morning be great, generally fluid tinged with bile is vomited; while if it occur later on, more solid matters from the food that has been taken are brought up.

If the vomiting continue the countenance becomes pale and haggard and the breath offensive, and feverish symptoms manifest themselves, which, unless relieved, may pass on to a fatal termination. In the simpler cases of vomiting no medicinal treatment is required; it will pass away in due time, leaving the digestive powers unimpaired. Should the vomiting, however, be more severe, and should bile be present in the vomited matters, indicating a deranged state of the digestive system in addition to the irritability of the stomach, the employment of soda and bismuth may be had recourse to, ten to fifteen grains of each being taken three times a day, or the confection of senna mentioned above in doses of a teaspoonful. Should there be much pain over the stomach, the application of a few leeches, and after their removal of strips of cloth dipped in laudanum, will generally give great relief.

The greatest attention must be paid to the diet, which should be light and nourishing. If, however, the pregnant woman express a desire for any particular article of diet, it may be given her by way of experiment, as not unfrequently the most unlikely articles are digested at this time. Should the vomiting be severe, and fail to be relieved by means such as have been already indicated, no time should be lost in sending for medical assistance.

2. HEARTBURN.-During pregnancy many females suffer from

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what is known as heartburn. This disagreeable affection is caused by the accumulation of an acid secretion in the stomach, and is greatly favoured by the employment of rich and heavy articles of diet, especially such as contain much butter or lard.

Many remedies are in use for the relief of this condition. Of these the principal are,—soda, bismuth, aromatic spirits of ammonia or sal volatile, and alkaline aperients. Fifteen grains each of soda and bismuth may be taken three times a day, and should this fail, a teaspoonful of the aromatic spirit of ammonia in a wineglassful of water repeated every four hours till relief is obtained.

The bowels should also be attended to, and a black draught be taken occasionally when required, or a teaspoonful of Epsom salts in water taken first thing in the morning. Better, however, than all medicinal treatment will it be for every pregnant female to attend to her diet and avoid such articles as are likely to produce this state of acidity and heartburn that is so distressing.

3. CONSTIPATION.—A very common condition from which the pregnant female suffers, is a constipated state of the bowels. It is a very troublesome affection, and is due partly to the mechanical pressure which the enlarged womb exercises upon the bowel, and partly to "defective innervation of the bowels resulting from the altered state of the blood."

**Carelessness**. Women are, however, very careless in regard to the state of their bowels, and frequently allow days, and even a week, to elapse without making any effort to have them moved. By a little attention of a preventive kind, this disagreeable and sometimes distressing condition may be obviated. Whenever a pregnant female finds the ordinary calls to stool less urgent, and when the motions assume a more constipated character than formerly, these premonitory symptoms should not be disregarded. They are warnings which, if unheeded, may soon give way to more obstinate forms of constipation.

Whenever the bowels become sluggish let attention be paid to
the diet and the daily exercise. If the diet has been faulty, let it be remedied, and let such articles as oatmeal porridge, ripe fruits, stewed apples, prunes, figs, and the like be taken. If the daily amount of exercise has not been taken for some time let it be resumed, unless there be anything to prevent this being done; let her move actively about the house doing a moderate amount of work daily, and let out-of-door exercise be taken. Many cases of commencing constipation may be checked by attention to these things. If, however, the condition of the patient is more advanced, and the bowels have not been moved for several days, diet and exercise alone may prove insufficient to remedy the disorder; and when this is the case, recourse must be had to the employment of certain medicines. Of these, the best are such as cause least irritation.

All violent medicines must be carefully guarded against during pregnancy, as they tend, from the disturbance to which they give rise, to produce miscarriage. One of the best medicines to which recourse may be had during pregnancy is castor oil. In its action it is certain, and as it causes no irritation it is free from an objection which attaches to many medicines, rendering them unfit to be taken at this time. The dose may vary from a dessertspoonful to a tablespoonful. Many people, owing to its disagreeable taste, have an aversion to castor oil. This, however, may be greatly lessened if the oil be floated upon warm milk, coffee, or orange juice. It may also be made into an emulsion with yolk of egg or mucilage. Another mild aperient medicine, and one which answers very well during pregnancy, is the Frederickshalle water, a small quantity of which taken first thing in the morning will gently move the bowels. A teaspoonful of the confection of sulphur, prepared according to the British Pharmacopœia, taken occasionally when required in a little milk or water, will prove very useful as a mild laxative.

Enemata. Better, perhaps, than medicine for the cure of constipation is an occasional enema of simple soap and water or gruel, with one or two tablespoonfuls of castor oil in it. The quantity should be sufficiently large to stimulate the bowel, and

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for this purpose a pint of fluid is necessary. Many women have an objection to the employment of the enema for the relief of constipation, and will rather hurt themselves with purgative medicines than have recourse to it. This objection is altogether unfounded. If a proper instrument is used, it will give rise to little trouble; it can be employed by the patient herself, and in its action it is painless. Besides, when purgative medicines have been taken by the mouth for some time, they lose their effect, and the dose requires to be increased.

Accumulations in the bowels. Frequently when the bowels have been allowed to get into a constipated state, hardened masses of fæcal matter accumulate in the gut, and by causing irritation of the mucous membrane give rise to an increased secretion, when the patient supposes she is suffering from diarrhœa, and frequently employs astringent medicines for the purpose of checking it. She also suffers from headache, a feeling of fulness over the abdomen, and indigestion. An enema of soap and water or a tablespoonful of castor oil with fifteen drops of laudanum, willanswer best for the correction of this condition. Frequently, when the patient is careless in regard to the state of her bowels during pregnancy, and fæces are allowed to accumulate, they form hardened masses which give rise to the spurious pains from which many women suffer for some time previous to their confinement, and which prove very annoying to them.

Labour retarded. Besides, labour may be greatly retarded by an overloaded state of the bowels, and as the danger both to mother and child increases with delay, the risks become greater. That pregnancy will be a state of least departure from health, and that labour will in all probability be shortest and safest, where, along with attention to other things, the patient has not been negligent of the state of her bowels.

4. DIARRHŒA.—Although much less frequently met with in the pregnant female than constipation, diarrhœa is nevertheless occasionally an accompaniment of this condition, and if very severe and allowed to go unchecked, it may lead to miscarriage.

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Attention to diet necessary. When diarrhœa thus attacks the pregnant female, attention should at once be directed to the diet, and only those things taken which are mild and unirritating. The quantity of food taken should not be large. Of those articles of diet suitable in such cases, milk must be placed first. It may be given either alone, or with rice, sago, arrowroot, or tapioca.

When the irritation has partly subsided some chicken tea may be given, or an egg lightly boiled. Later on a piece of chicken with bread may be given with advantage, and gradually the ordinary diet be resumed. Should the diarrhœa be of the kind mentioned as occurring with an overloaded state of the bowels, a different line of treatment must, of course, be adopted. It would be useless endeavouring to check the diarrhœa in such a case so long as the cause which gave rise to it remained in operation, so that the first thing which requires to be done is to have the bowels thoroughly cleared out by means of an aperient. For this purpose nothing will answer better than a dose of castor oil along with fifteen or twenty drops of laudanum, or an enema of soap and water. When the bowels have in this way been relieved, the diarrhœa will generally be found to cease of itself. The diet should be mild and unstimulating, and all irritating articles of food must be carefully avoided. When from the state of the tongue the stomach appears to be deranged, a few powders of rhubarb and magnesia will prove useful.

No attack of diarrhœa should be passed over lightly by the pregnant female; and if it is not checked by careful regulation of the diet, and by the administration of such articles as we have mentioned, medical assistance must be sought. During the continuance of diarrhœa warmth is very essential, and for this purpose flannel should be worn next the skin. A flannel roller wound round the abdomen will answer well. The feet also must be attended to and kept warm.

5. PILES.—Another affection from which the pregnant female is liable to suffer, and one which gives rise to considerable pain and annoyance, is an enlargement of the veins at the lower part of the bowel to which the name of piles or hæmorrhoids has been applied.

This condition is one which results from pressure upon the hæmorrhoidal veins. A congested state of these vessels is first set up which, unless relieved, will ultimately give rise to piles. The mechanical pressure exerted by the enlarging womb is thus a frequent cause of this condition. Piles sometimes occur during the early months of pregnancy, while the womb is yet in the pelvic cavity, and disappear about the fourth or fifth month, when it rises into the abdomen. Another frequent cause of piles is the accumulation of hardened fæces in the lower bowel. When the condition of the bowels has been neglected for some time, the hardened masses which accumulate in the lower part of the gut give rise to irritation, and by the congested state of the vessels to which this irritation gives rise, piles are produced. Their presence gives rise to a disagreeable feeling of heat and pain, and much uneasiness is caused on the patient attempting to walk from the irritation to which the movements of walking give rise. They frequently become congested and very painful.

On their presence being detected, no time should be lost in endeavouring to get them removed. If the bowels have been acting sluggishly, attention must be paid to them; and if hardened masses have been allowed to accumulate in the lower bowel, no relief will be afforded till they are removed. For this purpose a gentle dose of castor oil may be taken, or the patient may use instead an enema of soap and water or gruel, with one or two tablespoonfuls of castor oil added.

A very good preparation to administer as a laxative when piles are present, is the compound liquorice powder of the British Pharmacopœia. Of this one teaspoonful should be taken for a dose. The confection of sulphur given in similar doses is another preparation of much value in this condition. If the piles are very painful, they should be fomented with warm water every night at bedtime, or with an infusion of chamomile flowers and poppyheads. If they are greatly congested much relief may be given by the application of a few leeches in the immediate neighbourhood, applying on their removal a bread poultice or one made of linseed meal.

As an external application for the removal of pain the ordinary gall and opium ointment answers well. It may be smeared over the parts night and morning. The diet must also be attended to. It ought to be light and nutritious, and as free as possible from anything that would be likely to give rise to much accumulation in the lower bowel.

6. SALIVATION.—The discharge of a large quantity of saliva from the mouth is an occasional accompaniment of pregnancy. It is most generally met with during the early months, but is not confined to these, and may sometimes cause annoyance to a patient throughout the whole period of pregnancy, only ceasing when labour is over.

The quantity discharged varies, in some cases amounting to pints or even quarts in a single day. As mercury gives rise to **a** profuse discharge from the salivary glands, it may be as well to distinguish between the two. That due to the administration of a mercurial is accompanied by tenderness of the gums and **a** peculiar foetor of the breath. These are both absent in that form of salivation which occurs during pregnancy. The gums remain perfectly normal, and the breath has no foetor. Frequently this excessive flow of saliva is attended by acidity of the stomach.

Treatment. Various forms of treatment are had recourse to, many of which, however, prove futile in checking it. Astringent gargles may be tried, such as those which contain tannin. Glycerine of borax and rose-water mixed together form a useful preparation. Ices given to suck may also be tried, and so may counter-irritation by means of tincture of iodine over the glands. If the patient suffers from acidity, fifteen grains of bismuth or magnesia may be taken three times a day. Should the discharge be excessive, and the patient's health be suffering in consequence, medical advice should be sought without further delay.

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7. TOOTHACHE.—Another frequent accompaniment of pregnancy, and one which gives rise to considerable pain and annoyance, is toothache. It is not so much real toothache as a rule from which the patient suffers, as a kind of neuralgia depending upon an irritable condition of the nerves of the teeth, these nerves sharing in the general irritability of the whole system. It may, however be dependent upon a decayed state of the teeth themselves.

It is a well-known fact, that during pregnancy the teeth are peculiarly liable to undergo caries, and decay in consequence. This appears to be due in great part to the acidity of the stomach from which females are so apt to suffer at this time. If the teeth are good, small doses of quinine should be administered, such as one grain two or three times a day. It may be advantageously combined with steel drops, ten drops being given with each dose of quinine. This tonic treatment generally answers well in those cases which are of neuralgic origin; but when the teeth are themselves decayed they must be attended to.

There is a great dread in many people's minds of interfering with the teeth during pregnancy, but this dread is unfounded. There is nothing to hinder the pregnant female getting her teeth stopped, and if she be strong enough, and it be deemed necessary, nothing to prevent her having a tooth extracted.

8. PALPITATION.—Frequently during pregnancy a female becomes greatly alarmed by finding herself the subject of occasional attacks of palpitation or beating at the heart. There will be little cause for anxiety if this condition has not been suffered from before, and only attacks the patient for the first time now. It may be due to one or other of the following causes:—(1) to the heart sharing sympathetically in the general disturbance of the system; (2) to the pressure of the enlarged womb interfering with the proper action of the heart.

During the attack, should it be sufficiently severe to require treatment, the best thing to give will be a teaspoonful of salvolatile in a little water, whic<sup>1</sup> may be repeated in four hours

if necessary. Sometimes a patient is wakened up during the night with a feeling of impending suffocation. She feels as if sufficient air were not entering the room, and requests that the windows be thrown open that more may be admitted. Everything must be done in such cases to soothe the patient.

It is quite a mistake to fly to stimulants and administer them in the reckless manner that is frequently done when a female is thus seized. They are quite unnecessary, and will generally do more harm than good. What is wanted is to keep her quiet and as free from excitement as possible, when the attack will gradually pass off and leave the patient quite well again. If the general health be at all impaired, and the patient appear anæmic, much good will result from the exhibition of tonics. The tonics best suited to such cases are the various preparations of iron. Careful regulation of the diet must also be attended to.

9. FAINTING.—During the early months of pregnancy this troublesome condition is not of unfrequent occurrence; but the time of all others when it is more particularly met with, is about the period of quickening. It may occur with greater or less frequency; in some giving rise to little annoyance, while in others, by recurring several times during the same day, it proves a source of great trouble to the patient.

The duration of the fit varies; it may pass off in a few minutes, or the patient may remain in it for half-an-hour or even longer. It may come on while she is lying quietly, undisturbed by anything, or what is more usual, it may manifest itself after undue fatigue or excitement.

During the continuance of the paroxysm the patient should be placed in the recumbent position, her head being kept low, and such stimulants as the aromatic spirit of ammonia in water may be given in doses of a teaspoonful. Smelling salts may be applied to the nostrils, and the face may be sprinkled with cold water and freely exposed to the air.

When the attack is over, the condition of the patient's health

should engage attention, and a general tonic treatment adopted for some time will generally prove of great benefit. The best kind of tonics are those which contain iron. Bitter infusions are also very useful, such as the infusion of calumba. All undue excitement must be avoided. Crowded assemblies and heated rooms are injurious. Constriction of any part of the body by tight clothes is bad, and should be avoided. The diet must also be attended to. It should be plain and unstimulating in character. The bowels should be kept freely acting, a mild laxative, such as a dose of castor oil, being taken when necessary.

10. HEADACHE — When the stomach and bowels have been neglected, the patient frequently suffers from headache. In such cases the tongue will be found foul and loaded, and there will generally be acidity as well. This condition is to be remedied by attending to the cause which has given rise to it. Some mild aperient must be administered until the tongue becomes again clear, when the headache will generally be found to disappear as the state of the stomach and bowels improves. It may, however, be more neuralgic in its nature ; and if so, a different line of treatment will be called for. In this case, tonics must be given, such as quinine and iron. Should the headache persist, and not yield to such treatment, medical advice had better be obtained.

11. SLEEPLESSNESS.—Sometimes during pregnancy females are troubled with sleeplessness, which if allowed to go on long without being relieved, may seriously impair the health. Every means should be taken to remove any cause that may be at work in preventing the patient obtaining sleep.

Late hours and all undue excitement must be avoided, and the mind kept as cheerful and equable as possible, particularly before retiring to rest. Should it be found after attending to these things that the patient still continues wakeful, twenty or thirty grains of bromide of potassium should be administered in a little water at bedtime.

12. SWELLING OF FEET AND LEGS AND VARICOSE VEINS.—By the pressure of the enlarged womb upon the venous trunks the free

circulation of the blood in the veins of the lower extremities is hindered. This is frequently seen during the later months of pregnancy. The return of the blood being thus impeded the veins of the legs enlarge and become varicose. This condition most frequently manifests itself in those who have borne many children. In consequence also of this mechanical pressure the feet and ankles are occasionally found to swell. This usually occurs towards night, and generally disappears before morning.

When the enlargement of the veins of the legs is not very great, and when the vessels are not hard and lumpy, the administration of mild aperients, and the application of a calico bandage to the limb, will generally suffice. The bandage should extend from the foot, and must be applied with equal pressure over every part of the limb. When the veins are hard and lumpy, and present a knotty character, this treatment may be insufficient, and thus recourse must be had to the elastic stocking, and to occasional rest in the recumbent position.

Should the veins become painful and inflamed the patient must at once resume the horizontal position, apply warm fomentations to the part, and send for medical advice. An occasional and very troublesome condition is met with in the form of an enlargement of the veins of the external parts. This affection is not confined to those who have already given birth to children, but may also be met with in those who are pregnant for the first time. They complain of a swelling at one or other side, which goes on enlarging as pregnancy advances, and ultimately becomes very troublesome to them, interfering with progression, and in other ways giving rise to annoyance. When a woman suffers from this condition she should take frequent rest in the recumbent position, and should wear an abdominal belt. Beyond this little can be done, and the condition will pass away of its own accord so soon as labour is over, and the pressure which gave rise to it has been removed.

Care must be taken not to expose these varicose veins to the risk of external injury, as when ruptured they bleed most protusely, and the bleeding thus set up, unless checked, may cause the patient's death.

13. PAIN IN THE SIDE.—Among the many neuralgic affections from which the pregnant female is apt to suffer, frequent pain in the side is not the least annoying. It does not come on till the later months of pregnancy, and is due to the pressure of the gravid uterus upon the liver.

The pain generally comes on in the after part of the day, and may be so severe as to make the patient think she is suffering from some inflammatory attack. The state of the pulse and temperature, however, point to the true nature of the affection. In this case both pulse and temperature will be found normal, whereas if the pain were inflammatory in its nature the pulse would be quickened and the temperature raised. It is frequently very difficult to alleviate this distressing symptom. The patient should apply hot fomentations to the part. A belladonna plaster will frequently give relief. Friction with liniments containing opiates is also very valuable.

14. LEUCORRHEA OR WHITES.—During pregnancy many women suffer from a troublesome discharge which goes by the name of leucorrhœa or "whites." This discharge, although it may exist during the early months of pregnancy, most frequently proves a source of annoyance to the patient in the later months. Like so many of the affections from which the pregnant female suffers, it is produced by the pressure of the enlarged womb, and is the result of the congested state of the parts to which that pressure gives rise.

It manifests itself most severely in the case of those who have had their children rapidly, and whose constitutions are not of the most robust kind. If small in quantity it may not call for much attention, but if the discharge is great and allowed to go on unchecked, it gives rise to disagreeable excoriation of the external parts from its irritating nature. If it is not very excessive, the employment of a daily injection of tepid water, of water to which some Condy's fluid has been added, or with the addition of one or

two teaspoonfuls of powdered alum, will generally serve to keep it in abeyance and relieve the patient of annoyance. Should the discharge be more excessive the injection must be repeated more frequently, thus night and morning, or three times a day.

When the discharge is very profuse the patient must frequently resume the recumbent position, lying every day for two or three hours upon a hair mattress or a sofa, and sleeping at night upon a horse-hair mattress in preference to a feather bed. There must be no overloading with blankets when in bed, rather have too few than too many. The injections must of course be employed as in the less severe forms, and in all cases they must be administered gently, no force being employed, as it might prove dangerous.

Attention to cleanliness is of paramount importance to anyone who is suffering from this affection. Should such remedies as have been mentioned, after receiving a fair trial, prove unavailing in checking the discharge, medical advice should be sought, as a predisposition to miscarriage may be induced if it be allowed to go on unchecked.

Attention must also be paid to the general health. The diet should be light, nourishing, and unstimulating. Stimulants of every kind should be avoided. The patient should retire to rest early. The condition of the bowels must also be attended to, and if constipated they must be regulated by the administration of some mild laxative.

15. PRURITUS.—Along with the leucorrhœal discharge there sometimes exists a very painful and distressing condition of irritation of the external parts, to which the name of "pruritus" has been given. This irritation may, however, come on independently of any discharge, and by the itching to which it gives rise is a source of great annoyance to the patient. It sometimes appears to be neuralgic in its origin, while at other times it may be traced to the presence of small threadworms in the lower bowel. If due to the latter cause suitable means must be employed for their removal, such as enemata of salt and water every morning. Frequently, however, there is no cause that can be discovered to account for the itching.

The treatment consists in the maintenance of strict cleanliness, and the application of such lotions as Goulard's extract largely diluted with water. Should this not answer, a lotion composed of powdered borax and water, in the proportion of two drachms of the former to ten ounces of the latter, should be employed. When the irritation is great and the patient unable to obtain sleep in consequence, bromide of potassium, given in twenty or thirty grain doses at bedtime, will frequently lessen the irritability and soothe the patient to sleep. The diet must be light and nutritious. Stimulants must be avoided, and the bowels regulated by the administration of mild laxatives when necessary.

16. BLADDER AFFECTIONS.—The bladder affections from which the pregnant female is liable to suffer are (1) irritability, (2) incontinence, (3) retention.

Irritability.—This distressing condition is of frequent occurrence during pregnancy. In the early months it appears to be of sympathetic origin, while later on it is the result of the mechanical pressure exerted by the enlarged womb upon the bladder. If allowed to go unrelieved, it may seriously impair the general health by the continual disturbance of rest to which it gives rise. Much relief will be afforded to those who suffer from this affection by the free use of barley water as a drink, and by taking at bedtime a pill composed of three grains of the extract of henbane and two of extract of gentian. Other means may be employed; but should these fail, medical advice had better be sought. Mild laxatives must be administered from time to time, so as to keep the bowels acting freely.

Incontinence.—Many women, on coughing, or even on the slightest movement, are subject to a disagreeable dribbling away, or involuntary passing of small quantities of urine. This disagreeable affection is the result of pressure by the enlarged womb upon the bladder. It may be relieved by wearing an abdominal belt.

or by rest in the recumbent position. Should the urine give rise to excoriation of the external parts they should be smeared over with cold cream or spermaceti ointment.

Retention.—Instead of incontinence of urine the pregnant female may suffer from retention. This condition when present must not be neglected, as if allowed to go on it may lead to inflammatory affections of the bladder, which may prove very troublesome to the female afterwards. Care must be taken to prevent the bladder becoming over-distended, and for this purpose efforts should be made to pass water every few hours.

17. CRAMPS IN THE LEGS, ETC.-From the pressure which the enlarged womb exercises upon the nerves which pass to the legs, disagreeable cramps are experienced by the patient. For the relief of this painful condition friction with the naked hand, with camphorated oil, or with a liniment composed of laudanum and opodeldoc, in the proportion of one part of the former to two of the latter. Movement also may remove it, so that the patient should endeavour to walk about the room when the spasm comes upon her. Sometimes, instead of cramps in the legs the patient suffers from a similar affection of the stomach and bowels. In this case the treatment to be adopted is to immerse the feet in hot water and administer a draught consisting of twenty drops of laudanum in some camphor water. Hot fomentations should also be applied to the affected part. Should this affection prove troublesome by its frequent occurrence, much benefit may be derived by the employment every night before going to bed of a warm sitz bath. The patient should remain in it for ten or fifteen minutes.

#### 5. MISCARRIAGE.

The number of lives that are annually sacrificed by miscarriage alone is very great. There are few women the mothers of several children who have not miscarried at some period or other of their married life. It is therefore desirable that the young femals should make herself familiar with this subject, and thus be in possession of that knowledge which shall enable her to

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"carry" safely through the period of pregnancy, guarding against the occurrence of what has proved to many a thoughtless and ignorant one before her, the beginning of a life of suffering and misery. The necessity for every female becoming intelligently acquainted with those causes of miscarriage over which she herself exercises so much control, will be apparent when it is remembered that after one or two miscarriages a woman is apt to get into that condition in which it becomes a "habit" with her to miscarry.

Nothing is more desirable than to prevent the young female contracting this habit; for when once it has been formed it may be an extremely difficult thing to get the woman to carry to the full time. It is our desire to present this subject in the serious light in which it ought to be viewed, and ask that it receive that careful consideration which its gravity demands. Unfortunately at the present day the occurrence of a miscarriage is lightly regarded by many women; it is spoken of as if it were nothing, and treated with contempt. Now, it is this very light in which it is regarded that renders a miscarriage so fraught with danger.

Were it looked upon more seriously, more care would be taken both to prevent its occurrence and, having once occurred, to do everything to prevent it recurring. It seems difficult to impress upon the female the necessity there is for absolute rest for several days after miscarriage. Many women leave bed a day or two after, and some scarcely think it worth while remaining in bed at all. Need it be said that the majority who thus act live to repent of their folly? Miscarriage is not confined to any one period of pregnancy. It may occur all through ; but the time of its most frequent occurrence is generally between the eighth and twelfth week of pregnancy. It has a greater tendency to come on at certain times than others ; thus a woman is more apt to miscarry at the time she would have been poorly if she had not been pregnant, so that at these times she ought to be kept as free from excitement and every disturbing influence as possible.

Miscarriage occurs most frequently towards the close of sexual

activity, and perhaps next in frequency in the newly married. Hence the necessity for vigilance on the part of the young female.

The causes which may produce miscarriage are as follows:-Anything which gives rise to severe mental shock may bring it on, thus sudden fright, great mental anxiety. Anything which taxes the patient's strength severely, such as the lifting of heavy weights, excessive exercise either on foot, on horseback, driving, or on the railway. Falls also act injuriously, and are frequently the exciting cause of a miscarriage. Blows also may produce it.

Any undue excitement may cause it; hence the necessity there is for the young married woman being on her guard. The amount of gaiety to which the newly married female is exposed, and the unnatural mode of life inseparable from it, are fertile sources of miscarriage during the early months of pregnancy. Luxurious living also predisposes to this.

Scarlet fever, small-pox, and other of the diseases called "exanthematous" operate as powerful causes in the production of miscarriage. Some women of a naturally delicate constitution are more prone to miscarry than others. The exhibition of strong purgative medicines is very apt to act injuriously upon the pregnant female, and may bring about miscarriage. Their use at this time should therefore be carefully guarded against. Indeed, none but the mildest forms of aperient medicine should be given to the pregnant female. Many substances are employed criminally for the purpose of bringing on miscarriage. Of these, rue, savin, cantharides, and mustard may be taken as examples; but as they have no direct influence upon the womb itself, they can only act by reason of the irritation to which they give rise; but frequently the unhappy creatures who make use of such means bring about their own destruction,-the end they had in view never being attained.

Severe and excessive sickness may bring about miscarriage, as was before mentioned when speaking of the sickness of pregnancy, so that if the natural sickness should be excessive, the pregnant

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female should at once consult her medical attendant, that means may be employed to keep it in moderation. All emetics during pregnancy are dangerous, being apt to bring about miscarriage. Their administration must therefore be guarded against at this time. There are other causes which, operating upon the nervous system, give rise to irritation, and if allowed to go on unchecked may ultimately bring about miscarriage. Of this nature are the small threadworms which frequently infest the lower bowel.

Constipation is often a source of irritation, and if not attended to may at last lead to miscarriage. The irritation also of toothache is occasionally so severe as to threaten the patient with miscarriage. It will be seen from what has just been said that the causes which may bring about this condition present a formidable array; but as many of them are under the patient's own control, much may be done to obviate its occurrence.

SYMPTOMS.-Having enumerated the "causes," we now pass on to consider the symptoms of miscarriage. If, in the course of her pregnancy, a woman begins to experience feelings of languor, debility, and general depression, and if in addition to these she experience an uneasy sensation about the thighs, loins, and hips, with pains coming and going, she should be upon her guard, as these, although frequently unsatisfactory symptoms, may be regarded as premonitory of miscarriage. Shortly after, however, if miscarriage is threatened, these symptoms will be succeeded by a discharge of blood. This discharge may be small in quantity, and after lasting for a short time it may pass off to be renewed after the lapse of a brief interval. Instead of a discharge small in quantity, there may be a considerable gush of blood occurring quite unexpectedly. Should the bleeding be succeeded by no aggravation of the pains already referred to as occurring in the loins and hips, there is hope that by proper treatment the threatened miscarriage may be averted; but if, instead, the bleeding be followed by pains increasing in strength, and having more of a bearing down or expulsive character about them, the probability is that the threatened miscarriage will not pass off, but that the

pains will go on increasing in strength until the womb has emptied itself of its contents.

TREATMENT.—The treatment of this condition naturally divides itself into three parts: 1, That which is necessary prior to the occurrence of miscarriage, and with a view to prevent it: 2, That which must be adopted after it has occurred; and 3, The treatment which it is desirable to pursue after it has occurred with a view to prevent its recurrence.

1. TO PREVENT ITS OCCURRENCE.—If the patient is suffering from weakness, debility, and the other symptoms mentioned above as premonitory of miscarriage, she should immediately go to bed. It is useless attempting to pursue any line of treatment as long as the erect posture is maintained. What is wanted most imperatively is rest in the recumbent position. The head must be kept low; it ought on no account to be propped up with a number of pillows. The patient must be kept cool. She must not be encumbered with bedclothes, only sufficient being put over her to prevent her being chilled.

All articles of food and drink must be given nearly cold. The room in which she lies should be well ventilated, and if there is a fire in the apartment it must not be allowed to overheat the room. The patient should be made to sleep on a mattress, and there should be no curtains about the bed. The diet should consist of milk food; it should be light and nourishing. Sago, arrowroot, tapioca may be given, a lightly boiled egg, a little gruel, toast and water, and the like.

No stimulants must be administered. The medical attendant should be sent for without delay, as this is the time when by far the most can be done to prevent the occurrence of a miscarriage. Should it have gone beyond this stage, and should the first thing to attract the attention of the pregnant female be a discharge of blood, the same rules must be observed. Send without delay for the medical attendant, and meanwhile let the recumbent position be maintained. Attend to the rules already laid down in regard to the bed and the ventilation of the room. The diet must be light and as unstimulating as possible. On the arrival of the medical attendant means will be taken to prevent the occurrence of miscarriage by allaying the uterine contractions, and every direction which he lays down must be rigidly adhered to. Should the discharge of blood be accompanied by pains of a bearing down or expulsive character, the probability is that the case has proceeded too far, and that miscarriage is inevitable. Should this be so, the patient must be strictly guided in all she does by her medical attendant, who now takes charge of the case.

2. THE AFTER-TREATMENT.—As was before observed, the occurrence of miscarriage is by many women regarded as a matter of little or no consequence, and, as might be expected, the after-treatment is often grossly neglected. It is, perhaps, only after the lapse of years that the suffering which this neglect has given rise to causes the truth to dawn upon the mind. When a miscarriage has occurred, as great care is necessary as after a delivery at the full time.

Necessity for rest. If a woman rise a day or two after she has miscarried, especially if it be beyond the third month, the womb, which was increased in size, has no time to regain its normal dimensions, so that when she begins to move about again, the ligaments which maintain it in position are no longer able to support the increased weight thus put upon them; they therefore yield to the excessive strain, and the womb falls down, as it is called, or becomes displaced. When this occurs it may give rise to trouble at the time; more frequently, however, little present annoyance is experienced, although the foundation of future misery has been assuredly laid. After miscarriage the recumbent position should be maintained for a week or ten days,—the diet for the first few days being light and easy of digestion.

The room must be kept cool and well ventilated. On leaving bed the patient should be careful to guard against maintaining the erect posture too long at a time. She should for a week or so longer rest upon a sofa or couch for several hours each day.

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3. TO PREVENT ITS RECURRENCE.—When a woman has once been the subject of miscarriage, the question naturally arises, what must she do to prevent it happening again? If it has occurred in a woman who appears to be at the time in an enfeebled state of health, attention must be directed to its improvement before she becomes again pregnant. For this purpose nothing seems to answer so well as

Change of air. This is a powerful restorative means, and frequently is one of the first things to repair a debilitated constitution. The change should be to some quiet country spot, or to the seaside; if the latter be chosen, fashionable wateringplaces had better be avoided, and a place free from bustle and excitement selected. This will frequently do much to restore vital energy and bring back health and vigour to the exhausted frame, but it may not accomplish all; hence the necessity there is in such cases of bringing the patient under medical influence as well.

Tonics. For this purpose a well-directed course of tonic treatment should be begun, and no preparations will be found so useful as those of quinine and iron. These two substances may be had in the form of pills, or combined in the citrate of iron and quinine, of which five grains may be taken in water three times a day.

The diet should also be attended to. It must be light and nourishing. Milk, eggs lightly boiled, and farinaceous substances, such as arrowroot, sago, tapioca, corn-flour, and the like, may be given. Bread, brown or white, may also be eaten, the latter agreeing better when toasted. Animal food may also be taken, but only that which is more easy of digestion, veal, pork, and such like being avoided. All pastry and made dishes, or those which are highly seasoned, must be forbidden for a time. A moderate quantity of tea, coffee, or cocoa may also be taken daily.

The sleeping apartment should be well ventilated. A horsehair mattress is preferable to sleep upon, and is more conducive to the maintenance of health than a feather bed. There should be no curtains about the bed. The patient should be regular in

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her hours of sleep, and ought to retire to bed early. Irregular hours, sitting up late at night, and engaging the mind with what is calculated to produce excitement, are fruitful sources of disturbed and restless nights. The mind should be kept as far as possible calm and tranquil, especially before retiring to rest.

**Exercise.** A moderate amount of exercise should be taken daily. It is as bad for the patient to remain constantly indoors as it is for her to fatigue herself while taking exercise. The best time for taking exercise is between breakfast and dinner, and that kind of exercise which answers best is walking. This must never, of course, be carried so far as to fatigue the patient. Should she be too weak at first for this kind of exercise, a drive in an open carriage should be taken daily till she is able to go on foot.

The bowels. The state of the bowels ought also to be attended to, and should be carefully regulated by diet, so far as that is able to do so, and that failing, recourse must be had to the milder laxative medicines, such as castor oil, compound liquorice powder, or pills of colocynth and hyoscyamus. No severe purgative medicines are to be made use of ; they are quite unnecessary, and are frequently productive of harm. A little Pullna water taken first thing in the morning will often answer admirably for this purpose. A remedy, powerful alike in restoring the debilitated constitution and in causing the womb to regain its tone, will be found in

**Baths.** In summer the sponge bath or the shower bath may be employed, and cold water used; in winter the same baths will prove of great service, but tepid water should be employed instead of cold, at least to begin with. Great benefit will be derived from the daily employment of the sitz bath. The water should be slightly tepid. This bath has a powerful and invigorating action upon the womb. A coarse towel should be employed for the purpose of drying the body. During her absence in the country, and for several months after the occurrence of a miscarriage, the marital relationship should cease.

If the woman has miscarried several times, and has got into that state in which she is described as having acquired a "habit

of miscarrying," she should be very careful of her health when again pregnant. When she has again become pregnant, she must sleep apart from her husband. This is absolutely necessary to secure her carrying to the full time. She should rest frequently during the day, and the amount of exercise taken must never be such as to produce fatigue. The diet must be plain, nourishing without being stimulating, and all alcoholic beverages must be avoided. The state of the bowels must also be attended to. Thev must never be allowed to become constipated, and for this purpose an enema of simple soap and water or gruel, with or without the addition of castor oil, may require to be administered from time to time. Should the enema be objected to, some mild laxative must be taken by the mouth. When the time at which she formerly miscarried approaches, great care requires to be exercised. She should rest in the recumbent position for several hours daily. and if symptoms of impending miscarriage manifest themselves notwithstanding these precautions, she must at once go to bed and send for medical assistance.

At the approach of each menstrual period, that is to say, at the approach of the times at which she would have been "unwell" had she not been in the family way, the utmost vigilance is necessary. At these times the tendency to miscarry is always greater than at others, hence the necessity for increased precaution. The amount of exercise should now be diminished. The baths may be continued with advantage, except the shower bath, which is apt to prove too severe at this time. The rules that have been already laid down in regard to ventilation and the kind of bed upon which the female should sleep are to be carried out now in their utmost stringency. After the lapse of six weeks or two months beyond this date the pregnant female may consider herself "out of danger," and may look forward hopefully to the termination of her pregnancy.

#### 6. FALSE PAINS.

Many women, especially those who are pregnant for the first time, are troubled with what are called false pains. They may come on several days, or even longer, before the actual labour

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pains are felt. From true labour pains they may be distinguished by the uncertainty of their position. They may attack the belly, the loins, or the back. They recur perfectly irregularly, and have no influence whatever in causing the expulsion of the child. They may, however, if they continue long enough, merge into the true pains of labour and only terminate in these.

When a female is the subject of these pains towards the close of pregnancy, attention should at once be directed to the stomach and bowels, which frequently when disordered give rise to pains of this description. If the bowels are confined a gentle dose of castor oil should be taken, and if the stomach appears to be at fault the diet should be regulated. After the stomach and bowels have been attended to, should the pains still continue unabated, and the patient's nights be thereby rendered sleepless, medical advice should be sought. It is necessary not to allow these pains to go on long unchecked, as the patient's strength may become exhausted just as the true pains of labour are setting in, and her confinement in consequence be increased in danger.

#### III.—CONFINEMENT.

There are certain symptoms which manifest themselves towards the close of pregnancy, and warn the female that her confinement is now not very far off. One of the first of these symptoms to attract the patient's attention will be a perceptible alteration in the size of the abdomen. It will appear to her that she is less now than she was perhaps a month before; and whereas during the last few weeks she felt perfectly incapacitated for active exercise, she now feels able to move about with comparative ease, and experiences a greater desire for walking than she has done for some time past.

The breathing, too, which before was affected on the slightest exertion, is now free and performed without difficulty. The

reason of the abatement of these symptoms is this, viz., that the womb has now sunk lower down in the pelvis, causing a corresponding diminution in size, and in so doing the pressure which it kept up upon the lower part of the chest is removed, and the breathing, which from this cause was performed with difficulty, is now easy and natural. But while these symptoms, which formerly proved so troublesome, are passing away, their place is being taken by others no less annoying to the patient. While the womb was high up, the organs in the chest were those which suffered, the pelvic organs being meanwhile unaffected ; now, however, the contents of the pelvis are subjected to pressure, and fresh symptoms begin to manifest themselves.

The bowels and bladder begin now to give the patient trouble; she experiences a frequent desire to empty the bladder and evacuate the bowels. This is a wise provision of nature to keep the channel through which the child has to descend as free as possible from anything that would impede it in its course when labour had begun. The indications thus given should put the female upon her guard to prevent the bowels becoming constipated; and if they are at all confined, a gentle dose of castor oil must be administered, so as to have them thoroughly evacuated. The frequent calls to make water at this time must also not be disregarded, as an inflammatory state of the bladder may be set up. Besides those symptoms already enumerated, a discharge now makes its appearance, called in popular language

The show. This discharge consists of mucus, and is of a whitish colour, or may be mixed with blood. Along with this slight pains are now experienced, which increase in severity and in the regularity with which they occur until the contents of the womb are expelled. The character of these pains may be described as "grinding"; and whenever they are felt, and "the show" has made its appearance, the medical attendant should be sent for, or at least communicated with, that he may not be out of the way. The pains are at first slight and irregular; but as labour advances they assume a more bearing-down character, and the intervals between each pain become less.

## CONFINEMENT.

## 1.-PREPARATIONS FOR LABOUR.

1. THE BREASTS.—For about six weeks previous to the time the woman expects to be confined she should attend to the condition of her breasts. Many women by neglecting this precaution suffer from excoriated nipples, which give rise to great pain and irritation every time the infant is put to the breast; and, indeed, so acute may be the suffering during the time the child is at the breast, that the periods of suckling are looked forward to with dread. By a little previous care and management all such disagreeable complications may be avoided, and the act of suckling be attended with pleasure instead of pain. When the nipples are thus excoriated, the irritation to which the excoriations or cracks give rise, frequently causes the formation of abscesses in the breast, which may entail upon a mother weeks or months of sore suffering.

About six weeks, then, before she expects to be confined, the pregnant female should begin to bathe her nipples with a little brandy and water or eau de Cologne and water, in equal proportions, or with a little tincture of myrrh; she should then expose them for five or ten minutes to the air. By so doing the nipples will be hardened and rendered fit for suckling. It sometimes happens that when a female has been neglectful of these precautions previous to delivery, it is found on putting the infant to the breast, that owing to the retracted state of the nipples, it is unable The possibility of such a disagreeable occurrence to suckle. should be borne in mind; and when it is noticed to have taken place, no time should be lost in employing adequate means to remedy it. For this purpose nothing answers so well as a good nipple shield, which can easily be obtained. It ought to be worn both day and night. This retracted state of the nipples is generally brought about by the pressure of the corset when the breasts he ve begun to enlarge.

Sometimes the nipples are noticed to have a rough or nodmated appearance, and as cracks are more apt to occur when this condition is present than when it is absent, it must not be overlooked.

On being noticed, the nipples should be bathed two or three times a day with a lotion consisting of sulphate of zinc and rose water of the strength of two grains to the ounce. When fissures or cracks already exist, a good remedy will be found in a little powdered borax, mixed up with glycerine and water. A lotion, consisting of half-an-ounce of sulphurous acid, half-an-ounce of glycerine of tannin, and an ounce of water, is recommended by Professor Playfair in his work on midwifery as of great value in these cases.

When the breasts are hard and nodulated, the dress must not be allowed to press uncomfortably upon them. By a little care and attention on the part of the female these disagreeable affections may be altogether prevented.

2. ATTENDANTS.—Some months before a woman is expecting to be confined she should consult with her friends, or with her medical attendant, and engage the monthly nurse. Should she undertake this duty without consulting the doctor, she should inquire amongst her friends, and select as nurse a person who is thoroughly qualified for the work.

There is nothing more annoying to the female who has been recently confined than to be obliged to tell the woman who has come to nurse her what her duties are, and, perhaps, teach her how they are to be performed. Instead of being a comfort and relief, a nurse of this description is a source of endless annovance. and there is nothing more likely to retard recovery than to be worried in this manner. The woman who is chosen as nurse should be one who has bodily strength sufficient for the duties of her post. She should be a woman of a kind and loving disposition, and one in whom the utmost dependence can be placed for the carrying out of the directions of the medical attendant. She must be no gossip. Nurses are only too apt to become such ; but especially is this objectionable in the monthly nurse, as she, in recounting her experience during confinements, is almost sure to introduce all manner of objetcionable cases which can have no other than a prejudicial influence upon the patient's mind, rendering her uneasy and apprehensive as to the successful termination of her confinement. A nurse, then, having such qualifications as we have alluded to, having been selected, it is well to have her in the house a few days before the expected date of confinement.

In addition to the nurse, the only other attendants that should be found in the lying-in room are the doctor and a female friend. Generally the patient's mother is the one who is chosen to wait upon her at this time; but there are cases in which it would be better and greatly to the patient's advantage were some other person chosen for this office. Especially is this the case if the mother is a woman of an excitable and nervous disposition, and who, by her anxious looks and serious utterances, is likely to disturb that mental calm in the patient so necessary to the successful termination of her confinement. If, however, the mother is a woman who can command her feelings, the young female will derive much comfort from her presence; and whether she be the person chosen to be present with her during her confinement or not, it will be as well for her to be in the house. If from any cause the patient's mother cannot be in attendance upon her at this time, a friend should be selected who is able to act calmly and lovingly. She should be herself a mother, and will thus be able to sympathize with her in her suffering, and cheer her with the assurance of speedy relief, which her own experience enables her to give.

Anything like a congregating of individuals in the lying-in room must be avoided. It is necessary for the patient's safety that the apartment be kept cool; but if instead of attending to this the room is crowded with neighbours and friends, as is frequently the case among the poorer classes, it is perfectly impossible to keep the apartment in anything like a hygienic condition. The consequence of this crowding and over-heating of the apartment is that the patient becomes feverish and restless, and labour is retarded. Let everyone, therefore, who is not absolutely required, be kept out of the room; and when labour has

begun, let only the medical attendant, one friend, and the nurse be found there.

The conversation should be light and interesting, and of such a nature as to engage the patient's attention, and keep her mind cheerful and free from anxiety. Especially is this desirable in the case of those whose first confinement it is, and in whose mind there naturally exists a certain amount of fear and anxiety.

Allay fear.—Every fear in the young female should be, as far as possible, allayed; she should be reminded by those round about her that the process is a natural one, that the results are such as to enable her to look forward to the satisfactory termination of her suffering, and that after a short time everything will be over. It is necessary for those in attendance thus to cheer the patient; inasmuch as anything which tends to depress her mentally tends also to retard labour. Let it be again repeated that the nurse must not be allowed to talk of bad cases in the patient's hearing. Whatever she has got that is cheerful, and such as may be comforting to the patient, let her communicate. That, however, from which the female will be likely to derive most comfort will be the testimony of the medical attendant, so that if after making an examination he decla, everything to be going on well, her mind should be at once set at rest.

The medical attendant should be sent for whenever the female becomes conscious of the presence of actual labour pains. In those who have already borne children, we would especially advise that this be not delayed, because in such cases nature is frequently working quietly for some time, and on the occurrence of a few severe pains the child has been born. It is, at any rate, always safer to call in medical aid too soon than too late, and besides, the doctor will be the best judge as to the length of time labour is likely to occupy, and so can go or remain, as he may think fit.

3. THE BEDROOM.\_The room in which the female intends being confined should not be chosen without previous thought. As regards size, the room should be ample, and one which will permit of thorough and efficient ventilation being carried out

### VENTILATION AND TEMPERATURE.

during the lying-in month. For this purpose it must be provided with an open fireplace. Without this it is quite impossible to carry out any efficient system of ventilation. If the confinement take place in summer there will be no necessity to keep a fire burning throughout the lying-in month, unless the weather be cold and damp; but if there is no fire, care must be taken to see that the chimney is not stuffed up, as is frequently done, to prevent the entrance of so much air.

In winter it will be necessary to keep a fire burning in the room; it must not, however, be kept large, as the apartment will soon become overheated, and the woman get feverish and restless in consequence. Care should also be taken to keep the fire burning equally; if allowed to get low, and then suddenly heaped up with coals, a draught is produced which may give the patient cold and retard her recovery.

The window in the room should be freely movable, and may be kept open an inch or so at the top, which will secure a plentiful supply of air entering the room at all times and keep it cool and fresh. Should the patient complain of cold, the perforated zinc bar formerly made mention of should be employed, by which means the air will be divided, and perhaps rendered less objectionable to the patient's feelings.

The temperature of the apartment should be maintained as uniform as possible, and must not be permitted to rise too high. In order to ensure this being thoroughly attended to there ought to be a thermometer in every lying-in room, and the temperature must never be allowed to be above 60° Fahrenheit, otherwise the patient will become feverish and restless. The position of the room in the house should be such as to secure for the patient as much quiet at this time as possible. For this reason, if situated in a street, the back of the house will be preferable to the front. The utmost care must be taken during the lying-in month to prevent anything remaining in the room that would be likely to prove a source of atmospheric contamination. The air of an apartment is frequently polluted from the carelessness of nurses

in attending to this, and the patient's life in consequence endangered.

Everything that is likely to be wanted at this time should be provided; thus there should be a pair of scissors, pieces of tape, not very broad, a ball of worsted, and some whity-brown thread. These should all be at hand, as, unless the patient is already familiar with what the medical attendant is in the habit of using for the purpose of tying the cord, any of these may be required. There should also be an ample supply of towels.  $\varepsilon$  flannel receiver, soap, violet powder, or other unirritating powder.  $\varepsilon$  pot of lard without salt. The infant's clothes, and the bath for washing the child, should also be in readiness.

4. The BED.—The best kind of bed to have in the lying-in room is one made of iron. It should not stand above three feet from the ground, and the mattress should be of horse-hair. The fewer curtains there are about the bed the better.

A large sheet of Mackintosh or other waterproof material should be placed above the mattress to protect it, and above this a blanket and then a sheet. Next there should be a folded sheet to place under the patient as a draw-sheet, which is to be removed when labour is over. A sheet or large towel should also be taken and folded so as to form a kind of rope for the patient to pull by when the pains assume a bearing-down character. This should be fastened to the foot of the bed, to one or other side, or it may be fixed to the far corner of the head of the bed if preferred. A small cushion should also be provided, against which the patient may press her feet during the presence of a pain. Neither the towel nor the cushion should be made use of till the pains have become bearing-down, otherwise the patient may exhaust her strength needlessly, because at a time when such can be of no use

5. THE DRESS OF THE FEMALE.—This should consist of a chemise, from which on going to bed the patient will withdraw her arms, so that it may be slipped off without difficulty on the completion of labour; a petticoat, which also is to be removed when labour is over. A clean chemise should also be put cz

## DIRECTIONS AS TO DRESS, POSITION, ETC. 53

when the patient goes to bed. This is to be folded well up under the arm-pits, so that it may not be soiled during delivery, and may be clean and comfortable when drawn down afterwards. Over this the bedgown should be placed, and folded up in the same manner as the chemise. Over all a dressing-gown may be worn during the early part of labour, but this had better be dispensed with when the patient goes to bed. Some women wear their stays during labour for the purpose of giving themselves support; but as they are useless, and frequently in the way, they should not be kept on.

6. POSITION DURING LABOUR.—If now the medical attendant has arrived, or if the pains have become so severe that the patient is unable to remain up longer, she should go to bed. The position she is to occupy is the one in which she will be delivered, and ought to be upon the left side, with the head and shoulders nearly in the centre of the bed and the hips about a foot's distance from the edge. The knees should be drawn up. The patient when placing herself in bed must be careful to attend to these rules ; they will add materially to her own comfort and to that of the medical attendant.

**Examination by the medical attendant.**—The patient being now in bed, and occupying the position already described, the doctor will request that an examination be made, or that he be allowed to "try a pain," as it is called. As many young females from feelings of false delicacy object to this examination being made, and place their medical attendant in a very awkward position, a few words of caution may be necessary in regard to it.

Its necessity.—To make such an examination is very necessary for the following reasons: 1. It enables the medical attendant to ascertain whether or not labour is actually begun, and if it is begun, to what length it has proceeded; 2. It enables him to know whether or not everything is right,—that is to say, whether the child is presenting in the most favourable manner, and should anything be wrong this may be the best opportunity to rectify it, or at any rate it will be the best time for the medical attendant

to make up his mind in regard to what he thinks necessary to be done; 3. If everything is right, and labour has already advanced a considerable way, it will give the medical attendant the pleasure of communicating this to the patient, and so relieve her mind of much anxiety.

Should the patient however refuse to be examined, what is the result? The doctor does not know whether labour has commenced, and whether he can leave with safety to visit someone in the immediate neighbourhood. He does not know whether any active interference is necessary now or is likely to be. He cannot assure the patient that everything is right and cheer her with that assurance. He must remain in doubt and uncertainty, and she in distress and anxiety. By calmly submitting to what she should look upon as a necessity her mind may be greatly relieved, her fears may be dispelled, her courage strengthened, and her labour soon brought to a successful termination.

Let every woman be assured of this, that the utmost regard will be paid to her feelings in the conducting of every such examination, that the greatest possible gentleness will alone be experienced. Let her confide entirely in her medical attendant, trust to him, and be implicitly under his control in whatever he deems it necessary to do. The examination then having been made, the doctor is able to assure his patient in regard to her condition, to relieve her mind of much anxiety, and, it may be, he is able to tell her how long she is yet likely to be. He is also able now to tell her whether it is necessary for her to remain in bed, or whether she may not be up and moving about, and the longer she can thus keep upon her feet the shorter will the period of actual labour appear.

2. THE PERIOD OF ACTUAL LABOUR.

Actual labour having now set in, and the medical attendant having deemed it necessary that she should remain in bed, the patient must take up her position on the left side in the manner already indicated. If, till now, she has had her dressing-gown on, it should be laid aside.

## TROUBLESOME AFFECTIONS.

Frequent desire to pass water.-About this time also-that is, before labour has advanced very far-there will frequently be experienced a constant desire to pass water, and with the occurrence of each pain a small quantity may be forced from the bladder. These calls to micturition must not be disregarded, and for this purpose the medical attendant will occasionally leave the room. Should this desire to make water not be present, as sometimes occurs when the ordinary duration of labour has been exceeded, the medical attendant should be told of the circumstance, as it may be necessary for him to interfere actively in order to relieve the bladder. If the calls to pass water are unheeded it accumulates in the bladder, which, becoming distended, may act as a serious obstacle to the progress of labour. In addition to this, however, there is the possibility that by such neglect an inflammatory state of the bladder may be lighted up, and the foundation of much after-suffering be thus laid.

**Cramps of the leg.**—By pressure of the head upon the nerves which pass to the lower extremities severe cramps of the leg and thigh are apt to be set up as labour advances. They are a source of great annoyance to the patient by reason of the suffering to which they give rise. When this painful condition is present, friction with the warm hand, or by means of a piece of flannel heated at the fire, will generally give relief. Should these fail, friction by means of a little soap liniment may be employed instead.

**Sickness.**—Sometimes, also, during the early part of labour a woman may be troubled with sickness and often vomits. Unless the vomiting be accompanied by collapse and a cessation of the labour pains, its effect will be beneficial rather than otherwise.

1. DURATION OF LABOUR.—" How long will it be till labour is over?" is a question that is frequently put by the lying-in woman to her medical attendant. As this question is one which it is almost impossible to answer except evasively, it should not be pressed. The duration of labour varies greatly, almost no two eases being exactly alike, and about the most that can be said

is that first labours are generally considerably longer in their duration than others. If the patient has been assured by her medical attendant that everything is going on well, and if the pains continue good, it may not be long before all is over.

2. FOOD DURING LABOUR.—During the first part of labour no restriction need be put upon the diet; the patient may take any ordinary article of food for which she has a desire without hesitancy; but as labour advances, it will be advisable to refrain from solid food altogether.

Articles of diet of a fluid nature will now answer much better, and nourishment may be administered from time to time in the form of a little milk or beef tea. Beyond these there will be nothing else required unless the patient should complain of thirst, in which case a little cold water, toast water, or gruel, may be given, and will be found very serviceable for this purpose. Some people are afraid to give cold water during labour lest it should do the patient harm. They may, however, have no scruple in this respect; it frequently answers better than anything else for quenching the thirst, and is generally very grateful to the patient. A large quantity need not be given at a time,—a teaspoonful or a tablespoonful will frequently go as far to slake the thirst as the most hearty draught.

3. CHARACTER OF THE PAINS.—Labour pains may be spoken of as of two kinds: first, those which occur during the early part of labour, and are described as being *tearing* or *cutting* in their nature. During the continuance of these pains, the woman generally cries out, and is very restless, tossing about the bed in an uneasy manner. The bag of membranes, in which the child is contained, and which is generally spoken of as the "waters," is generally intact during this period, and is occupied in opening out the mouth of the womb. When by any chance the waters break before this is accomplished, the work has to be undertaken by the head of the child, and is attended with considerably more pain than if it had been by the soft wedge formed by the bag of membranes.

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# ACTING IN DOCTOR'S ABSENCE.

During the latter part of labour the pains become altered in character; they have now more or less of an expulsive power about them which they did not possess while the dilatation of the mouth of the womb was going on. They are now spoken of as *bearing-down* pains, and while they last the muscles of the abdomen are brought into play, and the female, catching hold of something with her hands, and pressing against a fixed point with her feet, bears down, and so assists the expulsive efforts of the womb. These pains are further distinguished from the early pains of labour in this, that, as a rule, during the greater part of their continuance, the patient remains silent, only giving utterance to expressions of suffering as the pains pass off.

The period of most intense suffering is when the head presses against the external parts; but after it has pressed sufficiently long to stretch them fully, with a pain of unusual severity, and with a three of agony, the head is born, and relief immediately experienced.

## 3. HINTS TO ATTENDANTS SHOULD THE DOCTOR NOT BE PRESENT.

As it sometimes happens, especially in the case of those who reside in the country, and at some distance from medical assistance, that the child is born before the doctor has time to be sent for, it will be well that those who are in attendance should know how to act in the meantime. We shall, therefore, lay down a few plain rules for the guidance of those who may at any time be thus awkwardly placed. As the head is being born, one of the attendants should place her left hand upon the patient's belly and grasp the womb. The object of this is that she may be able to follow it as it contracts and expels the child, and when the infant is born, that she may keep hold of it until the arrival of the doctor, or, at any rate, till the after-birth has come away. Unless this simple precaution is attended to, the patient may suffer from flooding, and her life be thus endangered.

When the head is born one of the attendants should place her hand upon the child's neck and feel if there be any coil of cord

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round it; and if there be it ought to be gently pulled upon so as to loosen it, or it may be removed from the neck altogether. It is very important that this should be attended to without delay, as the child may be very easily strangulated if the cord is wound tightly round the neck.

Having ascertained that everything is right, that there is no coil of cord about the neck of the child, the right hand of the attendant should be placed under the infant's head to direct it forwards as the body is born, which will generally be in a few seconds after. In case there should be anything lodging in the child's mouth which would be likely to interfere with the breathing, the finger of the attendant should be introduced into it, and anything that may be there removed. Frequently the mouth of the infant is filled with mucus, which may prevent it breathing freely; but if this simple proceeding be resorted to, the mucus may be at once removed.

On the child being born, if strong and healthy, it will generally begin to cry. If, however, instead of crying it remain in an apparently lifeless condition, efforts must be made as speedily as possible to cause it to breathe. For this purpose the child should be smartly tapped upon the buttocks, back, or chest, which will, in many instances, have the desired effect of bringing it round. Should this procedure, however, not have the desired effect, what is called *artificial respiration* must be had recourse to.

Artificial respiration may be performed as follows :— The hands of the infant are seized by the attendant and raised from the side until they are lifted above the child's head as far as they will go, by doing which the act of inspiration or drawing of air into the chest is imitated, after which the hands and arms are to be depressed until they are brought to the side again, by which the air will be driven from the chest, and the act of expiration be thus imitated.

Should this fail in causing the child to breathe, another method may be tried. It may be briefly described thus :- The mouth of

### TO RESTORE ANIMATION.

the attendant being placed close to that of the infant she is to breathe slowly, as in expiration, emptying the chest of its contained air, and filling with the air thus expelled the lungs of the child. During this process the child's nose must be compressed by the fingers. When this is done the open hand should be laid flat upon the chest, and pressure made, at the same time removing the pressure from the nose. By this means the lungs will be emptied of their contained air, when the process may be again repeated. Should it be found, after the employment of these various means, that the child is not restored to animation, the cord must be divided, and the infant put into a warm bath—that is to say, a bath having a temperature of about 98°F. It may be as well to remark here that an ample supply of warm water should always be at hand, especially if the labour has been at all tedious.

Rubbing the chest and back with equal parts of brandy and water may also be tried in cases of this kind. Suppose, however, the child has been born, and that so soon as it comes into the world it begins to struggle and kick violently and cry loudly, what is to be done? If the medical attendant is likely to arrive presently, the infant's head should be turned towards the edge of the bed, so as to be away from the discharges, and the bedclothes so arranged as to admit a plentiful supply of air. Beyond this nothing need be done in such cases.

If, however, it be uncertain when the doctor may arrive, or if it be in the country, where the presence of skilled assistance cannot always be calculated upon when wanted, it will generally be necessary to divide the cord, and thus sever the child from its connection with the parent. This may be done in the following manner :—The cord being taken up in the left hand, a piece of tape, several strands of whity-brown thread, or two or three thicknesses of yarn are passed around it, and tied in a double knot about the distance of three fingers' breadth from the navel.

A second ligature should then be placed about an inch and a half nearer to the mother, and midway between these two ligatures
the cord is to be divided. The application of this second ligature is not absolutely necessary in the great majority of cases, but it is always better to apply it.

This having been done the child is to be placed in the flannel receiver and removed to a secure place. This should not be an armchair, or other place of a like nature, where the child runs a risk of being injured through the carelessness or forgetfulness of those in the room. Further attention must now be directed to the mother. The first question which naturally suggests itself on turning again to her is, "What of the after-birth? Is it to be removed, or should it be allowed to remain?" The answer to this is that, "The less the attendants interfere with the afterbirth the better."

Any rash attempts at removing it by pulling upon the cord may be followed by severe flooding, or by breaking of the cord, the after-birth remaining in the womb. Frequently, indeed, the after-birth comes away a short time after the child is born, the same pain that brings about the expulsion of the latter giving rise to loosening of the former, so that on the recurrence of the pains after a short period of rest it is frequently expelled. Sometimes, also, the same pain which caused the birth of the child expels the after-birth, which follows upon the infant's heels.

Should it not come away by the normal contractions of the womb, no attempt is to be made to remove it. The hand of the attendant, which has been grasping the womb, must not be relaxed, but should be kept there incessantly until the arrival of the medical attendant. This pressure by the hand over the lower part of the belly upon the womb is a great safeguard against the occurrence of flooding, and frequently will be found of assistance in causing the expulsion of the after-birth. Care must be taken in removing the child from the bed, that in lifting it a sufficient hold is obtained.

It sometimes happens that by the careless manner in which children are lifted they fall, and are seriously bruised and injured. The way in which a child can be best lifted is by taking the back

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## ATTENTION TO MOTHER.

of its neck between the thumb and forefinger of the right hand, and allowing the buttocks to rest upon the palm of the left. In this manner the child may be lifted with perfect security and placed in the receiver.

#### 4. THE MOTHER.

On the removal of the after-birth, the mother ought to be allowed to remain just as she is for about an hour, after which time the immediate risk of bleeding will be in great measure over, and the soiled linen can then be taken away. Should any attempt be made to do this immediately after the expulsion of the after-birth, it may be attended with severe hæmorrhage, and may even cost the patient her life. Too much caution cannot be given in regard to this, and my readers would do well to bear it in mind.

It frequently happens that, when from any cause attendants are left to do this themselves, they are extremely careless in regard to what they allow the patient to do, and it is well if, in allowing this self-assistance, they do not bring upon the woman a severe flooding. An hour, however, having elapsed, the draw-sheet should be removed along with the soiled garments. This must be done with as little disturbance to the patient as possible, and when the removal of the soiled articles is completed, the clean chemi'e, which. if previous injunctions have been followed, will be folded up under the armpits, should now be brought down.

After this a warm napkin should be placed to the external parts, or, preferably, placed not in immediate contact with the parts, but under the hips laid flat out. A clean sheet, well aired, should now be placed under the patient, and the binder applied. The binder is generally made of a piece of calico about two yards long and eighteen inches deep. Frequently, however, a bolster slip is used for this purpose, and answers very well. Perhaps the best kind of binder that can be used is one made of unbleached calico, about a yard and a half long and eighteen inches deep, with the upper part cut away so as to render the top narrower than the bottom, which enables it to be applied more

regularly, and if made slightly narrower immediately above the wer edge than a few inches above it will the better maintain its position.

The binder ought always to be made so that it will extend below the fulness of the hips, and embrace the upper part of the thighs. It must not be applied too tightly, as is sometimes done—a moderately firm support being all that is required. It was formerly the custom to place some more solid article, such as a book, a pincushion, or a folded towel under the binder and over the womb to compress it, and so prevent flooding. Such things had however, better not be introduced, as they are apt to interfere with the proper contractions of the womb and so prove obnoxious.

While the binder is being applied, and indeed, while everything is being done to the patient at this time, she must be kept as passive as possible. The fewer the efforts she makes on her own behalf the better. The most serious risk of dangerous hæmorrhage, or even of immediate death, is sometimes incurred by women raising themselves to the sitting posture at this time, and they cannot be too strongly impressed with the necessity there is for them remaining both recumbent and passive.

All necessary changes having been accomplished, the patient should now be raised a little higher in bed, and for this purpose two assistants will be required. They should stand one at each side of the bed and draw the patient carefully up. The bedclothes should now also be arranged about the patient, and if she feel chill some extra covering may be required, and a petticoat warmed before the fire may be wrapped round her feet. She must, on no account, be overburdened with bedclothes, as too great heat at this time may act injuriously upon her. The changing of the patient being now finished, and everything about the bed being arranged comfortably, she may be given something to eat.

The best thing to give her at this time will be a cupful of tea and milk, about equal parts, or some milk and bread. If preferred, a little beef tea may be given instead. No stimulants of any kind must be given to the patient unless they have been specially ordered by the medical attendant. When the patient has had something to eat the room should be rendered perfectly quiet, and she should be induced to sleep.

**REST AFTER DELIVERY.**—There is nothing likely to prove more injurious to a young woman after her first confinement than to allow a great number of people to come into the room beside her. Amongst the lower classes it frequently happens that a confinement is scarcely over than the apartment in which she is lying becomes thronged with neighbours and friends, whose intentions may be good and laudable enough, but whose company she had much better be without. In the upper classes, also, the young mother is subjected to a like influence; and owing to the greater susceptibility of her nervous system, she becomes excited, grows feverish and restless, and frequently has, if nothing more serious ensues, a protracted recovery in consequence.

Necessity for quiet.—Too much care, therefore, cannot be taken to keep the young mother perfectly quiet after her labour is over, and to keep her free from all those disturbing influences which operate so injuriously upon her. The requests of wellintentioned friends must be calmlv yet firmly refused until such time as the medical attendant shall see fit to admit visitors into her apartment. Those who fail to ensure tranquillity to the young mother at this time incur a great risk of doing her harm.

The noisy talk of those who are well is ill-borne by the patient at this time, so that everything should be done to secure mental as well as bodily rest. The room, then, having been darkened, only one attendant should remain with the patient. The presence of more than one in the apartment is unnecessary, and only tends to render its atmosphere impure. Care must be taken to keep the room cool. If the fire be kept burning too high the apartment will soon become overheated, and the probability is that the patient will become feverish and restless, and unable to sleep. If the patient express a desire to make water before going to sleep, there is nothing to provent her doing so; but there is, at

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the same time, no necessity that she do so if she feel perfectly comfortable without.

### 5. THE CHILD.

WASHING, PUTTING UP THE NAVEL STRING, AND DRESSING. -We must now return to the child. When we left it, it had just been severed from the mother by the division of the cord, and was carried away in the flannel receiver, and placed in a position free from danger. Provided there is nothing to hinder it, so soon as the child is removed, the process of washing and dressing may be at once begun. Should the condition of the mother, however, require the services of both nurse and attendant, or should there be anything in the condition of the child to forbid it, the washing and dressing may be deferred. Where. however, there is nothing preventing, it should be proceeded with at once. The various articles of clothing which the child is to put on should have been hung upon a chair at the commencement of labour in proximity to the fire, and will now be thoroughly aired, and ready to put on so soon as the child is washed.

The way in which the child should be washed may appear to many trivial and unimportant, but it is in reality not so, and it frequently makes all the difference whether the child is ill or well washed. The child is generally washed upon the nurse's knee, the basin with soap and water being placed upon the floor, but there are good reasons why such a method of procedure should not be adopted. It should not be adopted, first, because during the washing the child is apt to be lifted by some part of the body by which it may be injured; and second, because the same water that is used to wash the child's body is also used to wash its face. This is a frequent cause of an inflammatory state being set up in the eyes. The best thing to use for the purpose of washing the child is a wooden bath, oval in shape, and having a place scooped out at one end which allows of the child's head being efficiently supported during the process. The bath should be sufficiently filled with warm water to cover the child's body, by which means it will not be exposed to the influence of the atmosphere till

ready to be dried. The head and face will in this way be alone exposed to the air.

The soap that is employed to wash the child's face with should be of the most unirritating kind, and great care must be taken that none of it be allowed to enter the infant's eyes. Many of the inflammatory affections of the eyes occurring in young children may be traced to carelessness in this respect, but as there are many who are totally ignorant of this fact it is mentioned here to caution them in regard to it.

The infant's body, at birth, is covered to a greater or less degree with a soft, cheesy-looking substance, upon which neither tepid water alone, nor that and soap, have influence in the way of causing its removal. The best thing to use for the purpose of facilitating its removal is lard, and before the child is placed in the bath the whole body should be smeared over with it, when it will be found that the cheesy substance then readily yields, and is removed by the sponge or flannel and warm water. As some do not care to use lard for this purpose, another excellent application, and one which will be found to answer equally well, is an egg. This should be whisked up in a bowl, and the surface of the body rubbed with it, just as in the case of the lard, and the process of washing thereafter proceeded with as before.

DON'T BE TOO PARTICULAR TO REMOVE EVERY PARTICLE.— Should portions of this cheesy matter still be found adhering to different parts of the body when the process of washing is completed, there is no necessity to be over-anxious for its removal. It will dry up in a short time and come off of its own accord, or at some subsequent washing. Indeed, it occasionally happens that when a nurse is over-anxious to remove the whole of this cheesy material at first, the amount of rubbing which has to be resorted to for this purpose cause: the bringing away of the child's skin, so that care requires to be exercised in this as in every other work pertaining to the child.

The child, having now been washed, should be carefully removed from the bath and placed on a pillow covered with warm

cloths upon the nurse's knee, and dried by means of warm, soft towels. The washing and drying being now at an end, the putting up of the navel string should engage attention. For this purpose a piece of soft old linen should be taken and a hole cut in the centre. Through this hole the navel string should be drawn (notice being taken while doing so that there is no bleeding from the end), and the lower part folded up against the other, so as to be brought into contact with the child's abdomen. It will thus lie between the two folds of the linen.

The cord is maintained in position by means of the flannel binder, which should now be applied. This binder should be made about five inches deep, and of sufficient length to encircle the child's body once and a half. It must on no account be drawn too tight, as the action of the internal organs may be interfered with, and the liver, which in the infant is large, may be unduly pressed upon and injured. It has this further disadvantage when made very tight, that it interferes with the free action of the lungs.

Care must therefore be taken in applying the binder that it does not press injuriously upon any part, and in order to ensure this there ought always to be sufficient space left after it is applied to permit of the finger being insinuated between it and the skin. It is better to retain it in position by means of a few stitches. If pins are used the ordinary ones should be avoided, and safety pins employed instead. Unless great care be taken in introducing them, ordinary pins are very apt to prick the child, and rather than run any risk they had better not be used.

Next to the flannel binder is placed a shirt, which preferably should be made of wool, as it will then afford the child both more warmth and greater protection against cold. Above this the petticoat should be placed, and then the infant's frock or slip. A shawl or piece of flannel should also be provided to throw over the infant's shoulders. The head is better to be kept bare. Caps are apt to prove overheating, and as it is necessary to have an infant's head kept cool, it will be better to allow it to remain uncovered. A linen diaper should now be applied, which having been done the dressing of the child will be finished. It should now be taken and placed in its cot, or laid upon a pillow and allowed to remain in a place free from draughts and sufficiently warm until the mother has rested, when it may be removed and placed in her bosom.

### 6. AFTER PAINS.

Pains, usually more severe in those who have already borne children than in those whose first confinement it is, frequently set in shortly after the termination of labour. They go by the name of "after pains," and are caused by the contractions of the womb. Their influence is one of a salutary nature, although they may give rise to much suffering. They continue with greater or less severity for a day and a half or two days. With each contraction the amount of discharge generally increases, and there may come away from the womb at such times clots of blood which have accumulated in the interior. Unless these pains are very severe, and give rise to much suffering, they do not call for interference.

If, however, by their continuance, they deprive the woman of sleep and cause her much pain and annoyance, the medical attendant should be communicated with, when adequate treatment can at once be resorted to, as these pains are perfectly under medicinal control.

### 7. CLEANSINGS.

For about three weeks after delivery the lying-in woman has a discharge from the interior of the womb. This discharge, as it at first issues from the external parts, consists almost entirely of pure blood, and in quantity it is sufficient to soil about twelve napkins during the first twenty-four hours. The quantity gradually diminishes till about the fifth day, when it is only sufficient in amount to soil two. From being of a red colour, as at first, the discharge gradually grows paler until it assumes a green colour, when it receives the name of the "green waters."

When this stage is reached the discharge has a disagreeable

sickly odour. From being green in colour it comes to have the appearance of soiled water, which character it maintains throughout. As already stated, the duration of the discharge is generally about three weeks, but there are cases in which it continues a much shorter time without giving rise to any evil consequences. Especially is this the case in women who have been delivered of dead children, in some of whom it ceases after a few days without the woman suffering in the slightest degree. If, however, the discharge has been of ordinary amount, and suddenly ceases, this circumstance must not be regarded slightingly, nor passed over as too trivial for notice.

It should be at once attended to, as it may be indicative of a serious febrile condition setting in upon the woman. Should it therefore be found, on the cessation of the discharge, that the patient begins to exhibit symptoms of feverishness, increase of pulse, and general restlessness, the medical attendant should be at once communicated with, when proper means will be employed to again establish the discharge.

NECESSITY FOR CLEANLINESS.-While the lochial discharge, as the cleansings are also called, continues, the most scrupulous attention should be paid to cleanliness. The external parts should be bathed every five or six hours with tepid water, a soft sponge being used for the purpose. Attention to this cannot be too strongly insisted upon. Cleanliness now is absolutely necessary to ensure a safe recovery, and those who neglect it cause a patient to run a very serious risk. It might indeed seem almost superfluous to insist on this, were it not a matter of every-day experience that there is nothing in regard to which people are more negligent, and amongst the poor, where the greatest necessity for cleanliness exists, least attention is paid to it. There are many who are deterred from performing these daily ablutions under the impression that the patient will suffer from the exposure. There need, however, be no scruple in the mind of any in regard to this, inasmuch as no exposure is necessary.

The process of washing and drying can all be accomplished by

the hand under the bedclothes, and if the water is sufficiently warm the patient need suffer no shock—need experience no chill. Should the external parts be very painful, they may be anointed with goose-grease finely prepared, which will exert a healing influence upon them. Instead of this some milk may be added to the water with which the parts are bathed, or they may be bathed with oatmeal gruel. Either of these will be found a useful application in such cases, and will answer admirably in place of the goose-grease. They are both bland and unirritating, and will generally be very grateful to the patient. Should these fail to give relief, a warm poultice may be applied to the external parts. The discharge naturally has a peculiar odour, which can be better perceived by the sense of smell than described in words.

It sometimes happens, however, that it becomes very offensive and irritating, and when this is the case about a teaspoonful of Condy's fluid should be added to a pint of tepid water and used as an injection two or three times a day. Whether the discharge be irritating and offensive or not, the same amount of Condy's fluid may be added with advantage to the water with which the parts are bathed.

### 8. TREATMENT AFTER DELIVERY.

1. **REST.**—The necessity for rest in the horizontal position after delivery cannot be too strongly insisted upon, and the fact that so little regard is paid to it renders it all the more necessary to impress every female with right views regarding its importance.

Among the poorer classes of society, where, from circumstances which need not be mentioned, as they will readily suggest themselves to the reader's mind, a woman is unable to obtain that amount of rest which is so necessary for her recovery, the frequent occurrence of womb diseases in after life points to this as the cause. In the case of those, however, whose circumstances remove them above the necessities of the poorer classes, who have nurses and attendants to minister to their every want—who, if they have already a family, are relieved of all anxiety in regard to it by having kind friends or relatives acting for them, by whom they know the comfort and the happiness of their little ones will be as carefully attended to as by themselves, —in the case of such there can surely be **no** adequate excuse if they are neglectful in this respect.

But it is difficult to make people understand why there should be this necessity for prolonged rest after confinement. They will tell you they feel quite well; feel strong and able to be up and moving about, and not unfrequently, in spite of all the earnest entreaties of their medical attendant, they leave the horizontal position after three or four days, sometimes even sooner, and may be found by him sitting upon a chair at the fireside.

The reason why a great many women act in this way is because the effects to which such carelessness on their part gives rise are not, at first sight, very apparent. They will tell you that many of their most intimate friends have left their bed on the fourth or fifth day after delivery, and in a few days more have been seen walking about outside, and they ask, "Why may not I?" Besides, there is an undoubted tendency among many women to regard the individual who can thus early leave her bed and her apartment as "clever," and they praise her for what she has done. The present obscures the future, and in consideration of it all after-consequences are lost sight of.

They do not look beyond, and into the history of such of their acquaintance as may be already suffering from carelessness in this respect they do not care to inquire. Could they see the present in the light in which the future would reveal it, they would pity rather than praise her who thus acts. Could they see the picture of a life rendered miserable, of years passed in sorrow and bitterness, the result of carelessness at the time of some confinement perhaps long since forgotten, they would doubtless take warning. But as they do not see these things, they remain unimpressed with the necessity there is for rest, believing it merely to be a precaution of an over-scrupulous nature on the part of the medical attendant.

# REST AFTER DELIVERY DISREGARDED. 71

Many women also labour under the impression that when the doctor enjoins upon them prolonged rest in the recumbent posture he imagines them to be ill, and they think if he only knew how strong they felt themselves, he would not hesitate in permitting them to leave bed before the eighth or tenth day. Now, in the great majority of cases, this is not the reason why the medical attendant keeps them in the horizontal position for this length of time at all. His whole object in keeping a patient recumbent is to permit of the womb regaining, to a great extent, its normal dimensions. After delivery it is always large, and when it is remembered that six weeks or two months have to elapse ere its natural size is regained, the necessity for long rest in the horizontal position will perhaps be more apparent.

The great danger therefore which the patient runs in thus leaving the horizontal position too soon is that the proper involution, or contraction of the womb to its normal size, may be interfered with. When this is the case the ligaments which retain the womb in its natural position are unable to sustain its increased weight; they become relaxed, and in consequence of this various displacements may occur. The patient then begins to suffer from a feeling of dragging and weight about the loins.

When these symptoms manifest themselves thus early it is well for then the patient has warning of her danger, and by again resuming the horizontal position for a week or so longer, she may prevent the occurrence of more serious mischief. More frequently, however, the changes which take place are more insidious in their nature, and do not manifest themselves at the time, and hence arises the great necessity for careful after-treatment.

It will be a good rule for every woman to observe not to leave her bed after confinement till the ninth or tenth day. She may then be allowed to lie upon a couch or sofa till the expiry of a fortnight, after which she may be allowed to move about upon the same landing for another week. If there be another room immediately adjoining the one in which she is confined, with a door of communication between them, there is nothing to prevent her being removed into it during the second week. This will be a pleasant change to the patient, and will at the same time permit, during her absence, of the other apartment being more thoroughly ventilated. If this change can be accomplished in the manner indicated, advantage should be taken of the patient's temporary absence from the room to have the bedclothes and the mattress thoroughly exposed to the air.

At the end of the third week she may be allowed to come downstairs and move about; but even now care must be taken that she does not remain too long in the standing or sitting posture, but that she recline upon a couch or sofa during some part of each day. Provided the weather be not too cold, she may also now begin to take exercise in the open air. For the first a drive in a carriage will perhaps be best, or if it be preferred she may take a turn in the garden. Gradually, as the patient's strength permits of it, the time devoted to exercise may be increased; but it should always be moderate for some time after confinement.

In cold weather, or in those cases in which confinement has occurred during winter, the woman had better not venture out of doors till the expiry of the month. By a little carefulness in regulating the exercise thus begun, a woman will be enabled to recover favourably without the occurrence of anything of an untoward nature; but by recklessness at this time she may throw herself back, rendering her recovery more tedious, and consequently impairing the state of her health.

For the patient's first outing after confinement it will be necessary to choose a good day,—not one in which the wind is keen and cutting,—and the best part of the day should be selected. If carriage exercise be taken, only a short distance should be traversed; if on foot, the patient must return home free from anything like fatigue. In these drives or walks the woman should be accompanied by an agreeable companion, who will keep up a pleasant conversation, and thus render them more serviceable in restoring the patient's health. By attention to such rules as we have here laid down a good recovery will in general be secured, and the female's health will be thoroughly restored.

2. DIET.—For the first two days after confinement the diet should be for the most part fluid, and may consist of a basin of milk and bread for breakfast, or a cup of tea or coffee with toast; a basin of good beef tea with bread crumb or toast may be taken for dinner. Tea may be again taken in the afternoon along with bread or toast, as may be preferred; and for supper the patient may take a basin of arrowroot and milk. A light-boiled egg is a very nourishing article of diet, and will rarely be productive of harm, however soon after confinement it may be given. It must on no account be boiled hard, as it then becomes much less digestible. It is preferably taken at breakfast-time.

This diet may be slightly varied—thus, instead of giving exactly the same on the second day as on the first, some sago and milk or rice and milk may be given along with the beef tea for dinner. On the third day a piece of chicken may be given at dinner-time, or a piece of white fish—such as sole or haddock. On the fourth day, provided everything has been going on well, the patient may be allowed a mutton-chop, or piece of steak, or roast beef, of which, however, she must not partake too freely. After this date she may return to her ordinary diet, care being taken at the same time to avoid everything of an indigestible nature—such as pastrystuffs, salted meat, pork, veal, etc.; only those articles being taken which she knows to be nourishing and easy of digestion.

Owing to the absence of active exercise at this period the stomach is unable to digest heavy meals of solid food; hence the necessity there is of keeping the diet plain and light, while at the same time of a kind sufficiently nourishing. Light puddings may be given; they are wholesome, and easy of digestion.

Formerly it was the custom in this country to allow the lying-in woman to live almost entirely upon slops. This pernicious system of dieting was the direct result of the light in which labour was then viewed. Being regarded as a disease, and not a natural

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process, it was thought necessary to keep the patient's diet low and of an antiphlogistic nature, in order to ward off attacks of inflammation.

The effect of this practice was the direct opposite of what it was intended to be; and the very diseases which they sought by so acting to guard against were found to supervene with far greater frequency than at the present day, when a more rational system is everywhere adopted. A woman upon whom the system of slopdieting is practised, will be found much more likely to suffer from inflammatory and febrile attacks than one to whom a light but nutritive diet is given. Of course the opposite extreme of over-feeding the patient must also be carefully guarded against.

The thirst of the patient may be relieved by giving her barleywater to drink, of which she may partake freely, without fear of doing herself injury. It may be given alone, or equal parts of barley-water and milk may be given instead. A little cold water may also be administered, or toast-water, or soda-water. Any of these may be given to the lying-in woman without hesitancy, and will generally be found very serviceable in relieving the thirst from which she suffers at this time.

No mention has been made among the beverages suitable for the lying-in woman of beer, wine, or indeed stimulants of any kind; and the reason for this is that in by far the great majority of cases the recovery of the patient will be rendered a thing of greater certainty if she refrain altogether from their use, so that unless specially ordered by the medical attendant no stimulant of any kind ought to be taken. If stimulants are taken, as they sometimes are, upon the recommendation of a friend, and perhaps contrary to, or at any rate without the sanction of, the medical attendant, they are frequently productive of harm, so that the lying-in woman who refrains from their use, unless ordered by her medical attendant to act differently, will be doing that which is calculated, generally speaking, to bring about a speedy and a safe recovery.

## NURSING A MOTHER'S DUTY.

#### IV.-NURSING.

As this part of maternal management is one of very great importance, and yet one that is but little understood, we would direct our readers to a careful perusal of the few practical hints that may be thrown out in connection with it here, believing that if acted upon they will be the means of conferring lasting benefit upon their offspring, and will tend to maintain their own health strong and vigorous.

There are those in our country, however sad the thought may be, who, for the sake of self-gratification, or in order that their own pleasure may not be broken in upon, forego one of the greatest privileges which any right-thinking mother can enjoy, viz., that of suckling her own offspring. Surely no motive of this sort ought for a moment to weigh with the true mother in the discharge of what is plainly a part of the sacred duty that devolves upon her. In the performance of the tender office of nurse, the mother engenders those strong feelings of affection and love in her child which are apt to be conspicuous by their absence in the case of those in whom this sacred duty has been foregone.

Let it then be understood that we regard it as plainly a part of every mother's duty to bring up her child at the breast, unless, of course, there are obstacles in the way which prevent her doing so. That the breast was intended by nature to be the fountain of nourishment, for a certain period, of every animal's existence, cannot be doubted after the most superficial study of the habits of the lower animals; and while creatures, by nature fierce and cruel, do not forego what instinct tells them to be a part of their duty to their young, shall woman, with her infinitely superior capacities of knowing, act differently? If, however, a woman undertake the duties of nurse, she must not do so to suit her own convenience.

The only consideration that ought to weigh with her should be the welfare of her child, and if she enter upon her duties with the notion that she may continue them or give them up just as it may prove convenient to her, or with the intention of only giving her child the breast at such times as she may find it suitable without interfering with her pleasure or society to do so, she had better not undertake the duty at all. There are, however, many women who are not sufficiently alive to their duty in this respect. They either fail to perceive the evident design of nature in regard to it, or they close their eyes to the fact.

If it should not appear to any reader of these pages to be a part of her duty to her offspring to nurse it herself, and even should it appear to be so, but should she not be prepared to undertake the work with the firm determination that nothing shall be allowed to interfere with her in the discharge of it, she should not undertake to suckle it at all. It need hardly be said that to give a child the breast only when it is convenient to the parent will prove most injurious to it, will undermine its health, and may cause its death. Let every mother, therefore, in undertaking the suckling of her child, be fully alive to the importance of the duty she thus undertakes; and let her make up her mind that as far as possible nothing shall prevent her faithful discharge of it. And need it be added, that if thus undertaken, instead of being an annovance, or proving irksome in the smallest degree, it will be a source of real pleasure and enjoyment to the parent. These remarks are, of course, only intended for those cases in which there is nothing to prevent the parent undertaking the office of nurse.

There are many women who, however anxious they may be to suckle their offspring, are prohibited from so doing either on account of physical debility or from some other cause. Of these we make no mention at present. Further on we shall notice those conditions which render it necessary for a woman not to undertake the nursing of her child ; but in what we say at present, no reference is made to cases of this sort.

The importance of children being nursed will be apparent by considering two things: 1, The admirable manner in which, from its constitution, milk is adapted to give support and nourishment to the child; and 2, By reflecting upon the enormous mortality in the case of children who are dry-nursed. United in its sub-

### EVIL OF ARTIFICIAL FEEDING.

stance, milk contains oleaginous, albuminous, and saccharine constituents, which are all that the system requires, and in this one article are combined those principles which in after years man requires to take a number of different kinds of food to yield. In considering the second point, let us compare the mortality of children brought up upon the breast with that of those that are drynursed. This we are enabled to do by referring to the case of children that are foundlings in our large cities.

In some of the large cities on the Continent, where the foundlings are wet-nursed from the time they are received, the mortality is from 33.7 to 35 per cent., while in the case of other large continental towns where the children are brought up altogether artificially from the first, the mortality is from 50.3 to 63.9, or even 80 per cent. Now a consideration of these figures must prove to everyone the advantages to be derived from nursing, and seeing that the sacrifice of human life is so great, this duty ought neither to be lightly thought of, nor given up without due consideration.

1. NURSING DURING THE FIRST FEW DAYS.—In those who have already borne children it is frequently noticed that towards the close of pregnancy the breasts begin to enlarge very considerably, become swollen, and often contain milk. Usually, however, the milk does not make its appearance till the second or third day, especially in first cases. Its appearance in the breasts generally gives rise to some constitutional disturbance, causing slight chills, feverishness, etc., which symptoms, however, speedily pass off. The breasts enlarge and become knotty to the feel, and blue veins are seen to traverse the surface. The nipples become erect, and pain and uneasiness are experienced by the mother, the pain sometimes passing up towards the armpits. All these uncomfortable symptoms speedily pass away on the milk, which is secreted, being drawn off by the child.

The first milk which is secreted is darker than that which follows it. In colour it is yellowish. It is called colostrum, and is supposed to have a purgative effect upon the child. In the case of those who have not already borne children, and those in whose

breasts the milk has not begun to be secreted towards the close of pregnancy, it would be unwise to put the child too frequently to the breast, because if it is frequently put to the breast and receives nothing, the child at last becomes disappointed, and may afterwards refuse to take the breast at all. In attending to this, however, the opposite extreme of not putting the infant to the breast even once during the first day or two, must be avoided, inasmuch as the occasional application of the child to the breast exercises a stimulating influence upon it, and by increasing the quantity of blood which flows to it, tends to hasten the "draught,' as the secretion of milk in quantity by the breast is called.

In the case of those, then, who have not borne children already, and those in whom the milk has not yet made its appearance in the breasts, the child should be applied not more frequently than once every six hours, and in order to satisfy its hunger till the milk appear, a little ass's milk may be given it, or what is of more general employment, because more within the reach of all, a little cow's milk, diluted with boiling water, and slightly sweetened with loaf sugar.

The proportion which will answer best will be equal parts of cow's milk and boiling water. This should be given to the child every two hours, and the proper quantity will be best ascertained by putting it into a feeding bottle and allowing the child to suck it. The child will take no more at a time than is necessary, and its appetite is our best guide at this early age. It frequently happens that when spoon-feeding is resorted to during the first day or two, the child's stomach is overloaded, and it is made unwell almost before it is put to the breast at all.

2. NURSING DURING THE FIRST MONTH.—When the milk has come to the breasts, all artificial nourishment must cease, and the child be put to the breast regularly. It is now that so many mistakes are made; that so many bad habits are formed; now that the health of the child frequently begins to suffer, and derangements of the stomach are so often met with.

Evils of irregular nursing .- There are many mothers who, by

## HOW TO DERANGE A CHILD'S STOMACH. 79

their irregular habits in suckling their children, overload the stomach, and when the child cries, as it frequently will do when the stomach is in this state, they give it the breast under the impression that it will cure everything. The following case, which recently came under my observation, will serve to show the necessity there is for careful regulation of the infant's diet at this time.

Called into the country late one night to see a child about five weeks old, supposed to be seriously ill, and thought, indeed, by some of the friends to be dying. On getting to the house the mother was sitting at the fireside with the child in her arms, and on asking what she had noticed the matter with it she said that it was vomiting everything it took. On asking the mother how she had been feeding the child, and how frequently she would give it the breast in a day, she said that the infant was so frequently sick and had so often vomited that she had to be almost constantly applying it to the breast. It never seemed to have entered her mind that the habitual system of over-feeding which she had been pursuing was the direct cause of the infant's suffering, that the pain and vomiting were but the natural results of the engorged state of the stomach, and that if the feeding of the child were more carefully and systematically conducted, these symptoms would soon pass away. On pointing out to her the necessity there was of allowing a certain time to elapse between each meal in order to allow of what little was taken being thoroughly digested, she appeared quite to understand the folly of the method she had been hitherto pursuing, and to see the force of adopting more rational principles in the future than those by which she had been guided till now.

When the first few days of the infant's life are over regularity in feeding must be observed, otherwise the health of both parent and child will alike suffer. The frequency with which the child should be put to the breast during the first month should be once every two hours during the day, and once every three or four hours auring the right. To attend to this from the very first is

absolutely necessary, as a mother's rest should be as undisturbed as possible. When this is neglected and her nights are disturbed, her health will become impaired; the milk will deteriorate in quality, and the child will be badly nourished, and suffer in consequence.

The best time to give the child the breast is when it awakes out of sleep, and on its hunger being appeased, it will generally again fall asleep without further trouble. The practice which some have of allowing the child to fall asleep with the nipple in its mouth before putting it into its cot is one to be avoided. A practice of this kind very soon becomes a habit with the child, and the mother herself may be astonished to find how great a hold it has taken upon it, and how difficult is the task, even in a short time, of getting the child to fall asleep without the nipple in its mouth.

Habits such as the foregoing may be easily formed, but when once they have been formed it is only with great difficulty that they can be overcome. Let a mother, therefore, not regard such matters as too trivial; for whatever tends to influence her health she 'ld not appear beneath her notice.

3. NURSING FROM THE FIRST MONTH TILL THE APPEARANCE OF THE TEETH.—That regularity in nursing which was spoken of as necessary to establish during the first month must now be maintained in all its strictness. The frequency, however, with which the child is fed need not now be so great as up to this time it has been.

During the day the breast should not be given more frequently than once every two and a half or three hours, and during the night it should not be given oftener than once every three or four hours. As the child grows older the time which is allowed to intervene between each meal should be increased. If such directions as those which have been given are attended to, it will soon be found that the child will sleep four or five hours without awaking, and the mother will thus be enabled to obtain that amount of sleep which is so necessary for her at this time; but if, instead, her nights are broken and disturbed, she will speedily suffer in health.

Till the appearance of the first or milk teeth, the child should be fed exclusively upon the breast milk; after that, which is nature's indication that the stomach has become fit to digest other substances, the child may be given rusks, tops and bottoms, a little of Hard's farinaceous food, Chapman's entire wheat,' f Robinson's groats. It may be that several of these may have to be tried ere one is found that will agree with the child, but when one that is suitable has been got, it should be at once adopted, and should not be readily given up.

#### WEANING.

About the ninth or tenth month the mother should begin to wean her child. Frequently this is not attended to, and many mothers are found suckling their children till they are fifteen or even eighteen months old. This prolonged suckling has its origin in the popular notion that so long as the infant is at the breast pregnancy cannot occur. This notion is however devoid of any scientific foundation. There is nothing to prevent the occurrence of pregnancy at this time, and it may not be unfrequently observed that those women who thus unnecessarily prolong the period of suckling are already pregnant, and their milk, deteriorating in quality, becomes unfit for the child, while the long-continued suckling is telling upon their own constitution.

There are difficulties in the way of laying down any hardand-fast rule as to the precise time when weaning should take place. Many circumstances may occur to prevent this being done at the usual time; but while remembering these exceptions, it may be safely said that if mother and child are both healthy the process of weaning should be begun about the ninth or tenth month. If, however, the child appear delicate, and especially if it be born of consumptive parents, and is being brought up upon the breast by a strong and vigorous wet nurse, it may be as well to prolong the period of suckling till the eleventh or twelfth month. Should the woman's health, however, appear to suffer, it

should at once be discontinued. The artificial feeding begun on the appearance of the teeth should now be increased in the frequency of its administration, while the breast should be at the same time gradually withdrawn.

The quantity of food necessary to be given to a child at any one time is not very easy of determination, inasmuch as the capacity of the stomach for receiving food varies in different children. It may, however, be laid down as a rule, that not more than about three ounces of fluid should be given at a time. When much larger quantities are given at once the child soon begins to suffer; the stomach becomes overloaded and the digestive powers are impaired, so that care must also be exercised to see that the quantity given is not too great.

#### THE BREASTS.

It may happen from the pressure of the stays upon the breasts during the period of pregnancy that the nipples have been injured, and that when the child is applied to the breast they are so small and depressed that the child is unable to get hold of them. The same thing may happen, independently of any pressure, from natural defect, and frequently when the breasts are large and the nipple so depressed, great care has to be taken in putting the child to the breast that it is not suffocated, as by burying its face in the breast the entrance of air into the lungs may be prevented. The mother should attend to this, and endeavour to prevent the occurrence of such an unfortunate accident by the exercise of a little care in placing the infant during the time it is at the breast.

The best position for the mother to suckle the child in when lying in bed is by turning upon one or other side, and resting slightly upon the corresponding arm. She should not sit up in bed to do this, as it will produce weariness and aching about the back, and, besides, has a prejudicial effect upon the figure. When out of bed the child should be nursed while the mother sits in the erect posture. It must not be done reclining. Should any difficulty be experienced in getting the child to take the breast from defect in the nipples, such as has been already noticed, they ought to be drawn out. This may be accomplished by taking a bottle, such as an ordinary pint bottle, and filling it with hot water, then pouring the water from it, invert it over the nipple to be drawn out, when, as it cools, it will generally exercise sufficient suction power to cause elongation of the nipple. Should this on being tried prove ineffectual, a nipple shield must be procured, and the nipple drawn out by means of this, or instead of either, an older infant may be put to the breast. The feeling of uneasiness to which the appearance of the milk in the breasts gives rise passes off as they are relieved, and the process of suckling, at first attended with pain, is now accompanied by no such unpleasant sensation.

Previously to applying the infant to the breasts they should be sponged with tepid water, and then dried, and this should be done again after the child has finished suckling. Besides this sponging with tepid water both before and after nursing, the breasts should be sponged with tepid water and soap two or three times daily.

The influence of the mind upon the secretion of the milk is very great, and it not unfrequently happens that a child is rendered dangerously ill by a mother giving suck immediately after some outbreak of passion or other mental emotion. This should be remembered by mothers, and the mind kept as calm and undisturbed as possible while the child is being nursed.

#### THOSE WHO OUGHT NOT TO SUCKLE.

However anxious some mothers may be to bring up their offspring at the breast, it may be absolutely necessary, both for their own and their child's safety, to forego this privilege. Frequently when a parent continues to suckle her child after the medical attendant has prohibited her doing so she undermines her own health and induces a weakly habit of body in her infant. The first class of those who ought not to suckle their children embraces such as are consumptive. Any mother who has an inherited tendency to this disease runs a great risk of imparting the same to her child if she bring it up at the breast. She therefore who is so circumstanced will be acting kindliest by her offspring if she do not attempt to nurse it herse f at all

The best thing undoubtedly to be done in such a case is to procure a strong and vigorous wet-nurse for the child. By so doing advantage is given the child of obtaining nourishment from a healthy source, which will go far to improve its general health, and, by laying the foundation of a stronger constitution, may do away in great part with any taint which the child may have inherited at birth.

It is frequently difficult to persuade a mother who has inherited a consumptive taint that she ought not to nurse her own child, because such women have often a very large supply of milk. They say, "Why should not I nurse the child seeing I have abundance of milk?" It is true that so far as quantity goes they have more than enough to supply the demands of the infant, but something more is required besides mere quantity to nourish and satisfy the child, and unless the *quality* of the milk be good it matters little how large the quantity be.

To the naked eye such milk generally looks very watery, and when viewed under the microscope the deficiency in nutritive property is at once made manifest. Let every mother therefore who has inherited a consumptive constitution bear in mind the fact that she will be doing the best thing to secure to her infant exemption from the disease which threatens her own life if she procure the services of a strong and vigorous wet-nurse.

There is another class of women who ought not to suckle their children, embracing those who are nervous and excitable. The influence of the mind, as has been already observed, upon the milk secretion is very great, and anything that exerts a greatly disturbing influence upon the mother will affect her milk in such a degree as to cause it to be dangerous, perhaps even fatal, to the child.

There are women of a naturally delicate constitution, who, however, may not have inherited any constitutional taint, such as we have mentioned, who ought to give nursing a fair trial. Frequently, instead of their health suffering, it is found to improve greatly. The experiment ought at any rate to be made in such cases, and the judicious medical attendant will be careful to remove the infant from the breast should he find evidence of the parent's health beginning to suffer.

In addition to the two classes already noticed, there is yet another, including those whose nipples are so depressed that they are obliged to give up all attempts at nursing. As this is frequently the result of carelessness, every female should be on her guard during pregnancy to see that the corset does not press injuriously upon the breasts. Of course, when the nipples are so depressed, means should be employed to elevate them and render them fit for nursing, ere the mother give up all attempts to suckle her child. The means usually resorted to in such cases have been already noticed, but should they on being tried prove ineffectual, a wet-nurse must be sought for the child, or it must be hand-fed. Lastly, there are some women who are debarred from bringing up their children at the breast owing to some natural defect in the nipple, which cannot be overcome by any means that it is within the power of the physician to employ.

It will sometimes happen during the time the child is at the breast that the milk, which till now was flowing freely, and whose quality was everything that could be desired, will suddenly cease to be secreted. Should this occur, it will be better not to put the child to the breast for two or three days, at the end of which time, by the rest that has been given, it will generally be found that the milk has returned to the breasts, and is flowing again as freely as it did before. Any severe mental shock to which the patient may be subjected may serve to bring about this temporary cessation of the milk-flow.

# MANAGEMENT OF THE MOTHER'S HEALTH DURING THE PERIOD OF SUCKLING.

To maintain the mother healthy during this period is in great part to maintain the health of the infant unimpaired, and every attention should be paid to see that, so far as this lies within the patient's power, no effort is wanting on her part to secure it. When the health of the nursing mother is thus maintained strong and vigorous, this period will be to her a period of great pleasure; but should the health deteriorate the child will suffer, and the sufferings of the infant, telling back upon the already debilitated frame of the mother, will cause her health to be altogether undermined.

DIET.—The diet of the nursing mother should be wholesome and nourishing, while, at the same time, it is easy of digestion. There is no necessity to increase the quantity of food taken, and stimulants are quite unnecessary. It is a frequent practice among women who are nursing, whenever they feel faint, or suffer from depression of spirits, to betake themselves to stimulants. Now it may be quite true that they obtain relief from this momentary feeling of depression by taking some alcoholic stimulant, but so soon as the effect of the spirit has passed off the feeling of depression will in all probability again return, and it may be in a worse form than before. Besides, there is a tendency that, by this constant repetition of stimulants, the patient may begin to imagine that she cannot do without them, and will soon regard them as necessary to her existence.

Let it then be a rule with every nursing mother, that unless alcoholic drinks have been ordered by the medical attendant, they ought to be avoided altogether. In good, plain, substantial food there will be everything to nourish the body, and there are other remedies which will answer better to cause the disappearance of those feelings of depression should the patient suffer from them.

Cheerful occupation and exercise in the open air will do far

more to relieve these than any amount of stimulants. The nursing mother cannot be too careful to live plainly. Everything she eats influences the condition of her milk, and it will be wholesome or the reverse, according to the care or the neglect displayed by her in what she herself eats.

A certain amount of animal food should be taken daily, preferably beef or mutton, but pork and veal had better be avoided, or, at any rate, partaken of sparingly. Soups and vegetables may also be taken, and so may fish and the flesh of fowl. Pastry stuffs are generally indigestible, and on that account can only be eaten in great moderation, if eaten at all. Made dishes and highlyseasoned foods are also difficult of digestion, and so should be avoided at this time.

If the patient suffer much from thirst she will find this relieved by taking a little toast-water, barley-water, or the like. It is a popular error, from which many women suffer, that a great deal more food is required while they are nursing than they are usually in the habit of taking, and so far does this idea sometimes go, that a woman will force herself to eat, from a sense of duty, a quantity greater than the stomach can digest, in consequence of which it becomes overtaxed, and considerable suffering results.

Let care therefore be taken to see that the diet is moderate in quantity, plain, substantial, and nourishing. As already remarked, the infant at the breast is influenced by the food taken by the mother. Any article of diet whose tendency is to cause constipation in the mother, will have a similar effect upon the child, and, in like manner, that which causes diarrhœa in the parent will be likely to cause a worse attack in the infant at her breast. A knowledge of these facts should be sufficient to put every mother upon her guard. The care she bestows upon her diet and any sacrifice or self-denial she may have to undergo will be amply repaid by the maintenance of good health both in herself and child.

EXERCISE.—A moderate amount of out-of-door exercise, at all times an important element in the maintenance of health, is

now as essential as ever. Exercise of this nature tends to develop a healthful habit of body; it improves the general health of the nursing mother; it improves the quality of her milk; and by the change it gives from the routine of household work, it tends to maintain a more cheerful mental state in the mother, which is very beneficial in its action upon the child.

The best kind of exercise for the nursing mother to take is walking exercise. It should occupy an hour of each day, unless when the weather is wet and stormy. Besides its bracing effect, out-of-door exercise is very helpful in securing a good night's rest to the patient, which it is most desirable she should have.

BATHS.—The question may be asked, "Is it proper for a nursing woman to continue her baths as usual?" and the answer must be, "Most assuredly." Baths are as necessary now for the maintenance of health as ever they were, and should be taken daily. The best kind of bath, and the one which perhaps bears most universal application, is the ordinary sponge-bath. During summer the water employed should be cold; it may however be made tepid in winter, should the cold be too severe. Instead of the sponge-bath the shower-bath may be used, which will be found very bracing, and will act as an excellent general tonic to the system. It may be used as the former; cold water in summer, and tepid in winter.

The best time to take these baths is on getting out of bed in the morning. They exert a tonic influence upon the body; they maintain the function of the skin in a healthy state and enable the patient to withstand cold much better than she could otherwise do.

CLOTHING.—The nursing-woman should be warmly clothed without being over-burdened, and in order to achieve this a covering of flannel ought always to be worn. There is no article of clothing that better combines lightness with warmth than flannel, and none that will enable one to resist the changeableness of a variable climate half so well. The various articles of clothing must be made in such a manner as to permit of the most perfect freedom of movement, and must on no account embrace the body tightly.

OCCUPATION.—During the period of suckling, light occupation, such as is afforded by attending to ordinary household duties, is very conducive to the maintenance of health. The duties undertaken must not be of such a kind as to lead to exhaustion, otherwise a weakly habit of body may be developed; but light household work should be undertaken by every mother, and in it will be found that which best serves to keep both body and mind in a healthy state.

#### HOW TO DRY UP THE MILK.

When a woman has been able to maintain her child at the breast for the usual period,— that is to say, for about nine months, she will generally find little difficulty with her breasts when the time for weaning has arrived. Should it happen, however, that the breasts become swollen, hard, and distended on the child being weaned, recourse must be had to measures calculated to remove these symptoms. For the relief of the tension a certain quantity of milk may be withdrawn from the breasts. The amount of milk thus taken away must not be excessive, as the glands will immediately begin again to secrete in larger quantity than before, and the feeling of pain and distension will return. Only sufficient, therefore, must be drawn off to relieve the state of tension from which the patient suffers.

When from any of the causes that have been already mentioned the mother finds it necessary to discontinue nursing her child, or where a woman has given birth to a dead-born infant, this condition of the breasts is most apt to occur. At the outset, when the breasts become swollen and painful, mild saline aperients should be administered, and friction of the breasts with warm oil be resorted to several times a day. The saline aperients which will answer best are a little Epsom salts or a seidlitz powder. The application to the breasts of plasters, such as belladonna or soap, are frequently had recourse to, a hole being

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cut in the centre for the nipple, but a lotion, consisting of eau-de-Cologne and water, will frequently answer better.

Should these means fail to give relief, the medical attendant should be called in. In all cases of this nature the diet must be strictly attended to, as it forms a very important item in the treatment. Fluids should be avoided as much as possible, and food of a more solid nature given.

THE WET NURSE.—For reasons that have been already given under a former section, it may be found necessary to obtain the services of a wet nurse. As the choice of a person to fill this position is one of very great importance, and as many of the points which determine her being accepted or refused are not so apparent to an untrained eye, the selection of a wet nurse generally devolves upon the doctor. It is as well, however, that a mother should make herself familiar with the qualities which are deemed essential in one who is to fill so important a post. In the first place the age of the applicant should be ascertained, as it forms a very important element in the selection.

The age at which a woman is best suited to perform the duties of wet nurse is between the twentieth and thirtieth year. The matter of age having been settled, it is to be further ascertained whether or not she has before given suck, and the woman who has already had one or two children of her own is to be preferred to the one who is nursing her first child, for the two following reasons: first, that the milk in those who have already borne children is richer and more nourishing than in those who are suckling their first infant ; and second, that they are likely to be more experienced. Of course we are supposing that the ages of the women have been ascertained and are found suitable.

In regard to the woman's own infant inquiries must be made as to its age, and if there exist a great disproportion between their several ages she must be rejected. This is absolutely necessary, for if the child of a few weeks old be put to the breast of a woman whose infant is already six or seven months old, it is fed

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# ENGAGING THE WET NURSE.

with milk secreted to supply the wants of a child considerably older, and consequently by its richness it is apt to derange the weaker stomach of the younger child. In like manner it would be wrong to put an infant several months old to the breast of a woman whose own child was only of the age of a few weeks, for then the older infant requiring richer milk than the one of a few weeks old would be improperly nourished. In inquiring into the health of the applicant, the medical attendant will remark the general appearance of the woman. Her appearance ought to be such as indicates a vigorous constitution. She should be robust but need not be stout. Great care should be taken to obtain a supply of milk as near the same age as possible with that to which the child has been accustomed, so that the stomach of the infant may not suffer from the change.

A matter of the utmost importance to inquire into is the state of the nurse's health. This, however, can only be satisfactorily done by the medical attendant, inasmuch as many of the appearances which indicate unfitness for this duty are only to be recognized by those who are skilled.

Another thing to be carefully inquired into is whether or not there is any evidence of constitutional disease about the woman. Should such exist, that is to say, should the woman be consumptive, strumous or syphilitic, she will in consequence be unfit to undertake the duties of wet nurse. To ascertain the woman's own freedom from consumption, the chest must be sounded; to ascertain her freedom from a strumous taint of constitution, the neck must he examined, when the presence or absence of suppurating glands or scars, the result of former suppuration, will determine this. Should these glands exist or should scars be found indicative of previous suppuration, the medical attendant will at once pronounce the woman unfit to undertake the nursing of any child other than her own. Again, the teeth, gums, and skin will be examined, and from the appearance of these the presence or absence of a syphilitic taint in the woman will be determined.

When the woman has thus been examined and the absence of

all constitutional disease been ascertained it will be necessary ere she is engaged to have her child thoroughly examined by the medical attendant. In this examination he will determine the presence or absence of any discolouration about the buttocks, and will examine the skin as to the presence or absence of eruptions. Should the child be found to be suffering from a peculiar nasal affection called *snuffles*, from which children with an inherited syphilitic taint suffer, the woman will be at once rejected. These various items being inquired into, and everything being found so far satisfactory, the digestion of the woman must next be seen to. This should be good. The breath ought to be sweet, and her teeth should be in a good condition.

The condition of the breasts must also be ascertained. They should be of moderate size; not too large, as this frequently is only indicative of an increased amount of fat. To the feel they should be hard and knotty, indicating the existence of a good amount of glandular substance, and those breasts are to be preferred in which the lines are seen crossing from one side to the other.

The condition of the nipple should also be ascertained. It must be of good size, and above all should be prominent, if sunk or depressed the child may be unable to get hold of it, or it may only do so imperfectly. A little of the milk should now be pressed from the breast and examined. When good it will present the following characters :—It will be thin, bluish-white, and sweet to the taste.

It must also be ascertained whether or not the woman has been unwell since the birth of the child. This may be difficult to ascertain, as the woman may be cunning enough and endeavour to conceal it; usually, however, they are ignorant of the fact that the occurrence of menstruation in a nursing woman impoverishes the milk, and there are many who, far from being aware of this, imagine that the milk is thereby improved.

Should it be found on asking her this question that she has been unwell, it must be ascertained at what time it occurred, and if it be found to have come on during the early months of suckling, the child must not be allowed to be put to the breast, or if she be already engaged as wet-nurse and become unwell during the first few months a change will be necessary and another nurse must be procured.

Should the wet-nurse begin to menstruate, not during the early months of the term of engagement but later on; for example, about the sixth or seventh month, there is not then the same necessity for a change as there was in the former instance, because now the diet of the child begins to be supplemented by something extra, so that it is not now so dependent for its nourishment upon the breast milk as it was formerly. The services, therefore, of the wet nurse may be continued, the child being principally maintained till her monthly period is over upon artificial food.

In addition to the various qualities already alluded to as necessary in the wet nurse, there are others which are no less essential. These, however, the medical attendant has nothing to do with; they ought to be seen to by the person who is engaging the wetnurse, and can be more readily ascertained by her than by any other one. We refer to the moral qualities of the woman.

It need scarcely be said that those who are engaged to perform the duties of wet nurse should be of temperate habits, and anything to the contrary existing in an applicant for this situation must at once cause her to be rejected. She ought also to be cleanly, and evidence of a contrary nature being discovered should prevent her being chosen.

In her disposition the wet-nurse should be cheerful, willing and obliging, frank and outspoken, and where these form part of a woman's character they should always be a recommendation in her favour, as their non-existence should be a barrier to her being accepted. These various points have been gone over in detail in order that every mother may have definitely in her mind those qualities which are deemed essential in anyone undertaking a wet-nurse's duties, for should the selection of a person fit for this position at any time devolve upon herself, unless such matters are attended to, the health and future well-being of the child may be seriously interfered with.

The wet-nurse having been chosen and her duties begun, it may become a question with the young mother how she ought to be dieted. Many mothers, from ignorance in regard to this matter, allow the wet-nurse both to eat and drink far too freely. They seem to think that the wet-nurse cannot well have too much given her, and that the more she eats the better will the quality of her milk become. Frequently the result of this over-feeding and over-drinking is the serious derangement of the digestive faculties of the wet nurse.

It should be remembered what the habits of those women were previously to their engagement, and if they have been accustomed to one meat meal a day, it can be easily understood that if now they have the chance of and take three, a very great strain is suddenly thrown upon the digestive organs, and if, in addition to this heavy system of dieting, a liberal allowance of stout be also given, it cannot fail to injure the woman. Moreover, the indolent habits into which wet-nurses are only too liable to fall, contribute to bring about a state of ill-health in these women.

The kind of food which it is necessary for the wet nurse to have, and the general regulations regarding her health, are similar in every particular to those already laid down for mothers who are themselves suckling their children. It should be wholesome, nutritious and varied. Two meat meals a day will be amply sufficient, and unless specially ordered by the medical attendant the wet-nurse will be better without stimulants of any kind. She should be strict in regard to her maintenance of personal cleanliness; she should have a cold water sponge bath every morning. This will invigorate the system and improve the quality of the milk. Out-of-door exercise should be taken daily when the weather permits.

The wet-nurse should also be given certain household duties to

perform, which will exert a very beneficial influence upon her both bodily and mentally.

When at any time it may be deemed necessary to change the wet nurse, a certain amount of caution must be observed, otherwise the health of the infant may suffer. Thus by communicating the fact to the nurse that you are about to dismiss her for some cause or other, you naturally produce a certain amount of agitation in her mind, which influences to a very considerable extent the state of the milk in her breasts, and if the child be allowed to go on suckling from day to day until a substitute can be found, depend upon it the child will suffer in consequence.

Far botter will is be for the mother, when she has made up her mind to change the wet nurse, to secure the services of the second before a word has been mentioned to the first about it. By attention to this the infant will be saved the taking of milk which would in all probability have proved hurtful to it.

Should pregnancy occur in the wet-nurse during the period of suckling, her services must be at once discontinued on the discovery being made. The position which the wet-nurse will be expected to occupy in the house among the other servants should be pointed out to her at the beginning when she is just entering upon her duties. By so doing much trouble and annoyance may be prevented. A strict supervision should be maintained over her, but in such a loving and kindly manner that she is unaware of it, until such time as the mother feels sure her every command will be obeyed.

### BRINGING UP BY HAND.

When from one or other of the causes already mentioned the mother is unable to nurse her child, and when, as frequently happens, especially among the working classes and the poor, the services of a wet-nurse cannot be had recourse to, nothing remains but that the infant be brought up artificially, or as it is called, "by the hand." As, however, of the three methods by which a child may be brought up,—viz., nursing by the mother herself.
nursing by means of a wet-nurse, and that which we are now considering,—this last, or bringing up by the hand, is the most difficult of all to accomplish satisfactorily, it is under this system that so many children die, and this it is which, in our large cities, is the cause of a great amount of the infant mortality which occurs there.

With the knowledge, then, of the difficulties by which this artificial system of feeding is surrounded, it behoves every mother who intends to adopt it in the rearing of her children to make every effort to render it successful. The more care that can be exercised in this respect the greater likelihood is there that a happy issue will result. The fact that so many children annually fall a sacrifice to this artificial system of feeding being badly managed should impress every mother with a full sense of her duty, and make her doubly anxious to attend to all the little minutiæ upon which success so greatly depends.

It will naturally arise in the mind of every mother who intends thus to rear her child to inquire as to what food will be best suited to take the place of the human breast-milk. To this question the answer is that there are three kinds of milk, any one of which may serve as an efficient substitute for the breast milk. These are the milk of the ass, the milk of the goat, and that of the cow—their adaptability being in the order in which they are here given. But although the milk of the ass, from its greater resemblance to the human milk, is that which is most suited to act as its substitute, owing to the difficulty there is to procure it and its great expense, it is put beyond the range of many and cannot in consequence ever be of more than the most limited application.

Something, therefore, that can be more universally employed must be had recourse to, and a substitute of this nature is to be found in cow's milk. It is at once the cheapest substitute that can be had, and that which comes within readiest access of all. The milk of the goat, like that of the ass, is sometimes used; but there are many reasons in the case of the former of a similar

## ARTIFICIAL FEEDING.

nature as those we saw to exist in regard to the latter, which preclude the possibility of its ever being of general application. Cow's milk, therefore, is that to which we naturally direct our attention, and a glance at its composition enables us to see how eminently it is fitted to act as a substitute for the milk of the human breast. In order, however, that the milk of the cow be brought to resemble human milk as nearly as possible, certain alterations require to be made, inasmuch as the milk of the cow contains more caseine and less butter and sugar than that of the human breast. A certain proportion of water must therefore be added, varying with the age of the child, and also a little sugar.

At the present time it is frequently very difficult in many of our large cities to obtain milk that has not been already adulterated with water, chalk, flour, and other things, so that in diluting the milk to render it fit for the infant, the possibility of its being already sufficiently diluted must not be forgotten. Till lately it was too much the practice to over-dilute the milk, so that the health of many infants was impaired through it.

For the first ten days or so equal parts of milk and water may be given, after which, till about the third month, the proportion should be two-thirds milk and one-third water, the proportion of water should then be gradually diminished, until the fourth or fifth month, when pure milk undiluted should be given. It is necessary that the milk given to the child be not given cold.

It should have the temperature raised so as to resemble as nearly as possible the milk of the human breast. For this purpose hot water is added to the milk when it is given to the infant in a diluted form, or when given pure it must be placed in boiling water till the temperature is raised to about 96° Fahrenheit, which is the temperature of the human breast-milk. The milk should, if it can possibly be so arranged, be from one cow. It not unfrequently happens that the milk of a certain dairy disagrees with the child, and when such is the case, different dairies must be tried until one has been got the milk of which agrees with the child, when it should not be readily given up.

The quantity given at a time is a point of very great importance and requires to be carefully attended to in order to the success of this plan of feeding. Many parents disregarding this, or ignorant of the important part it plays in the artificial rearing of children, err by giving their infants too much at a time.

This over-feeding of infants with its resulting effect upon their tender stomachs is a fertile source of many of the disorders from which they suffer, and well is it if the errors so committed do not ultimately lead to a state of ill-health in the child from which it may with difficulty recover. Since there is this tendency on the part of mothers to overfeed their infants, we would caution them to be particularly careful in this respect. It is always easier to prevent the derangement of the digestive powers than to remedy them when they have been disordered and a state of general illhealth induced.

The quantities given at a time will, of course, require to be increased with the increase of growth in the infant, and may have to be altered in some degree to suit the requirements of individual cases; but as a rule, for the first few days from six to eight tablespoonfuls will form an amply sufficient diet for any child. It may be that in some cases a less amount than this will be required.

After the first few days are over, three or four ounces may be given at each meal, till the teeth begin to appear, when other articles of food require to be added. The regularity with which the child is fed is another matter of great importance, and one well deserving of careful attention. It was pointed out when speaking of the suckling of infants that many of the disorders from which they suffered were in great measure due to the irregularity which was so frequently found to prevail in regard to their diet, and the same holds true in regard to children brought up by the hand.

A regular method of feeding should therefore be practised from the first, and a sufficient interval must be allowed to elapse be-

## DIFFERENT METHODS EMPLOYED.

tween one meal and another, in order that the act of digestion may be completed. It frequently happens when this is disregarded and one meal given on the back of another in an indiscriminate manner, that the child's digestive powers prove insufficient for the extra strain, the stomach is unable to perform the work thus thrust upon it, and the child suffers in consequence, its health becoming impaired, and unless attended to and early removed perhaps undermined.

For the first month the child may be fed every two and a half or three hours during the day, and every four hours during the night. From this time onwards the child should be fed at regular intervals of every four hours. Many mothers are under the impression that in milk there is not sufficient nourishment to support the child; and acting upon this mistaken idea, derange the infant's stomach by giving it solid food, such as biscuit and bread panada. This ought never to be done. There is in milk all those elements required to build up the tissues of the infant; and children that have been given nothing else till the teeth have appeared will in all probability be found in a much more healthy condition of body than those whose stomachs have been overtaxed by the administration of more solid food.

There are two methods which may be employed in this artificial system of feeding,—the one is to give the infant its meals from a spoon, the other is to allow it to suck from a bottle. The first of these two methods is one which is frequently employed, but against which there are serious objections; thus the feeding of the child may be hurried through the carelessness of the nurse, and it is well known that the flow of saliva is much greater during the act of sucking than it is when spoon-feeding is adopted, and as saliva is a very important aid to digestion, its loss cannot be sustained without ultimate injury to the child. The feeding-bottle should therefore be adopted from the first, and the child be allowed to take its meals regularly in this way.

In regard to the bottle that should be employed, little need be said here. The variety of feeding-bottles is so great, and each

one is said to be possessed of some little advantage over the other, that it is difficult to say which is best. But whatever bottle may be selected, one thing is absolutely necessary in regard to it, and that is that it be kept scrupulously clean. Too much attention cannot be paid to this. A bottle that is not kept in the most perfect state of cleanliness may be, and frequently is, productive of the white-mouth, the so-called "thrush," from which children, especially those who are thus brought up, are so liable to suffer. Every effort should therefore be made to prevent the occurrence of this affection.

Frequently from carelessness on the part of the nurse the feeding-bottle is laid aside after being used without being properly cleansed, and when this is done the milk which was left in the bottle from last meal becoming curdled, turns the fresh milk that is put into it, the consequence being that the infant's digestion is thereby deranged.

Care must therefore be taken to see that every particle of milk is removed from the bottle, and for this purpose it must be scalded with hot water whenever the infant has finished sucking. The tube and other parts of the bottle must be similarly dealt with, after which the bottle, tube, etc., should be placed in water until they be again required. To this water a little Condy's fluid may be added, which will further assist in the maintenance of perfect cleanliness.

No more food should be made than what will serve for one time. —To make a large quantity sufficient to serve the infant for two or three meals on the ground that time and trouble are thereby saved, must never be permitted. Each quantity must be made afresh as it is wanted, and by attending to this much will be done to keep the infant in a sound state of health.

It sometimes happens that under the most careful system of dieting the child's health gives way; it appears not to thrive, and recourse must be had in such cases to other articles of food in order to save the infant's life. When such cases occur, it will of course be necessary to call in medical aid. Ere passing from this subject of artificial feeding, and conscious of the necessity there is of attending to such rules as have already been laid down in order to attain success, we would again run over some of those points which are most essential. First, then, let the child receive its meals by sucking them through a feedingbottle and not by using a spoon. Second, let only milk be employed prepared as before recommended and diluted to suit the age of the infant. Third, let the meals be given at regular intervals. Fourth, see that the bottle, tube, teat, etc., are kept scrupulously clean.

It is by attention to such points as these that the success of this system so greatly depends, and if it were only conducted more universally in the manner we have indicated much of the illhealth of hand-fed children would be unknown, and the immense mortality that at present obtains in many of our large cities would be greatly lessened.

When the teeth begin to appear, which is usually about the sixth or seventh month, the diet will require some alteration; but if the child be thriving well upon the milk alone, there should not be displayed too great a hurry to make a change. When, however, it is determined to supplement the infant's diet by the administration of articles of a more solid nature, a great many suitable for this purpose present themselves to our notice. Of these may be mentioned Hard's farinaceous food, Robinson's groats, Chapman's entire wheat, Nestlé's milk food, Liebig's infant's food, rusks, tops and bottoms. Two or three of these may require to be tried in succession before one is got which suits the child in every way; but when that one has been found, its use should not be readily abandoned for experimentation with others.

## POSITION OF THE INFANT DURING FEEDING.

Nothing has as yet been said with regard to the position in which the child should receive its meals; but as this is a matter of very considerable importance, and one which is frequently mismanaged, we devote a few words to it now. The manner in

which children are fed is frequently in the horizontal position, lying upon the nurse's knee. This position, however, is one which ought not to be adopted, as the food is apt to pass into the windpipe, and may lead to suffocation.

The head of the child should be raised so as to recline easily upon the nurse's arm, in which position will be found the one best suited for giving the infant its food. Held thus the infant can swallow more easily, and there need be no fear of the food going the wrong way. After the child has been fed, it should be laid quietly in its cradle, or allowed to lie perfectly still upon the nurse's knee. All dandling and jolting are bad for the child immediately after a meal, and so they must not be allowed.

## HEALTH OF THE INFANT AND YOUNG CHILD.

When the larger double teeth make their appearance, it is regarded as a sign that a further change in the diet is now become necessary, and that the child has attained to that age when it is able to partake of animal food of one kind or another. Milk should yet, however, form a large part of every child's food; but, in addition, some beef tea, chicken tea, or mutton broth, may be given once a day in the forenoon.

As a change a little meat gravy, with a mealy potato mashed up in it, may be given. An egg, lightly boiled, or one that has been placed for two minutes in boiling water, forms a very useful article of diet for young children, and one that is very nourishing. As before said, milk should still form a very large part of the child's diet. A little piece of some ripe fruit will not prove hurtful to most children at this age, and so may be given sparingly, care being taken to remove all stones. Nuts and other husk fruits, which are difficult of digestion, should be avoided. They may derange the child's stomach, and had better, on that account, be withheld altogether.

During this time the teeth will be every now and then appearing, and may give rise to different degrees of irritation; some children cutting their teeth without almost any trouble, and others

suffering much with the appearance of every new tooth. Attention must, therefore, during the whole of this period, be paid to the state of the stomach and bowels; and if the child should suffer from diarrhœa, some slight alteration in the diet should be made, as it is always better, if it can possibly be accomplished, to remove diarrhœa in this way than to have recourse to medicines.

For this purpose a little arrowroot may be given—first with milk, and if that do not serve to check the diarrhœa, with water. This may be given for a day or two, during which time all animal food should be discontinued. The cream of milk may also be used instead of the milk itself. A little lime-water may also be added with advantage to the milk or cream. The proportion should be one tablespoonful of lime-water to three of milk or cream. Instead of diarrhœa occurring during the period of teething, the child may suffer from constipation.

A little calcined magnesia will be found a very safe medicine to administer should this prove at all troublesome. A small quantity should be lifted upon the small end of a teaspoon and added to the milk which is being given to the child. Ripe fruit should also be given, as it exercises a laxative influence upon the bowels.

As, during the period of childhood, growth is going on very rapidly, the amount of food taken requires to be of larger amount, proportionately, than it does in the case of adults. The number of meals given in the day need not exceed four; but rather than allow children to be constantly eating between times, a fifth regular meal may be introduced. They should be given at regular hours, so timed that each shall have time to be thoroughly digested before the other is given.

Nothing must be allowed the child between these regular meals. Pieces of cake and such like given in the intervals are a frequent cause of stomach derangement among children, and many parents are greatly to blame in this respect.

Care must also be taken during these early years to see that the

child is taught to masticate its food thoroughly. Children sometimes get into a habit of "bolting" their food, from the mother not paying sufficient attention to this at the first; and when this occurs, owing to the food not being thoroughly mingled with saliva, a greater amount of work is entailed upon the stomach. Unless this is seen to early and prevented, a disagreeable dyspepsia may result, which having its beginnings now may be a source of pain, misery, and annoyance in after years.

Many children, especially those of the poorer classes, have frequently given them at this age tea once, twice, or oftener in the day. Now such a system of dieting is bad. Tea is not a suitable article of diet for young children, and milk should always be given instead. The same applies to coffee, and of course stimulants of every kind are strictly prohibited. All foods which are rich, or highly seasoned, should form no part of a child's diet.

CLEANLINESS.—The utmost attention to cleanliness cannot be too strongly urged upon those who have the care of children entrusted to them. For the first few weeks the infant should be bathed morning and evening in tepid water, and afterwards in cold. It is a foolish notion to plunge the newly-born infant into cold water under the idea that by so doing it will be hardened and made able to resist a greater amount of cold. This practice must never be had recourse to. Let the baths during the first few weeks be tepid, then gradually lower the temperature till the water is cold. The evening bath, so long as it is continued, should be tepid.

The period of immersion should not exceed three or five minutes at first, but may then be gradually lengthened. The influence of baths in developing a healthy habit of body in a child cannot be too strongly insisted on. Upon the nervous system of the child they exert a soothing influence; they frequently remove irritation, and by the feeling of comfort which always follows their use, they tend to keep the child cheerful and happy. This is often well seen towards night, when a child has become restless and irritable, the bath, by its soothing influence upon the nervous system,

#### CLEANLINESS.

removing this restlessness and irritability, and securing to the little one a night of quiet and undisturbed repose.

By keeping the pores of the skin open, baths permit of the free passage of perspiration, and thus assist in maintaining health. They act, moreover, as preservatives against cold, and the great moral effect which they have upon the child should recommend their employment to every one. If the child is thus brought up accustomed to daily ablutions, he will soon take a pleasure in them, and when he grows older will feel uncomfortable without them.

At the morning bath soap should always be employed, which ought to be of the blandest kind that can be procured, as the infant's skin is very tender and easily irritated. After the first few months, if the evening bath be still continued, the child should be immersed in tepid water, as before directed, and soap only used to the lower parts of the body. When cold water is employed, the surface of the body should be sponged, or if the child is put into the bath, it should only be a momentary immersion at first.

The temperature of the room should be attended to while the child is getting its bath, and must on no account be cold, otherwise the child may be liable to suffer from an attack of bronchitis or inflammation of the lungs. The daily baths should, if possible, be personally superintended by the mother, and from the first every means should be employed to make the child feel pleasure in them. Many children have a great dread of the bath, and cry on being put into it. This is very much the result of the manner in which they have been performed from the first. Every effort should therefore be made to engage the attention of the child when in the bath, and this may be done by the mother speaking to the little one while the nurse gives it its bath.

When the bath is over the child should be received in a warm blanket, and the surface of the body carefully dried. The drying is best done by means of some soft material, such as flannel, and by employing during the process gentle friction a healthy glow will cover the surface. A bath ought never to be given to a child im-

mediately after a meal. Such a practice may prove very injurious, therefore always allow an hour or two to elapse.

In young children, great care must be taken to dry the arm-pits, groins, and buttocks well so as to avoid that chafing which is so apt <sup>t</sup>o occur in these parts, and which frequently proves very annoying. Should any redness or excoriation appear, the parts should be gently dusted with a little powdered starch, violet powder, or powdered fuller's earth. Great care must be taken to remove all soiled linen from the child as soon as possible. If this is not attended to the parts are very apt to become irritated. From the first the child should be taught to make known its wants in this respect, and can frequently, by a little careful teaching, be early taught habits of regularity. By scrupulous attention to cleanliness from the first, the mother will be using that precaution which is the greatest preventive against the occurrence of those disagreeable skin eruptions which so frequently prove a source of annoyance and anxiety to those who have disregarded it.

SLEEP.—During infancy and childhood the disposition to sleep is great, the first few weeks of the infant's life being for the most part one long sleep, the little one only awaking when the calls of hunger compel it to do so, and again dropping off so soon as its hunger has been appeased. Gradually, however, the periods of wakefulness will be noticed to lengthen, and the child will be found at the expiry of a month or so looking about it, and beginning to take notice of those things by which it is surrounded. And now is the time to begin teaching the infant habits of regularity in sleep.

Habits of a contrary nature are easily formed during these early months of infant life which it may be very difficult to root out in after years. Thus children when allowed to fall asleep with the nipple of the mother's breast in their mouth, or with the teat of the feeding bottle, are soon unable to sleep without them. In like manner an infant that has been accustomed to be rocked to sleep will be made sleep only with very considerable difficulty when left to itself. From consideration of such facts as these, it will be appaent to every mother how great the care must be with which she

#### SLEEP.

attends to such apparently trivial matters sufficiently early to prevent the little one acquiring bad habits.

It is desirable for the first month at least that the child sleep with its mother. This is rendered necessary for the reason that the power of generating heat is very feeble in young infants, and to place them thus early in a cot would be to expose them to a trial which might easily prove very dangerous. For the first month, therefore, the child should sleep with its mother, in whose bosom alone it can find that warmth which is so necessary for it at this time. Care must however be taken that the child be not overlaid, as many deaths have been caused from carelessness in this respect. Indeed, we may extend our remarks to even a longer period than that in which any danger of over-laying exists and call attention to the fact of how many deaths arise from pure carelessness on the part of those who ought to know better. Mothers and nurses mean no harm, but the best intentions coupled with stupid actions never yet did any good in the world. Certainly the number of fatal cases bears but a small proportion to the number of careless mothers, but in this we see only another proof of the proverly that children are watched over by Providence.

After the child has been fed it should be removed from the breast and its head turned away from the mother, in which position it will be safest from the occurrence of such an accident. While these remarks are generally applicable, there are certain exceptions. Thus, in the case of an infant that for some cause or other is restless, and keeps up a constant crying, it would be unwise to allow it to sleep with its mother, inasmuch as her rest would be thereby disturbed, and her health in the long run be seriously impaired. This also acting upon the milk in her breasts would produce such a change as would speedily render it unwholesome as food for the infant, whose health also would soon suffer. The best plan, therefore, in such cases will be for the mother to allow the child to be taken from her at night and allow it to sleep with the nurse.

As soon as the crying has ceased and the infant's nights have again become peaceful, it may be brought back and allowed to sleep with its mother, and no time should be lost in endeavouring to discover the cause of the infant's uneasiness.

The following may be useful as hints to a mother to prevent her child being overlaid. "Let the baby while asleep have plenty of room in the bed. Do not allow him to be too near, or if this be unavoidable from the small size of the bed, let his face be turned to the opposite side. Let him lie fairly either on his side or on his back. Be careful to ascertain that his mouth be not covered with the bedclothes.

"Do not smother his face with clothes, as a plentiful supply of pure air is as necessary as when he is awake. Never let him lie low in the bed. Let there be no pillow near the one his head is resting on, lest he roll to it and bury his head in it. Remember a young child has neither the strength nor the sense to get out of danger; and if he, unfortunately, either turn on his face or bury his head in a pillow that is near, the chances are that he will be suffocated, more especially as these accidents usually occur at night, when the mother or the nurse is fast asleep.

"Never entrust him at night to a young, giddy, and thoughtless servant. A foolish mother sometimes goes to sleep while allowing her child to continue sucking. The unconscious babe after a time loses the nipple, and buries his head in the bedclothes. She awakes in the morning, finding, to her horror, a corpse by her side! A mother ought, therefore, never to go to sleep until her child has ceased sucking."

When the first month is over regular habits in regard to sleep must be begun. The infant should then be placed in a cot. which ought to occupy such a position in the room as will exempt it from exposing the child to any draught or current of air by which it might be injured. Attention must also be paid to the covering of the child, which should only be sufficiently warm to maintain the infant in a moderate degree of heat. By carelessness in regard to this many children are unduly heated, are rendered irritable and restless, and their sleep in consequence is disturbed.

But while attention is paid to see that the child is not over-heated, care must also be taken lest the opposite extreme be run into of allowing the child to remain without a sufficient quantity of clothes to maintain vital heat.

The head should be kept cool; no covering should be placed upon it in the form of nightcap or shawl, and the pillow ought to be one of horse-hair. The amount of clothing above requires to be judged of in comparison with those articles which serve the infant in place of a mattress Thus if it sleep upon a featherbed, such as an eider-down quilt, or the like, this will necessitate, owing to its warmth, less clothing being put on above; whereas if the child sleep upon something else, and have a sheet next the skin, this being colder, will necessitate a warmer covering above. Again, a blanket placed underneath the child, being warmer, will necessitate less clothing above.

Only general observations are made here, as the number and variety of methods pursued in regard to these matters are so great as to make anything like a dogmatic arrangement out of the question. The common-sense of the mother must, therefore, be brought into play, and such modifications adopted as may be found necessary to suit the requirements of individual cases. Care must be taken to see that the infant's bedding and everything that comes in contact with it be kept perfectly clean and sweet, and this can only be done satisfactorily by frequently exposing them to the purifying influence of the air.

For the first two years or so the child will generally sleep three times in the twenty-four hours, and the two naps during the day must be so timed as not to interfere with the dieting of the infant. Regularity in this should also be observed from the first ; thus the noon nap should be taken from about eleven till one o'clock, and the child should be again encouraged to sleep for about an hour after the principal meal of the day. Young infants cannot pass their time more profitably than in sleeping at such periods.

After the first two years have passed, the afternoon nap may be discontinued, but that at midday should not be hurriedly broken off. It may be advantageously continued till the fifth or sixth year has been reached. Till about the tenth year a boy will generally sleep a round of the clock, and if he do, the period of his slumber should not be cut short. After this time the hours devoted to sleep may be somewhat curtailed, but this ought always to be done cautiously, and the growing boy should rather be encouraged to sleep more than is perhaps absolutely necessary than have his hours of sleep unduly shortened.

As the period of puberty approaches, the necessity for so much sleep diminishes, and the hours may be somewhat shortened, about eight hours being allowed for this purpose. From this time onwards there can be no reduction of the hours of sleep without risk of the health becoming impaired in consequence. A child should not be allowed to sleep with lights burning about it.

When laid in its cot the gas ought to be lowered, and the infant thus accustomed to fall asleep in darkness. Were children thus early taught and accustomed to the absence of light when they were put to sleep, much of that dread of darkness which many feel would be prevented. The nurse also should be carefully watched lest she frighten the child by stories in which darkness is associated with everything that is dreadful. If a nurse be not thus guarded the minds of those who are under her care may soon be poisoned by the pernicious influence her stories will nave upon them, and a boy who might otherwise have been strong and manly will soon exhibit signs of timidity and nervousness when left alone in the dark.

AIR AND EXERCISE.—After the first two or three days, if the weather be warm, the infant should be taken out for a walk in the nurse's arms. Should the infant be born in winter, it had better remain in-doors till spring, when it should be taken out of doors daily. The habit of regular exercise should be thus early begun, and should be continued daily if the state of the weather permit. Care must be taken to see that the child is sufficiently clothed when out of doors, and there should always be a covering of dannel worn both in summer and in winter. Fresh air is necessary to the growth and development of the child, just as it is to the growth and development of the flower. Without it there can be no real health, and when its salutary influence is ignored, a feeble habit of body is the result. If a mother would have her children grow up with constitutions strong and vigorous, let her early begin to give them the benefit of fresh air and sunlight. Without the latter the former cannot be obtained.

As well might we expect to make a plant grow strong and hardy by depriving it of the fresh air and sunlight as to expect a human being to thrive cooped up in over-heated, badly-ventilated rooms. In his "Advice to Mothers," Dr. Buchan relates the following case which may serve as an example of this kind of up-bring, and may act as a warning to some :— "Edward Watkinson was the only son of a country clergyman of amiable manners and sound learning, but of a recluse turn of mind. The mother was the daughter of a London tradesman, and had been educated with extreme delicacy. She naturally pursued the same line of conduct towards her own child; and her good husband was too much under the influence of the like fatal weakness.

"Many a child is spoiled by the indulgence of one parent; in the case now before us both concurred to produce that enervating effect. For some time after his birth Master Neddy was reckoned a promising boy.

"When I first saw him he was about eighteen years of age; but to judge by his look one would have supposed him to be at least eighty. His face was long, pale, and deeply furrowed with wrinkles; his eyes were sunk in their sockets; his teeth quite decayed; his nose and chin almost touched each other; his breast narrow and prominent; his body twisted; his legs like spindles; his hands and fingers approaching nearly to the form of a bird's claws,—in short, his whole figure exhibited the truly pitiable appearance of a very old man sinking under the weight of years and infirmities into the grave. It was at midsummer I paid my first visit I then found him wrapped up in clothing sufficient for the rigours

of a Lapland winter, and so closely muffled that one could hardly see the tip of his nose. He wore several pairs of stockings; his gloves were double, and reached his elbows; and, to complete the absurdity of his dress, he was tightly laced in stays.

"Though armed in this manner at all points, he seldom peeped out of doors, except in the dog days, and then ventured no farther than the church, which was only forty paces from his father's house. I believe this was the most distant excursion he ever made, and the extraordinary attempt was always accompanied with peculiar care and many additional preservations from cold.

"The eye of his parents might be truly said to watch over him, not only by day, but by night also, as he slept in the same bed with them, having never been permitted to lie alone, lest he should throw the clothes off or feel the want of any immediate assistance. It did not once occur to his father or mother that all the inconveniences which they so much dreaded could not be half so injurious as the relaxing atmosphere of a warm bed, surrounded by close curtains, and impregnated with the noxious effluvia from their lungs and bodies.

"His food and drink were of the weakest quality, always administered warm and by weight and measure. . . . All his vital powers were languid. . . . When I spoke of exercise I was told he took a walk every fine day in the hall, and that was deemed sufficient for one of his delicate constitution. I mentioned a horse, —the mother was frightened at the very name of so dangerous an animal.

"On telling her that I owed the firmness and vigour of my own constitution to riding every day, she began to think there might be something specific in it, and she therefore consented to the purchase of a little horse. But tame as the creature was, it did not quiet the mother's alarms. Master Neddy, though placed upon the pony's back, was not entrusted with the reins. These were given in charge to a maid-servant, who led the horse round

the orchard, while the cautious rider fastened both hands on the pommel of the saddle, and the father walking on one side and the mother on the other, held him fast by the legs, lest he might be brought to the ground by any sudden start of his high-mettled racer.

"This exhibition was too ridiculous not to excite the laughter of the neighbours, which soon put an end to Master Neddy's equestrian exercise. The timidity of a youth thus brought up is more easily conceived than described. Fearful of everything, he would run from the most inoffensive animal as if he had been pursued by a lion or a tiger.

"His weakness in this respect being known to the village boys it was a common practice among them, whenever they saw him peeping through his father's gate, to frighten him by calling to the pigs to bite him. This sportive alarm had the same effect as the sudden rush of a mad bullock. . . . Improper food, tight or oppressive clothing, and want of fresh air and exercise have in their time proved destructive to thousands. This young man fell a victim to them all, and it would have been a miracle indeed had he survived their combined influence."

The time of day when the child is taken out of doors must be determined by the season of the year. In winter, when the early morning air is cold, and when the afternoons are apt to be chill, the brief period of sunshine at midday must be taken advantage of, and the walk taken then. During spring and summer the early part of the forenoon and the afternoon will prove the best time to allow the infant out of doors. The daily walk must, of course, be subject to the state of the weather, and if cold and damp, it would be rash to take a child out, as bronchitis or inflammation of the lungs may in this way be lighted up.

The following advice upon the manner of carrying an infant in its nurse's arms is given by Dr. Eberle:—"The spine and its muscles seldom acquire sufficient strength and firmness before the end of the third month to enable the child to support its body in an upright position without inconvenience or risk of injury. Until

this power is manifestly acquired, the infant should not be carried or suffered to sit with its body erect, without supporting it in such a manner as to lighten the pressure made on the spine, and aid it in maintaining the upright posture of its head and trunk ; there. fore, at first (a few days after birth), the infant should be taken from its cradle or bed two or three times daily and laid on its back upon a pillow, and carried gently about the chamber.

"After the third or fourth week the child may be carried in a reclining posture on the arms of a careful nurse, in such a manner as to afford entire support both to body and head. This may be done by reclining the infant upon the forearm, the hard embracing the upper and posterior part of the thighs, whilst its body and head are supported by resting against the breast and arms of the nurse. When held in this way it may be gently moved from side to side, or up and down, while it is carefully carried through a well-ventilated room." The manner in which infants and young people are handled by their nurses and by those who daily surround them, is one that is productive of mischief to the child, and requires to be noticed here. Thus an infant is often rudely grasped by one or other arm and lifted from the ground, the weight of the body being meanwhile almost entirely supported by the arms, and as the joints of an infant are not so deeply excavated as those of the adult, and portions of bone are but imperfectly united to each other, the former may be very easily dislocated and the latter separated or broken.

Lifting and dandling of children.—As parents and friends have a practice of lifting children and dandling them in the air or swinging them round and round, care must be taken not to overstep the bounds of moderation. It should always be borne in mind that children are very apt to suffer from affections of the brain,—from congestion and the like,—and that in consequence caution must be observed.

After the child is a few months old, the mother should place it on its back upon some material, such as an eider-down quilt, spread upon the floor, and here it should be allowed to exercise its

## NATURE THE BEST TEACHER.

legs, which it will soon be found to do by throwing them about with great energy. By-and-by it will be found that the infant begins to crawl from one place to another about the room, and gradually, towards the expiry of **a** year, the little one will be found endeavouring to raise itself to the upright position by laying hold of a chair, a stool, or whatever may be at hand. These efforts should be allowed to go on undisturbed. Nature will herself teach the child if those by whom it is surrounded will only refrain from interfering, which it is sometimes difficult for them to do.

Many children are given lessons in walking by people taking hold of one or both hands. This will, however, be better attained by putting the hands round the child's waist, and in this manner giving it support when it is necessary; for the great lesson that the child has at this time to learn, is how to maintain its equilibrium, and so soon as this difficult task has been accomplished, the little one will walk without difficulty, the muscles strengthening by usage, and the legs, which were at first bent and not very well adapted to walking, will gradually strengthen, and as they do so, less and less difficulty will be experienced. After a moderate amount of practice, if the child has been left to himself, and not frightened by those round about him, he will be able to run about with ease. When he begins to walk about, he should be provided with little boots, so made that the rapidly growing foot shall not be stinted of room and suffer in its growth.

**VENTILATION.**—There is no subject more important, and none demanding more attention on the part of the mother, than that of ventilation. It is scarcely possible for anyone to over-estimate its value in the case of young children.

During the early years of childhood, as indeed throughout the whole period of our existence, to inhabit well-ventilated rooms is an important factor in the maintenance of health. When attention to this is disregarded the neglect is apt to be punished by disease and impairment of vital power. The atmosphere of the nursery in which the child at this time passes so many hours of each day cannot be maintained in a state of too great purity; but care must be taken to secure this desirable end without exposing the child to the pernicious influence of draughts.

When the atmosphere of the apartment is allowed to become over-heated and the child passes from it to one that is colder, or into the outer air, it frequently happens that the child takes cold or suffers from various chest affections. It is the duty, therefore, of every mother who desires to bring up her child strong and vigorous to see that the apartments which he occupies are thoroughly ventilated. Unless this be attended to the constitution of the child may be seriously injured.

To have a thorough and efficient system of ventilation nothing answers so well as a window and an open fire. This, which is the natural method, is preferable to any artificial one that can be employed, and has this advantage, that it is within the power of all to make use of.

The windows of the day-nursery should be thrown open while the children are out of doors so as to secure a thorough change of air two or three times a-day, and again the windows ought to be opened when the children have retired to rest for the night. In like manner, so soon as the children have quitted the night-nursery the window must be thrown wide open and the bedclothes turned back or spread out upon chairs so that the air may be able to play about them freely, thus rendering them pure and sweet before they again come into contact with the bodies of the children.

The necessity for these precautions being observed will be rendered more apparent if it be recollected how intolerable the atmosphere of a badly-ventilated bedroom is in the morning to one who comes into it from inhaling the pure outer air. Perhaps the best way of all to maintain the air of the day and night nursery sweet would be to keep the window open about an inch at the top. This, while it would admit a plentiful supply of pure air to enter the room, would not give rise to anything like a draught.

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A gentle current of air would thus be constantly, yet imperceptibly, circulating about the room, keeping its atmosphere fresh. Should some, however, object to this on the ground that so much air entering in this manner might prove hurtful, a wooden frame with a piece of finely perforated zinc, or wire gauze, may be fixed outside the window-frame, as recommended by Dr. Bull, which has the advantage of dividing the current and rendering the stream of air that enters finer.

The sleep of a child in an apartment thus efficiently ventilated is of the most refreshing and invigorating kind, and presents a striking contrast to that of a child in whose case this has been neglected. The bright, happy expression of the former compared with the languid, peevish look of the latter, marks well the difference there is between sleeping in an atmosphere kept constantly pure and fresh and one that is close and stuffy because badly ventilated.

The danger of such close and stuffy apartments is enhanced by the fact that those who are in them are unable to appreciate the atmospheric deterioration that has taken place, and it is only on coming from the outer air that one becomes fully alive to the unhealthy state of the atmosphere in such rooms. Children brought up inhaling impure air in the manner above described have frequently laid in infancy the seeds of those diseases by which their after years are embittered or cut short. Let every mother use her own judgment and act as she thinks best for the happiness and well-being of her child.

**TEETHING.**—The period of teething is one which is looked upon by many mothers with dread. Owing to the greater irritability of the system usually found to exist at this time, there are diseases which are more liable to attack the child; and in order that everything may be done on the mother's part to guard against these, it will be well that she be made familiar with the *usual* time of appearance of the teeth, and with a few hints that may be of service in maintaining the health of the child during this period.

No definite time can be stated as that at which the first teeth

will make their appearance. Usually they do so between the fifth and eighth month, but the time is subject to much variation, some children beginning to cut their teeth earlier than this, and the process being delayed in others till a much later period.

The teeth which first make their appearance are the two central front teeth of the lower jaw called central incisors. Then follow the corresponding teeth in the upper jaw. Then follow the lateral incisors, the four anterior molars, the four canines, the two upper of which are popularly called *eye-teeth*, and lastly the four posterior molars. These teeth, which are twenty in number, are called the *temporary* or *milk teeth*. They are afterwards replaced by the *permanent teeth*, which are thirty-two in number. They begin tc make their appearance between the fifth and sixth years, and the last of this set—the wisdom teeth—do not appear till between the seventeenth and twenty-first years.

During the cutting of the temporary teeth the infant's head should be kept perfectly cool, and for this purpose all caps and wraps of every kind must be removed. The clothing should be warm, but the material, while affording warmth, should be such that it will combine lightness as well, and thus be easy for the child to bear. Anything approaching to tightness in the various articles of clothing must be carefully avoided ; the infant should be allowed free play of chest, arms, and legs, and everything about the armpits and thighs should be made so as to admit of the most perfect freedom of action. By combining heat with lightness, in an admirable degree flannel recommends itself as an article of clothing eminently suited for children, and should be largely made use of for that purpose.

The apartments occupied by the child should be at this time kept cool; over-heated rooms are productive of feverishness, and must be avoided while the process of teething is going on. If the infant's bowels have a tendency to become confined, the diet should be altered as before indicated; and should this fail to give relief, a little calcined magnesia will be found the most useful laxative for this purpose.

## OBJECTION TO VACCINATION.

**VACCINATION.**—One would have thought that the time had arrived when every person of unbiassed mind had become fully aware of the great benefit that was conferred upon mankind when Jenner discovered in vaccination a preventive against small-pox. Daily observation, however, goes to prove that there are yet a few persons in our land so ignorant and blinded that they are unable to perceive any good that has resulted from it.

One would have thought that the accumulation of evidence to the contrary had served to convince people of the necessity there is to have every child vaccinated; but instead of this there exists a small number of individuals throughout the country who are willing rather to submit to be repeatedly fined than have their children receive the benefits of vaccination. It seems incredible. if they have bestowed upon the subject the smallest consideration. that they should come to the conclusion that vaccination, instead of being a blessing, has proved a curse to mankind.

If in connection with this subject we look back to the preceding century and fix our attention upon the state of our land at its close we cannot fail, unless, indeed, we wilfully close our eyes, to perceive the great change that has been wrought by the introduction of vaccination. Then small-pox was causing its awful ravages among all classes in the land. High and low, rich and poor, alike fell victims to this dreadful scourge. The Queen in her palace as well as the beggar in his wretched hovel was a fit object of its prey. Thousands mourned the loss of dear ones snatched from them by this ruthless enemy, and thousands more were left to mourn over the mutilated forms of those whom death had spared.

In some of the great cities of England more than one-third of all the deaths among children under ten years of age arose from small-pox. Two-thirds of all the applicants for relief at the Hospital for the Indigent Blind had lost their sight by small-pox. The number of hopeless deafened ears, crippled joints, and broken-down constitutions from the same cause cannot be accurately computed, but was certainly very large. Vaccination is all that now stands between us and all these norrors of the last century.

The number of diseases and disorders that are attributed by the ignorant to vaccination can scarcely be credited,—skin diseases of every kind, all kinds of eruptions that appear within a sufficiently early date to be included amongst the effects of vaccination, progressive wasting, glandular enlargements, and a host of affections besides, too numerous to mention.

If we pause for a moment, however, and bring these supposed results of vaccination to the only true test, viz., that of statistics, we shall find that skin diseases and eruptions of various kinds, which are ascribed over and over again to the influence of vaccination, are more numerous in those children who have never been vaccinated at all, than in those who have. The fact is, that the early period of childhood is one in which skin diseases and eruptions of various kinds are peculiarly apt to make their appearance; and the only effect which vaccination has upon this class of diseases is to render the child who is the subject of it a little less liable to them than it would otherwise be.

The best time for vaccination to be performed is that which is specified in the Compulsory Act, viz., three months or under. This time has been fixed upon as sufficiently far removed from the commencement of teething in most children to render them safe from the constitutional irritation which is apt to accompany this process. If vaccination be delayed beyond this period, the troubles of teething are apt to be begun, when the child is frequently more or less fretful and irritable, and when vaccination is apt to be attended by a greater amount of constitutional disturbance than it would have been had it been performed earlier. If there is nothing in the infant's state of health to prevent this being done, vaccination may be performed before the third month. Indeed, it may be performed with safety any time after the sixth week.

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