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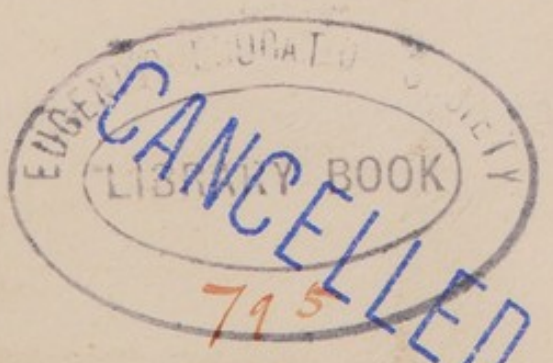

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The Healthy Marriage

A MEDICAL AND PSYCHOLOGICAL GUIDE FOR WIVES

BY

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THE HEALTHY MARRIAGE.

CHAPTER I.

The Value of Marriage.

"No one regrets a youthful marriage."—*Saxon proverb.*

For all women, even in these days of varied interests, the question of marriage is the most important. It is true that, as European civilisation advances, many vocations offer themselves to women and cause them to be given the choice between marriage and the non-married state. Moreover, some women in Europe have always been born with an apparent aversion to or fear of marriage, an aversion which was fostered and perhaps created by the teaching, which, while sanctifying marriage as a holy sacrament, taught that the unmarried state of the nun was the holier and worthier condition. The monasteries in the past sheltered all those women who, either by nature or training, shunned marriage. To-day the monasteries have little influence in the European states of the most advanced civilisation. But, though the monasteries have lost their influence and no longer offer a career to women as an alternative to that of the wife and mother, there remains a large class of women, who, while desiring to preserve the high respect of society, for some reason or other have to find careers other than marriage. For a long period these women in the better classes of

society were content to remain unwed and form the charming and kindly folk of whom Miss Matty in Mrs. Gaskell's " Cranford " is the classical example.

With the increase of economic pressure and the spread of education, this class has gradually come to claim for itself more individual rights and occupations ; and, as fashions always filter from above downwards, so the desire to establish individual independence has spread to many less prosperous classes of women.

Economic pressure has had the same effect upon the men. In the past parents considered it their duty to make provision for their sons and to save them from the arduous and anxious times which they have to suffer in their youth, if their living and still more the expense and responsibilities of wife and home fall upon them when they are inexperienced and incapable in the world's affairs. But now the change of the modern world from a system of tradition to a system in which each individual starts more or less *de novo* has entirely changed the feelings with which a youth views the life that is before him. Lord Bacon, whose philosophy one may say was almost the first notable expression of the modern world, showed the changed position in the famous saying, " He, who hath wife and children, hath given hostages to fortune," a saying which would have had little vogue or meaning in previous eras and in the countries of the older and more stable civilisations. In the Orient, for example, where Europe has not yet caused the adoption or imitation of her modes and habits, all women who desire or have to pay heed to the

respect of society, are married. The unmarried woman is, one reads, quite unknown, except she be a concubine or hold a yet lower place in man's esteem. The unmarried man, except in the case of certain priesthoods, is equally unknown. The relation of the sexes is regarded in the East as a fundamental and primary condition of life, the neglect of which could not be sensibly considered. Among the Greeks there was the same feeling, and when in later periods marriage became questioned the Greek legislators punished celibates.

In order to permit of this general inter-relation of men and women, Oriental parents are obliged to make provision for their sons and daughters to marry in the freshness of their adult life. As the parents or family heads make material provision for the young people, they also claim the right to see that the marriage proposed is one that is suitable. In some countries they even arrange the marriage without consulting the young people, in others marriage is preceded and decided by the mutual affection or choice of the pair. The elders take upon themselves, in fact, the position that an English father would take if he were buying a business for his son. He would consider that his riper experience and the fact that he was making a gift to his son entitled him to the chief voice in the decision, as to whether the business suggested was a suitable one or not. In some cases the father might be guided in his choice by selfish considerations, seeking so to place the son as might be advantageous to himself, but it is more natural and therefore more frequent for him to be guided by a desire for his son's welfare.

Similar feelings guide, as a rule, parents in the Orient in the planning of the marriages of their sons or daughters. The element of love in most of these arranged marriages has at first very little place, affection and love being supposed generally to arise from the common life and common interests of two youthful people both in possession of the natural desires allotted to them. That love and affection do arise therefrom seems to be shown by the fact that though in general the process of divorce is easy, divorce actually is said to be rarer than in Europe. The main rationale of the Eastern marriage was and is, therefore, the provision of a wife for the son or a husband for the daughter, in order that what is considered the normal human life might be fulfilled. Provision is, in fact, made not only for the material needs of the youth or girl, but also those which are based upon the sexual and associative natures of man and woman.

In modern Europe the dominant creed of individualism gives an altogether different basis to marriage. Love is purely an individual thing ; as a guide it is the following of the impulse of personal feeling. Though many marriages are still arranged upon a purely material basis, and others are largely influenced by material considerations, yet the predominant influence in the choice for marriage of the present day is love. " Don't marry for money, but marry where money is," is doubtless often wise advice, but to enter into a lifelong union with anyone without the existence of love is regarded by most young people as an experiment of wanton foolishness. The actual degree of love that urges

a man or girl to marriage varies, of course, according to their particular personality ; with one it may be a sleep- and health-destroying fever, with another a warm approval, but according to each one's capacity and kind, so love in most cases is the choosing factor in modern marriage.

Modern marriage is, therefore, based not upon tradition, custom and parental aid and guidance, but upon personal choice. It becomes, in fact, a matter of personal responsibility thrust upon a girl in the early years of her adult life. Whatsoever her nature may be—if one except the uncommon cases of those individuals whose strange nature tends to make them love their own rather than the opposite sex—a girl is faced with the question of marriage, and it becomes a question of her own individual choice ; and it is a choice that throws a heavy responsibility upon her shoulders, for upon her decision her whole ultimate happiness depends. She is, of course, far less able, under the modern shifting and fluid conditions of society, to judge of a man as a safe husband than parents were and are in tradition-governed and stable conditions of society. The impulse of love is a pleasing one, but it is not a sure guide to the sound quality of character possessed by the man she thinks of with delight. Especially is this the case when she has already taken up a career, in which she meets many men who do not come from the same friendly circle in which she was brought up. She does not know the parents, family or friends as she does the family and friends of any man who has lived for a long time in the same place as herself. Similarly her parents are also

unable to advise her. As a consequence the responsibility that falls upon her is additionally heavy, and, unless she surrenders herself to the hazard of chance or the current of her love, she may well hesitate before she gives up a certain security of contentment and individual independence for what is now called the lottery of marriage.

Nevertheless, although marriage is hazardous, a happy marriage is, with the exceptions referred to, the zenith of a woman's attainment, and is one that no girl will willingly forego. Consequently, lacking the traditions that compel her to act in a certain way, and lacking the dominant guidance and provision of her parents, unless she acts from intuition or takes her chance, she seeks for guidance in such slight experience as she and her friends have had, and she may also seek for help in the pages of a book. Many books are now to be bought which act more or less as guides to marriage and its happy conduct. Some are well-written and sage. Some, one feels, are inspired more by the financial need of those concerned with them than by the true knowledge and advice they have to impart.

The responsibility of a girl at the present day in the matter of marriage, is, as has been said, a heavy one, and a writer who presumes to give her advice upon marriage, and when married as wife and mother, takes upon himself a part of that responsibility. It is one that he cannot but regard as a grave one, for his readers, if they trust his book, will be influenced in their happiness and health by his writings. Only a due and fitting sense of his responsibility and the exercise of much thought and

testing of the knowledge he has acquired upon the subject can entitle him to the consideration of his readers in questions of such supreme moment to them. One has to approach the subject with the same cleanliness of intention and the same deliberate care as an honest priest approaches the delicate structure of a human soul.

It is in this spirit that, as a medical man who has employed a great deal of his time in studying and meditating these matters, I shall endeavour to approach my subject, and it is in this spirit that I hope to be met by my readers. For the whole question of marriage and its relation to woman is one of such peculiar intimacy that it invites a particular reverence. Marriage is, of course, the most intimate relation of the sexes, and without reference to the question of sex no book upon the subject of wives and mothers can be regarded as anything else than superficial and misleading. The further questions of pregnancy and motherhood partake of a like peculiar character, but, being more individual and especial to the woman, and not being so closely concerned with her intimate relations to her husband, they permit of a greater freedom of consideration and discussion.

Although there are evidences of sex in childhood, which sometimes become of moment to the medical man, as a rule the first bodily intimation of sex that a girl receives occurs through the onset of menstruation, which takes place usually between the fourteenth and sixteenth years, though cases of earlier and later onset are not uncommon. Even then in the great majority of girls bodily sexual

feeling is either very slight or absent, although through novels, plays, and general conversation, a sentimental, but on the whole innocent, atmosphere of romance is engendered. Other girls, led by scientific training or habit, may enquire into the physiology of sex, and acquaint themselves with such facts as are offered by the books that they are able to obtain. Even then, however, these facts are read and considered by the intellect rather than the senses, a fact that seems to me the proper answer to the interminable discussion as to whether girls should be specially instructed in these matters or not. Other girls, more emotionally inclined, discover for themselves by observation, conversation and association with their school friends, the general facts of sex. Nevertheless, as regards the actual feelings of nature, it may be stated broadly, that it is not really until a girl is married that any intimate understanding of what it means to be a wife comes to her. Nor, in my opinion, is this a fault. I believe the natural modesty of the majority of girls is an indication that there is no need for any peculiar education in these matters. One cannot really instruct the inexperienced body through the intellect. Howsoever forewarned, every true bodily experience in this world comes as an original discovery, and it is not until that experience has come, that the intellectual expression of it, given by some teacher or writer, is in any way properly understood. I believe rather that such special instruction to young girls would be harmful, as tending to excite a curiosity which nature herself does not countenance. When the nature of a girl does urge her to

attempt to understand, she will usually in the current of affairs be able to find out or guess enough to satisfy her. But open instruction would destroy the shame, since the word has to be used, that is the companion to her modesty and the greatest safeguard that she possesses of her self-respect and her chastity. When she is engaged to be married, or upon the eve of her wedding, her mother may tell her such things as she thinks necessary, but, if she be marrying a man of gentle feeling towards her, the explanation of the meaning of wife is best left to him. Until that time comes, her diffidence upon the matter of sex is, as I have said, an actual provision of nature, and is of definite protective value to her. It is founded upon her bodily nature, and any interference with it by the rude intrusion of instruction, such as is urged by narrow-minded educationalists who cannot see the truth of modesty but only the truth of physiological text-books, is strongly to be deprecated.

With marriage, the great majority of women's knowledge of the meaning of sex begins. As to whether that knowledge brings her happiness or not depends largely upon her husband as well as upon herself. In general, one may say that the fulfilment of so important and fundamental an instinct as that of sex, brings with it the gift of happiness. It allays the harassing discontent, the restless seeking for an unknown good that is characteristic of many women, who by ill fortune or ill judgment delay marriage. It brings with it the double or stereoscopic vision of married life, by which alone true proportion is seen. It unites the preservation of the individual and the

adjustment of one's own desires to those of another, with whom one lives in the closest intimacy. Its very character is symbolic of this definite change in character that comes to man or woman through the married state. Indeed, one may lay it down as a rule that as the years pass and one does not marry, so one tends to become abnormal. This abnormality, of course, is clear to all, when the unmarried bachelor or lady is advanced in years, and especially if he or she lives apart from young children. The pitiful oddity of such people is proverbial. But to the more interested observer, the abnormality may be noticed far earlier, and is usually evidenced in a devotion to abstract things, or in a veiled or open ever-present and overruling egotism.

This abnormality, which grows with the unmarried state, affects the question of the age at which it is advisable to marry. Setting aside the guidance of love, or presuming that love occupies a certain proportion of most of the years of youth, it may be laid down that as years pass, so this abnormality of egotism or substitution of abstract interests and generalities for personal and bodily ones, becomes more settled in the character, and is brought as an unwelcome part of the marriage gift to the partner. A man, fit for marriage at four-and-twenty, may bring all sorts of disagreeable requirements of bachelorhood into his marriage if entered into at four-and-thirty. This is even more the case with women. A girl, who puts off marriage until her chance becomes less easy, may develop an excess of envy in an otherwise kindly nature, which she brings with her into her subsequent marriage as

an undesirable factor. In a word, marriage is a condition the time for which is indicated by nature, and if nature is disregarded and the marriage age delayed, a certain amount of punishment will almost surely follow.

Indeed, one may say definitely that, with rare exceptions, marriage preserves the social quality of men and women and prevents them from becoming egotists. Parentage, of course, adds to this preservation of the social side of men and women. I do not say that unmarried people are necessarily selfish. They often do much work for others, but there is always apt to be a spurious or vicarious quality to their work, it is apt to be work that they take up largely for the sake of something to do and for the need of being humanly interested. In both these reasons there is soundness, but in both one also sees that such work is somewhat of a substitute for the direct bodily love and inter-relationship that takes its origin in the married state. "We may work day and night for the good of humanity," said Ribbing, and quoted by Professor Kisch in his invaluable book upon women: "We may sacrifice for that good our time and our blood, but all this work and all this sacrifice remain useless if we neglect and despise the sexual life, the eternally self-renewing elementary school of true altruism."

In addition to these celibates who do social work, there are a number of both men and women who, by the unsocial character of their lives, their deliberate and pervading selfishness, more than counter-balance the good done by the former class. Such people tend to make society impossible, for

society is only made possible by a general give and take. Were, indeed, marriage to require excuses and reasons in these days of over-loaded enquiry and probing by the foolish, this one alone is sufficient, namely, that marriage is the chief mode and the natural mode by which an individual is compelled to consider others, by which he is bound to make sacrifices usually prompted by the heart, by which, in fact, he is forced to be social. But the selfish individualism that in most cases arises in the unmarried makes society impossible ; it tends to the anarchy and general greed which have their origin in exclusive individualism, and which prevent the social inter-relationship, the sense of courtesy, etiquette, manners, and mutual give and take, which alone can promote a healthy and stable association of mankind.

The married state is, then, the proper social setting to the natural functions of men and women, and the delay in its execution until late in life brings into it some of the unsocial characteristics of the unmarried state. Married people are, on the whole, even in these days of economic anxiety, happier, wiser, less cranky, more stable and more moral than other people. They are also healthier, provided that the marriage is contracted at a suitable age by partners who have not wasted their strength in the years preceding marriage, and that childbirth is ably conducted.

If, then, marriage is the normal social state, it would seem an advantage that adults should enter into it when young and in the full flush of youthful bodily health. It is of benefit to society at large

that they should do so, and it is of benefit to themselves. In girls, it prevents the years being unduly lengthened, in which doubt exists as to the proper fulfilment of the life that should be theirs, years which they fill in with pleasure-living or business and professional work, and in which they gather many notions antagonistic to a healthy conception of marriage and motherhood. I have frequently witnessed the ill-managed households which result from the lack of domestic habit in such girls. Their husbands, and, later, their children, suffer in consequence. By them marriage is apt to be viewed as an exciting incident with the glamour of the wedding and the honeymoon so radiant about it that little else is seen. Then when they enter into the true married state, they find that the rails of their life have hitherto run for a wholly other and individual destination and that they cannot properly alter their speed and direction to ensure smooth travel.

The men of to-day might also hearken with profit to the unfortunately fading wisdom of the East. "All young men should marry," said a great teacher, "for marriage prevents sin." If the future husbands are rare men of strong character, then delayed marriage is not of great moment. Such men pass through all sorts and conditions of circumstance unscathed and preserve the shape of their personality unchanged. But with the great majority of men the dilemma of delayed marriage is one that sets them between the dangers of an enforced continence and of an indulgence, the temptations and risks of which they cannot avoid. They become definitely soiled by

their mode of life. Their outlook upon the world of sex and womanhood becomes an outlook from the lowest plane. Their most intimate associations with members of the opposite sex are of a kind that implant in them the opposite qualities to those that lead to happiness in married life. Their freshness and the cleanness of their youth are taken from them by these women, and their wives have to be content with the worn and soiled manhood that is left. Sometimes such men not only bring degraded tastes, but they also bring actual disease as a part of their marriage gift. There is, in fact, no greater secret tragedy in modern life than the number of women who suffer or have suffered long-lasting pain, sickness and shame owing to the venereal disease they have contracted from their husbands. I well remember one particular case that came under my charge. A girl of about twenty married a man some fifteen years older than herself. Two years after their marriage the husband developed definite signs of locomotor ataxy, and after four more years died of this repulsive disease. I enquired as judiciously as possible into the health of the young wife, but she was a modest girl and assured me that she was and had been perfectly well and needed no medical examination. She did not look well, but the trial of her husband's illness was sufficient to account for her looking poorly. A twelvemonth afterwards she came to me, and bursting into tears said that she could hide her dreadful secret no longer. She stripped herself to the waist and showed me a sight that filled me with horror. Her body displayed several large, foul ulcers eating deeply into the flesh.

When her tears had ceased, I assured her that I could make her better, but she cried again and said, "Oh, but you can never take from me the shame of it all, the shame of being the foul and polluted thing that I am. I could curse the man who gave me this dreadful disease, but the memory of those years of his paralysis and suffering restrain me. But why did I ever marry?" Why, indeed, I thought? Why should there be such a thing as the union of this young girl with her healthy body to a man who had so diseased himself before marriage?

These dangers of late marriage and of the delay of marriage, which are increasing year by year, are little mentioned in books and conversation, but are unfortunately only too well known to doctors and to circles of intimate friends, amongst whom the veiled things of life are disclosed. The years between twenty and thirty too often soil a man physically and morally, and it is this soiled article that a woman has to accept. Not only is this so, but often girls themselves become looser in their thought towards the cleanliness of sex, in order, it seems, to make themselves more acceptable to such men. A freedom of speech upon sexual matters, a speech with suggestiveness and allusions that provoke laughter, is all too common in modern life. Novels that deal with the same subjects are also common and many plays cannot be exempted. Many girls and more men, of course, take no little pride in being up-to-date in this acquisition of freedom. It is a freedom of speech and intellect, which to my mind is greatly to be deplored, especially in that it is complemented not by a general marriage and freedom to enter

into the married state, but by an increasing total or relative (delayed) absence of marriage, and ever increasing economical obstacles to marriage, which are regarded with complacency by people who nevertheless get highly agitated by questions far more removed from the natural rights of life than are marriage and the possession and love of children—such as the political questions that are current. The more, indeed, marriage gets pushed into the background and loses its position as one of the first rights and foundation of society and mankind, the more an irreverence for sex arises. Instead of the sanctity and respect of sex, which is embodied in marriage, a half-mockery arises amongst those, who in mocking really mock at themselves for losing that which constitutes the chief pillar of human happiness, and who attempt to cover with the cheap cloak of cynicism, a deplorable and growing inability to manage the requirements of sex properly. A vapour of sex, as it were, takes the place of its solid benefits and satisfaction. A trivial, false and vulgar attitude is often shown to it, and an attitude of mock seriousness, which expends itself in endless discussion, but which is impotent in result except to make a subject, which should be regarded as one of the simplest and most obvious rights of men and women a matter of extreme and insoluble complication. The respect and reverence of sex, which shows itself in a religious adoption and reverent attitude to marriage, is becoming more and more obscured and clouded by this false irreverence and ineptitude. The most primitive men can give us many a lesson in their high respect for the gift and decency of sex.

"The savage is also more refined in language with regard to this subject than are most civilized men," wrote Ernest Crawley, one of the most profound students of primitive man; "thus in Ceram it is forbidden to speak of sexual matters in the presence of a third person; and obscenity, that fungus-growth of civilization through degeneration or wrong methods of education, is either unknown amongst savages or regarded as a heinous sin. Ethnology supplies many cases of apparent obscenity, but the expressions are not obscene, they express a man's righteous and religious indignation."

Savages in their marriage customs and ceremonies, ceremonies which Ernest Crawley believes are in some form or other universal, show the same high regard and profound reverence for sex. Irreverence towards sex and ignoring of its primary importance to men and women cannot but be gravely disadvantageous to the cleanliness and health of any society. Such irreverence brings into marriage, when accomplished, all kinds of subtly hostile influences to the wedded state; and, breeding as it does a partial scorn and antagonism to the married state, is particularly liable to become acquired in the years that intervene between the arrival at adult years and the delayed date of marriage.

In my opinion, therefore, there are very strong grounds for advocating marriage in early years. To many this may be a counsel of perfection. Economic difficulties bar the way, and to overcome them is a matter almost impossible, unless one is born with the advantages of inherited wealth, the exceptional gift of parents who save money to enable their children

to marry and do not spend it on their own luxuries, outstanding talents or a goodly portion of individual courage and judgment. The exigencies of poverty are such that few care to face them, even though by doing so they are able to lead the natural married life. For marriage is natural to man, the formal name of marriage and the rites that accompany it being but the confirmation of a universally spread instinct. Modern researches have shown that the so called promiscuity, which was hastily attributed by some writers to primitive man, has no existence in facts, and if one care to push the argument into the generally-held belief of the ape-ancestry of man, it is known that the anthropoid apes themselves mate by a form of marriage and are faithful to each other. Indeed, it is recorded that the male of Hapale jacchus, after the death of his mate, covers his eyes, ceases to eat and remains thus until he dies. One has every right, therefore, to regard marriage as natural to man, and to look upon the suggestion of free love as a false and evil creation of degenerate natures. One also has the right to place celibacy, with less vehemence, in the same category, for Professors Forel, Westermarck and others have shown that the increase of celibacy always goes hand in hand with an increase in the corruption of morals. One, therefore, can regard the married as the sane and healthy section of society.

To undertake marriage in the earlier years may be actually impossible owing to the great poverty it would entail. Nevertheless, counsel should always point to the best. Marriage in early years is certainly worth a considerable sacrifice of personal

comfort, and there are many expenses, entertainments, fashions of dress, indulgences of pleasure, of food and the lesser and greater luxuries, which it is wiser to forego than to forego marriage. Modern parents themselves, as I have said, tend to increase the obstacles to early marriage. A man is more inclined to get and keep a motor-car for himself than to help his son to marry. One frequently sees the spectacle of luxurious parents, while the son is earning an income that could not possibly permit him to lead a healthy physiological life. Society throughout is based upon an economic opposition to marriage. A man or woman is considered fortunate to earn sufficient for his or her maintenance alone, and the extra expense that is required for marriage is only merited by extra desert. In short, marriage has come to be regarded as a luxury, and the bent of the nation's efforts is directed to enriching the richer classes, and normal physiological life is not taken into consideration as a national asset, but is openly or latently opposed as being a condition distinctly antagonistic to the accumulation of luxuries on the part of the classes in power.

It needs, therefore, no little boldness and disregard of the attitude of others, for young people to pay chief regard to themselves, and, in spite of the obstacles thrown in their way, to enter into their natural rights and to form the compact, which is not only beneficial to themselves but ultimately essential to the solidarity and stability of society. They have to deliberately choose marriage and reject as far as possible the many costly complexities and artificial enjoyments of modern life, which add nothing to the

health of the nation except a growing burden of nervousness and discontent. Indeed this very nervousness and discontent arises from the perverted springs of nature and has to create for itself some form of inebriation, whether it be the inebriation of alcohol, or of drugs, of fevered absorption in work or study, of the ceaseless pursuit of pleasure or rather diversion, as if pausing were dangerous for fear that something suppressed might make itself heard, as if sobriety and meditation disclosed too ravelled and distorted a picture to be borne, even as the sobered drunkard is driven into the blues at the thought of his inability to master his life. How much of the rush and tear of life is due to the extravagances of thwarted nature one cannot say. But one can say that social stability and a certain calm mastery of life are only to be found in nations which base their society upon marriage and provision for marriage.

For a girl and man, therefore, to decide to devote themselves to marriage, thereby to view the world with the invaluable social double or stereoscopic vision which marriage brings, and with the coming of the child to gain the racial vision and understanding of the continuity of the life of man as opposed to that of barren individuality, is a matter requiring no ordinary judgment and boldness. To advise it, as I have said, may be a counsel of perfection, but it is the duty of doctors, who know the supreme importance of a proper physiological basis to life, to set up their opposition to the increasing neglect of the fundamental physiological and psychical factors of health. It is their duty to urge

upon young men and women that the claims of physiology have as great and greater right to be heard than those of urban pleasures, the clamour of political and abstract questions, the fever of business, the pretension of possessions, when those possessions usurp the place of the possession of wife and child. These are false issues of life, if they are indulged in at the expense of, and as substitutes for, the true. They cannot promote a true mental and physical health, but can and do form very credulous material for the innumerable systems of gymnastics, diet, electrical, hydropathic and faith cures and the many other witless methods of attaining health by a society which cannot see the profound errors of its faulty physiology, and needs these cures to patch it up to a tolerable efficiency.

Many girls and young men are not equipped, of course, with sufficient courage to stand out decisively for their own wishes in the matter of marriage. They are more concerned with what others think and with what is the custom of their time. To such the vision of choosing marriage and poverty rather than celibacy and comfort is one they cannot entertain with assurance. Habituated to a certain standard of life, they are unable to change this standard in order to marry, but can only hope to add marriage to it. There is a great deal of reason upon their side. To the majority of young men and girls the definite adoption of a mode of life, that is not so comfortable and expensive as that of their fellows and which loses, therefore, some of the respect of their fellows, amongst whom possessions rather than personality form the standard of judgment, would be intolerable,

or sufficiently difficult to test the happiness of their married state severely. Such young men and girls rightly prefer to remain single and thereby to be able to show a mode of life that bears comparison with that of others. If in the rush of love they do get married and set up house in a cheap way, a sense of shame overcomes them when their friends visit them. They overstrain their slender resources in trying to make a good show, and deny themselves necessities in order to provide those things which their friends take by habit. The thought of what others will think of them becomes a harassing one. The absence of an equal smartness of the wife in the presence of her girl friends may irritate the husband. The husband is apt to blame his wife for not being able to ease his sensitiveness in these matters. The wife, on her part, may begin to fret at finding that she is deprived of the comforts of her home, she may refuse to do any of the service of the house, and openly declare with great irrationality that she expects her husband to properly provide for her. With such people early marriage before firm financial security exists will be disastrous, and such people are certainly in the majority. They must delay marriage, until their incomes ensure that their lives do not differ materially in kind from what they were before marriage, that their house, though smaller, will be as genteel as the family home, that their food will be of the same sort, that their clothes will cost as much and that the wives will be as free as previously from any household work other than the ordering. But they have to pay some penalty for their regard for the conventions rather than their

individual promptings. They may delay marriage until it is too late, or so late that it has lost all its first freshness. They risk the staling of themselves, they lose the unique vital splendour that belongs to all things that, clothed in youth, are looking towards maturity, such things in nature as the unique and exhilarating splendour of the air at dawn, the lusciousness of fruit just plucked, the freshness of water that bubbles up at a spring. They miss the reward of nature when her behests are obeyed. They bring to each other a certain exhaustion of the sources of love, and, in the case of the man at least, the source is sometimes polluted as well.

Nevertheless, as long as civilization and economic pressure enforces the delay of marriage, it is not possible to see how these disasters can be avoided, except by a bold venture, itself entailing the risk of greater disaster. One can only hope that the subject of the physiological basis of life will eventually divert to itself the attention which at present, to my mind owing to a mistaken understanding of social life, is devoted to class politics, individual advertisement and aggrandisement, a culture and education divorced from the body, and other economical, abstract, and impersonal questions.

With these general suggestions as to the value of marriage and of early marriage, we may now enquire into the actual marriage ages of the present day. In northern Europe, with the exception of Russia, which is now however beginning to follow suit the average marriage age of the better and professional classes amongst the girls is twenty-six, and amongst the men, thirty-one. This late age

is dependent not only upon economic stress, but also upon the individual and competitive basis of modern life as opposed to the family basis and its traditions. In the latter, the elder and secure members of the family gave their protection to the younger members until they had ripened to full adult and parental power. In the former system, the young married folk at once enter upon a separate life. They set up a separate household, and upon their own efforts and judgment their success or failure depends. At the age of twenty and twenty-one of course they have not, with rare exceptions, the judgment and experience that will enable them to hold their own in a competitive world. They are surrounded by people anxious to make what can be made out of them, instead of by people who tend to shield them from the greater difficulties of life. Their parents may be willing to help them, but they live at some distance in households entirely separate, and therefore cannot help them in more intimate concerns. The young couple, therefore, find themselves unprotected and exposed to the slings and arrows of outrageous fortune. They have not the necessary authority of years, which for most men is the only authority they possess; for the ruler quality which gives the born ruler domination even when young, is a rare gift. The young wife is perpetually harassed by the behaviour of her servants and shop-people, and the young husband, though knowing that his expenses are unnecessarily high, does not know how to check them, or, if he attempts to do so, acts without the firm assurance of proven facts, and arouses the ruffled self-righteous-

ness of the people he accuses. Quite unexpected household disasters occur. The house that was depicted as so exceptionally desirable a residence by a specious agent, proves to have all kinds of disadvantageous idiosyncrasies. Though the lease or agreement seemed to be one of open clarity, yet the husband discovers that the justice of the law creeps in in dishonourable garb, and squeezes money out of him in ways that altogether run counter to his sense of fair play. Everywhere he finds the innate sense of justice, which has been nurtured in him at public school to a strong and overruling idea, is one that has not the dominant influence it had at school, but is rather the shame-faced spectator of the cleverness and cuteness of competitive commercialism. He finds that the peculiar code of honour that held sway between him and his school and college friends is one neither recognized nor understood by the lower classes, and that they, on their part, unless he happens upon that increasing rarity, the faithful family domestic, tend to regard him as a legitimate and happily innocent prey. In town or at his work, he often has similar latent or open hostilities upon the part of his fellow-men with which to contend, and his life tends to assume the form of a painful struggle along a path beset with thorns and bestrewn with hidden pitfalls. His elders help him with advice only, and the assurance that he must buy his experience.

His wife at home has to endure similar experiences and defeats. She thinks to purchase and manage with the same skill and facility as her mother, and though shop-people and others oblige her with every

facility for purchasing, she finds with some bitterness that the skill is always upon their side. Her bills, do what she will, assume proportions that, when shown to her husband, call forth the frowns upon his brow. Do what she will she cannot control them without considerable sacrifice on her part. She can dispense with pretty dresses and delicate underclothing, and become a student in the art of making things last and making things do. She can give up certain pleasures to which she has been accustomed —and what is dearer than the pleasure of shopping when the purse does not nip the intruding finger ?— and sigh when she sees her girl friends indulging in these same pleasures without pangs of conscience and qualms of anxiety. Perhaps, in the evening, when her husband returns from work, she relieves her pent up feelings by pouring out her troubles to his sympathetic ears, and together they bemoan the unfairness of their fellows. But as the weeks pass, the young husband begins to weary of a wife who has complaints upon her lips where once untroubled laughter played, and his welcome home seems to him only a continuation of the vexations he meets with in his business. Or the wife, finding the pinch of narrow means, and accustomed, as so many are, to regard their habits as their rights, demands the dresses, pleasures, leisure and expenditure which she enjoyed in her unmarried days. Under such circumstances, it is only too probable that the happy married state becomes commingled with much of the bitterness and irritation which arise from perpetual competition. One is not surprised, therefore, to find, when the statistician enters the field of

modern youthful marriages, that his record is a gloomy one, and shows that it is safer to look after oneself alone to-day than is the state of marriage, which is, nevertheless, the first foundation of the social feeling and of society. Seved Ripping investigated the question of youthful marriage in France. He found, comparing 1,000 married men, who married at the age of twenty or less, with 1,000 of their unmarried contemporaries, that in a certain period of time the mortality amongst the married was as much as five times as great as that of the unmarried. In the same investigation he found that the girls who married at twenty or less, showed a mortality compared to that of their unmarried contemporaries that was not quite twice as high. German statisticians have found, on their part, that marriage also increases the mortality of women under the age of twenty-five.

Figures, however, are very unreliable guides in life, and especially as guides in individual cases. No doubt marriage does bring with it an increased risk to life in civilized countries, where there is a great deal of venereal disease, where women have difficult childbirths, where there is a good deal of interfering and incompetent midwifery amongst the mothers of the lower classes. But the reader must not be influenced by figures, which include the whole community, for the various grades and quality of life forbid any deduction made from the whole community being true for a single section of it. That youthful marriage is best for healthy girls provided they can get healthy mates is undoubted. Only they who feel they must obey the spirit of

their time should delay marriage with its risks of no marriage at all, or decide from the first to live in the unmarried state.

Whom to marry is not a question to answer in this book. If any woman finds she wants advice on the point, she will herself know where she can best seek it. If she wants a book upon the subject, there is the translation of Dr. Mantigazza's " How to Choose a Husband."

But I may be permitted a few words of advice as to whom *not* to marry, though I shall confine myself to an enumeration of the diseases which should cause a woman to refrain from marriage, believing, of course, that she, should she suffer from any of these diseases, and yet contemplate marriage, would submit herself to the decision of some competent physicians. These diseases are definite consumption, any indication of disease of the central nervous system, mental disorder or definitely hereditary insanity, pernicious anæmia, hæmophilia, diabetes, chronic kidney disease, severe heart disease, marked deformity of the pelvis and infantile condition of the womb. Venereal disease is not a bar, but marriage should not be contemplated, unless a physician declares the disease to have been cured, and as far as can be judged, in no way likely to infect the other party.

As regards the marriage of cousins, it is quite safe and perhaps advantageous, provided there is no morbid tendency in the family. Should there be one, then cousin marriage must be avoided. An instance of successful and advantageous cousin marriage was that of Queen Victoria. Not a few

notable men have been the children of cousins, and the brilliant and able Greeks regarded consanguineous marriage as the most natural and advantageous. But should there be a morbid heritage in the family, it is said to be quadrupled by cousin marriage, and such a marriage should certainly be avoided.

CHAPTER II.

The Hygiene of Marriage.

"This age will be named that of the maladies of the womb."—*Michelet.*

THE early weeks of marriage, especially those of the honeymoon, are those in which women especially need guidance. In them the change from the girl to the wife occurs, a change of so radical a nature that there is no time in women's lives which requires more delicate handling. Yet there is in the modern honeymoon a foolish romance and reprehensible disregard of physiology which is quite inexcusable. There is, I believe, considerable wisdom in a diffidence, and even secrecy, about intimate marital matters, but to base the honeymoon upon a deliberate defiance of all sensible respect for sex is exceeding the bounds of obscuration to a lamentable degree.

Every doctor who is consulted in these matters knows many a case in which the young wife and also the husband have suffered very considerably upon the honeymoon. Not infrequently, injuries leading to long illnesses may date from this period, and, I think, as frequently, moral injuries are inflicted upon the wife, from which she suffers very often in secret for a considerable time. Further,

serious results are consequent upon the foolishness which frequently permeates the modern honeymoon.

The relation of the sexes from the beginning of time is one in which there has always been an element of fear. Primitive marriage ceremonies are always directed to guarding the young people from the harms that may befall them when they first enter into the strange domain of wedded life. With this fear they also combine a secrecy of the intimacies of marriage, a secrecy in which in general the modern writer does well to follow them. But though secret in speech, their customs and rites were devised to guard the young people against the actual dangers that, as experience teaches, threaten them. Thus, it is not unusual for the bride to be examined before marriage. This has as one of its objects the rupture of the hymen. The hymen, as is generally known, is the membrane of virginity. In certain cases this membrane is unduly developed, and this is especially liable to be the case in women marrying late in life. It may consequently offer a definite obstacle to the consummation of marriage. A husband may, then, out of ignorance or lack of consideration cause his wife considerable pain. Indeed, if he fail to treat her with delicacy and understanding, he may bring about a condition that causes her so much pain as to make the consummation impossible, and also to produce in her a highly nervous and hysterical condition, one in which a dread and dislike of her husband may form a prominent feature. The hymen also frequently bleeds in the earlier period of marriage, and this may

alarm a young girl. It is clear, then, that unless care and knowledge guide this period, most detrimental mental and physical conditions may result.

The wise course in this and similar matters, as it seems to me, is for the husband to visit a doctor before he is married, and to become informed upon the intimate details of physiological care. One often has later to express a grave regret to men, who, owing to the temptations of life, have acquired what they call experience from a class of women very different in their sensitiveness to the refined women whom they have married. Such men fail to make a proper distinction, and show an attitude to their brides which is unintentionally brutal. Here, again, one has the groundwork of prolonged nervousness and of definite personal dislike, which spoils the desirable married happiness.

Here, again, one may say that, reading the customs of mankind, one is impressed by the extreme respect shown by primitive peoples—quite wrongly supposed to be barbarous in these matters—to the initial married state, shown, for instance, by the frequency with which the young bride is made accustomed to intimate relations with her husband in the first few days before the marriage is actually consummated.

In civilized life such delicacy, unfortunately, depends, not upon a general custom, but upon the individual refinement of the husband, a refinement which not infrequently has become blunted by experiences with the women who at night throng the chief thoroughfares of American and European cities. I, therefore, think that older people do well

to advise a bridegroom to consult an experienced doctor before marriage.

The honeymoon which is spent quietly in a secluded place has much to recommend it. The early weeks of married life are sufficiently absorbing physiologically as to make further demands upon the vital energy foolish and even dangerous. With the increase of facilities for travel and the one great chance of having a good tour in foreign parts offered to them, honeymooners have unfortunately come to disregard fundamental physiology and add to the honeymoon the burden of much sight-seeing, in itself a sufficiently exhausting task. The husband especially seems to forget that his wife is not like a male friend and able to undertake the same lengthy walks and expeditions. The young folk may arrive in Paris on the day following the wedding. The name of the magic city itself denotes endless sources of delight, each one of which must be at least tasted. The Louvre, the Invalides, the Palais Royal, Notre Dame, the Luxembourg, Versailles, the Petit Trianon, have to be seen ; in the evening there are famous restaurants to be visited, then the Théâtre Français, and later, perhaps, a light supper with a bottle of champagne, and at last the young couple get back to their hotel, both having thoroughly enjoyed themselves, but the bride at least tired out. A few more similar days and evenings follow, then, perhaps, more railway journeys and more visits to famous places. All this is added to the strain of the physiological change that marriage essentially entails. Excitement keeps the bride up for a time, but each night she returns home in an exhausted

condition. It is then that a further and more distant danger of such a honeymoon occurs. A child is perhaps conceived when both bride and bridegroom are in a state of exhaustion. It is well known to doctors that the first child tends to be more delicate than the later children, and Dr. Van Gelsen, one of the chief authorities in these matters, was of the opinion shared by his colleagues that the reason was that the first child was often conceived when the parents were in a state of exhaustion. Further, there is the danger that Professor Forel and others press forward. Professor Forel says there is danger to the child's full health and nervous stability, if, when it is conceived, the parents have alcohol circulating in their blood. Young people who are habitually abstemious not infrequently indulge, mildly, of course, but nevertheless in a manner to which they are not accustomed, in champagne and other wines. This not only in the end adds to the artificial excitement which buoys them up, but it may even have its effect upon the child conceived. No doubt a child conceived in true love passion is well conceived, but when it is conceived by parents exhausted after a long day of sight-seeing and pleasure-taking, and sustained by the artificial stimulus of wine, it is in Van Gelsen, Professor Forel, and many other authorities' opinions badly conceived and apt to be of a delicate and nervous constitution. At any rate it seems that, though strong love should certainly be a factor, it must be love supported by the fullest and most natural vigour, if the child is to be conceived in the best way possible.

The Need of Moderation.

This brings me to the further point of honeymoon moderation, namely, in the satisfaction of desire. There is temptation to be immoderate in the honeymoon, and this in itself adds to the exhaustion of the newly-married couple. No doubt in the early part of married life more can be borne with safety than at a later period. But immoderation tends to exhaustion. Its effects are as a rule shown more in the man than in the woman. For it is a fact that the married life is a greater physiological strain upon the husband than the wife. This seems also to be the case amongst the primitive men, who have many different rites and customs by which they strive to avoid the depression and weakness that frequently visits the husband. The folk-lore of European peoples is also actuated by the same belief. Amongst primitive men, for instance, it is frequently the custom for the men to occupy separate dwellings when they are preparing to go upon a military expedition. During pilgrimages the observance of continence is also imperative amongst Mussulmen, and amongst many tribes important hunting and fishing expeditions are also preceded and accompanied by a continence upon the part of the men. The belief is certainly well founded, and every doctor who has studied these questions knows how immoderation exhausts the husband, with his more active *rôle*, more than it does the wife. Depression is the result of immoderation upon either party in the marriage. Emotional exhaustion follows, and the sufferer finds himself or herself unable to enjoy the ordinary pleasures of life in the wonted manner. Moreover, the love and affection

felt between the pair is also blunted, and irritability as well as melancholy takes its place. The sufferer becomes run down and below par, as the popular expressions phrase it. Headache, weariness, loss of appetite, loss of ambition, loss of zest for work, loss of desire for the pleasure of society, lowered resistance to disease, a greater liability to catch cold, indigestion, vague pains in different parts of the body, pain and weight in the loins, heat waves, general nervousness, diarrhœa, in women in addition vaginal catarrh and whites, swelling of the breasts and neck and various other debilities result. One cannot, therefore, be too insistent upon the value to health of moderation.

A doctor is not infrequently asked as to how many times intercourse may be enjoyed without harm. The question has occupied the attention of many religious teachers. The priests of the Catholic Church always receive instruction during their training upon this important matter, in order that they may be able to give wholesome advice to those who come to confess to them. Luther threw his advice into the form of a verse, which is still much quoted and followed in German-speaking countries :

In der woche zweier,
Schadet weder mir noch dir,
Und macht in yahre hundert und vier.

(Twice in the week we need not fear,
Or a hundred and four times in the year.)

Zoroaster, the Persian prophet, advised an interval of nine days between intercourse, and Solon, the Athenian lawgiver, ten days.

But it is not possible in this matter always to be bound by rule. It is better to be guided by the actual promptings of nature, and, as man is the active agent, to be guided chiefly by him. In this matter, as in any other appetite, nature herself indicates when satisfaction is wise. Any artificial stimulation of the senses has the same effect as the artificial stimulation of any other appetite, it eventually exhausts. When the appetite is present, then the art of caresses and love may be added to it, as the art of cooking is added to the promptings of the gastric appetite. But art must not be used to attempt to arouse an absent appetite or one that can only be artificially excited. In fact, the matter, viewed in this light, is so much on a par with the wise regulation and satisfaction of the gastric appetite that the analogy between the two will teach any sensible person how to act. After the satisfaction of either there is the desire to sleep, and, if the appetite has been properly tended, the sleep should be followed by a feeling of freshness. Exhaustion is a definite warning of immoderation or artificial stimulus. If moderation is difficult to observe, a couple are well-advised to sleep in separate beds.

It cannot be too definitely stated that the happiness of married life largely depends upon physiology. People are wont to conceal their married troubles and often to exhibit a false appearance of happiness and even to do their best to deceive themselves. They are ashamed to be unhappy in their married life, and perhaps rightly so, for unhappiness argues a bad choice and judgment in what is generally the

most important matter of their lives. Very little has been written upon such unhappiness in England and very little is said. Consequently, there is a good deal of ignorance upon the matter, which is, so to speak, the debt we pay for a very proper feeling that we do not care to make these intimate matters public. Nevertheless, it is possible that we err on the side of too great secrecy and its complementary ignorance, and a psychologist, who has studied these matters, is often depressed, when cases come into the courts of law, by the grave ignorance of human nature which our law and its executors display. Much of our law, indeed, was devised for times when England was almost wholly an agricultural country. Now it is well known that amongst an agricultural population we meet with the most normal marital life. However much we may deplore it, the fact remains, that amongst the inhabitants of large cities and manufacturing towns, lesser or greater disabilities arise and occur with sufficient frequency to be constantly observed by the psychologist instructed in this important branch of human nature. Consequently he notices many cases of lesser or greater unhappiness in married life which a little knowledge might avert. The English medical profession as yet shares in this widely spread ignorance and diffidence in entering upon what all agree is a dangerous subject. Nevertheless, a doctor is, as a rule, more learned in the subject than other men, and, therefore, I would always advise people who are not happy in their married lives to consult a doctor. As I have said, there is nothing more certain than that marital unhappi-

ness in a great number of cases is due to faulty physiological understanding and adjustment.

I have already indicated how many minor disabilities and nervous affections may arise from this source. Wrongful deprivation of marital rights may have the same evil effect, even though the deprivation is mutually agreed to by the two partners. Sometimes also it is advised for some reason by a doctor not versed in psychology. I would state here that only in very rare cases is such advice justified, and that it is generally given with far too facile an ignorance of the mental and moral effects that are its resultant. Marriages, previously happy, may be utterly ruined by such advice based upon some weakness of the wife which may itself actually be due to a mistaken notion of marital physiology. With married folk themselves, moreover, there is an increase of folly in this respect. This is especially amongst the upper classes in the United States, amongst whom the women seem to possess often an acquired aversion to being natural in these important functions. Infected by the exaggerated estimate of the individual, marriage becomes to them a means by which they can secure the most pleasure and the greatest degree of escape from what they hold to be the troubles of life. Pregnancy, childbirth, and suckling they regard with dread, and the relations with their husbands, which naturally lead to such issues, they curiously distort and pervert. The results to them are by no means fortunate, for amongst American wives one can find the most restless, irritable, nervous creatures to be found upon the globe.

Nature punishes any people who depart from a rightful regard of her demands. People may obey and base themselves upon nature and build up an art therefrom, but they may not check and pervert her. City life tends to do this, and what is most notable in the United States is also noticeable in European countries. There are restless, irritable wives and husbands in abundance in European countries as well as in the States, and one can assert positively that the major amount of the nerves and hysteria of the present day may be traced to faulty sexual hygiene.

It is not possible to enter very fully into the subject in a handbook of this nature, and in a later chapter more will be found upon the subject. I would only warn my readers here that in the advice of a skilled doctor they may be able to find the guide to happiness in marriage, where unhappiness already exists or is threatening. Each case has to be dealt with separately. Sometimes the husband is at fault, sometimes the wife, more often both are at fault, or rather, suffering from ignorance. As a simple instance of fault in the husband, one frequently sees a man give all his power and strength to the day's work and come home to his wife utterly exhausted ; and to be united to exhaustion is not a source of happiness. Sometimes, again, the husband is one whose love is subject to a definite cycle, at one part of which it is warm and tender, at another cold and indifferent. Sometimes the wife is cold and frigid, there is no true response in her. Sometimes she demands too much and makes her husband dread her as one who asks by right what he cannot give.

Sometimes the wife is never satisfied, sometimes the husband. More rarely there is definite perversion in one or other of the parties to the marriage. The causes are, indeed, varied, and to produce marital happiness often requires a nicety of balance. But once this balance is established, then all the secondary relations of marriage begin to prosper. Business, though unchanged in its actual character, becomes less harassing to the husband, and domestic annoyances, which previously formed as it were a setting to the wife's dissatisfaction, are now regarded by her with calm judgment. A sound physiology is the rock upon which to build up firm wedded happiness. Found it upon the shifting sands and the whole fabric will be perpetually giving here or there, though the couple will attribute their partial or complete unhappiness to this and that disaster of the day. But it is the foundations that are at fault. Were they firm then what appears as a disaster, or as an almost unforgivable fault in one's partner in life, will appear in a totally different light. This is really the primary secret of married happiness. Properly appreciated the two find a charm and happiness in each other, which often to the uninitiated, regarding them as plain and ordinary folk, is wholly incomprehensible.

There are especial times, of course, when continence must be observed. At the time of menstruation there has always been amongst all peoples the strictest continence observed, and amongst many peoples there has been and is an additional complete separation of husband and wife for a few days afterwards. In the law of Moses the breaking

of this law of continence was punished with death. These laws and customs have a sound physiological basis. Any infringement of them is apt to lead to sudden cessation of the menses with cramp of the womb and hysterical symptoms, or on other occasions to loss of blood and vaginal discharge. The husband also may contract a troublesome urethral catarrh.

Amongst primitive peoples, as well as Oriental civilizations, as has been shown, the profound physiological difference of men and women is observed not only in the primary relations of life, but also in all the secondary manifestations. The equality of man and woman, which is the theory that subsumes the sex relations in the spreading of democracy, is from the biological and physiological point of view romantic nonsense. It has no basis in bodily fact. There is no question of equality and inequality in man and woman, but a definite difference. This difference is shown in the respect the men show for the inherent modesty in women, and the desire of the latter to be separated from the opposite sex at times of physiological functioning, which is peculiar to the female sex. It is this that leads to the separation of the sexes at the menstrual period. Similarly during pregnancy amongst some peoples of the world there is the same greater privacy on the part of the wives, a privacy as strictly regarded by the husbands as the proprieties of society are regarded amongst civilized people. But this separation of husbands and wives during pregnancy is by no means widely spread. Amongst civilized people it is not regarded at all, nor is it to be commended.

Times for Continence.

Continence should be observed for the month preceding the birth of the child. After the birth of the child, the Bible lays down a continence of forty days or some six weeks. Amongst some peoples, continence is observed until the child is weaned. Though continence is not necessary during pregnancy, there are cases of pregnancy when it is necessary. Such cases are those threatened by miscarriage, for intercourse may bring on the miscarriage. Continence should be observed for at least a month after all signs of threatened miscarriage, such as loss of blood, has ceased, and then should be very moderate. If miscarriage occurs, continence should be observed for six weeks as after a childbirth.

Continence should also be observed if there is any bleeding with intercourse, unless it occur in the beginning of marriage, when it is frequent. With this exception, however, continence should be observed and a doctor's advice sought.

As has been said, during the process of suckling the child until weaning, continence is observed amongst some people. At this time, amongst civilized people, there is not as a rule continence, but moderation should be enjoined more particularly than at other periods. The process of suckling a child is one that evidently entails some physical sacrifice upon the part of the mother, for nature has provided the general rule, a rule not free from exceptions, that the suckling mother does not become pregnant. The strain of suckling is evidently sufficient, and nature does not permit that of pregnancy to be added to it.

The Healthy Marriage.

Marriage can scarcely be said to be fully completed until a child is born. Amongst the Zulus, Nubians and other tribes, the wife is not regarded as a wife in the full sense of taking over her established rights until a child is born. Both physically and psychologically marriage is not really completed until the birth of the child. The narrowing sense of individualism, then, becomes leavened with the sense of race and family, and the social feeling which alone can displace egotism becomes widened by the care and love which through the child the parents feel for the future generation. Moreover, the husband's feeling for his wife certainly gains in respect when he regards her as a mother, and the husband no longer appears to the wife only as her mate, but she regards him with peculiar tenderness as the father of her child. These changes and expansions of feeling, though they may not be quite general, are perfectly definite. They are not romantic, but are felt by parents to arise quite definitely when the child is born. Their speech conveys it. The husband becomes the papa in the wife's eyes, she identifying herself with the child, and the husband addresses his wife by such endearing terms as "little mother."

As regards the frequency of childbearing, it may be laid down that nature has given a good guide in that she prevents conception taking place with few exceptions whilst the child is being suckled. In most countries of the world, the period of suckling stretches over at least two years. Consequently a space of some three years elapses between the successive births of children. Such an interval may

be regarded as one which nature orders for the due protection of the mother from the strain of excessive childbearing. Moreover, with the natural height of infant mortality, it forms one of the chief agents for the limitation of population. There is a great fear of over-population since Malthus' famous book. But in China, a country whose history has been remarkably free from devastating wars, one sees that the two agents above-mentioned, plus the ordinary mortality, which prevents many who are born from reaching marital and parental years, have very notable effect in restricting population from reaching impossible limits through the centuries.

In France, Germany and England of the present day, amongst the upper classes the two-child rule, as it is called, largely prevails. It is a rule of certain decline, for rarely do both children attain to marital years and themselves have children. This limitation of families is brought about by the use of precautionary measures taken by the parents against conception; as a result, they limit their families to the small numbers to which, in their opinion, they will be able to give the inestimable advantages of a modern education and, perhaps, a stock of capital as a start in life. Not infrequently, owing to the death of one child, the other child is brought up to absorb the whole of the parental love and care. The one-child marriage may bring a sufficiency of content to the parents, and they are proud of the selfish, indulged, inadaptable, round-shouldered, thin, clever, and highly-educated product of their union. But such wither-

ing up of family life means a withering up of social life. Life becomes no longer a question of give and take, but merely one of take.

The subject of the relation of the family to society and history I have dealt with in another book. Here I have to deal briefly with the deplorable fact that preventive measures and checks to conception are used in the most widespread manner, a use that has been practically enforced by a commercial civilization, whose standard and god is money. The practice is part of the civilization. It cannot be regarded separately. Nevertheless, much as I dislike this limitation and shrivelling of the family and its influences, I feel bound to state that the evils which, according to many writers, invariably follow the use of any kind of check, are exaggerated. That many of them do cause hysteria, nervousness and more definite forms of illness is undoubted. That their use will also be paid for by additional suffering in women, when the change of life comes, is also true. Nevertheless, there are some forms which are not directly harmful to health. They do not make women ill in the modern sense, for modern people seem to be contented with a quality of health much below that which mankind with wisdom could possess. I do not think it fair to frighten women with the perils of all forms of checks, when these same women live in terror of being submerged in poverty if they have too many children. The whole question is a deplorable one, and there is little or no remedy for it whilst civilization continues to progress in its present courses of the dominating influences of commerce,

money, additional costs of the necessities and additional necessities of life, and the painful subordination of life's true physiological issues.

There are, it is true, some marriages which are not blessed with children. There are even marriages in which there is a voluntary avoidance of all childbearing. It is rare for such marriages to be happy, though occasionally they are so As a rule it is said the wife is the one who suffers most. Her desire for a child is greater than is the husband's. I am not sure that this statement is correct to-day. In voluntary childless marriage, I have never yet discovered that it was the husband who desired the marriage to be childless, and what one sees in the extreme may not be untrue for the average. My belief is that in urban populations, at any rate, the husband is as eager for, and perhaps, as devoted to the children as the mother, and though the maternal instinct is a very definite thing, I do not believe that the paternal instinct is any the less definite. I have found that the sterility of the marriage, however it be caused, is a decided grief to the husband and, wheresoever the wife is not wholly bent upon her individual pleasures, a great grief to her as well. Indeed, the women, who through dread of child-bearing, the absorbing duties of motherhood, the loss of their youth, and as they hold their beauty, women, such as one sees, especially amongst the fashion in the United States, are mostly heavily punished by an enduring discontent, a perpetual restless search for the undiscoverable, a feeling of the emptiness of life, though it be filled with a ceaseless round of appointments

and pleasures, the vague but definite pessimism, which is sharpness itself in discovering the faults and imperfections of life and fails to be conscious of the deep tides of reality, which transcend mere happiness in the sense of the volume and substance of life. I would go so far as to state that wives ought to be made to have children; childbearing should never be left to their individual choice. They do not know the treasure that is awaiting them, and custom has no right whatsoever to overlay their natural instincts with a lot of false opinions and intellectual poses as it does to-day. I say that the choice of having children should never be left to young married women. The very fact that their instincts moved them to marriage in the great majority of cases shows that the joys they will receive with maternity are latent within them. Then, when their babies are born, the false opinions and the nonsense that is talked and written to-day vanishes before the genuine gifts of nature. I know, even as a man, no delight so great as that of holding one's first-born in one's arms and the joy to a mother must be the most exquisite that this world can give. It itself is the joy of giving, the true joy of gifts from one's strength. The baby takes all, it is too weak to give. Consequently, from the mother, nature requires that a source of giving and, if you will, self-sacrifice, though I would prefer the term of self-fulfilment, should spring up freshened and made sparkling with love. Texts by their repetition are apt to lose the striking truth that lies within them. Only when they suddenly make conjunction with the feelings of the

heart, does their great worth illuminate life, the world and its true meaning. Thus it comes about that women hear again and again without heed the text that speaks of the joy that a woman feels when a man-child is born into the world. But when her lips are upon the child's cheek or its lips against her breast, then all the modern verbiage upon marriage vanishes and the truth of this noble text stands out before her like one of the eternal hills which has divested itself of a mantle of enveloping cloud.

CHAPTER III.

Sterility.

"The grave; and the barren womb."—*Proverbs*, xxx. 16.

THE barren womb or sterility is justly considered a great grief to a married woman. Therefore, in this all-important matter to their health and happiness—for the proper fulfilment of life has a profound influence upon health—women have as great a right to reliable information as they have concerning other matters, which touch them far less closely. As it is, however, though burdened with education, there is astonishingly little information given to people on the most vital issues of life. There are two reasons for this: Firstly, amongst medical men and students there is very little teaching and knowledge about sterility and kindred subjects, and secondly, such doctors as do know something about them seem to be afraid of writing. These subjects deal with sex, and to pay heed to sex is dangerous. Yet the question of sterility is one vital to the happiness of many married people, and, as many of the causes of sterility are subject to cure, such guidance as one can give has a definite value.

About one in ten marriages are said to be childless. The inability for the marriage to be fertile is sometimes due to the woman, sometimes to the man,

sometimes to incompatibility between the two. I will first speak of the causes of sterility in the male, which subject, perhaps, is less pertinent to this book, though one cannot write of sterility without thought of the husband. Here, then, at the outset I would say, that unless the cause of sterility is obviously in the wife, the husband should always be examined by a medical man. It is not fair to submit a wife to treatment, which is naturally not pleasant for her and may involve some minor operative work, and in rare cases a more serious operation, without the husband first submitting to examination. There are men who have lost power owing to peculiar phases of diseases that are only too common in those who have delayed marriage. There are others to whom power is actually wanting, there are others who from sheer nervousness, especially in the earlier part of marriage, are impotent, and there are others suffering from diseases or congenital defects which make paternity impossible. Clearly, then, in such cases it would be a great abuse for a married couple to decide to let the wife consult a medical man and be treated without the husband first submitting to examination. Sterility in men is sometimes curable, but as a rule the causes leading to his lack of fertility are such as do not permit of cure. Lastly, the most common cause of sterility, of course, affects men, namely, age. Men who marry about the age of twenty-five are most sure of having children. At thirty-five their chance is decreased by about one-third, and at the age of forty-five by over two-thirds. It is rare for men who marry at fifty-five, or over, to have children, but, of course, it is not impossible. The

children of men marrying late in life are also less vital and tend to die in infancy. The children of very young fathers, namely, twenty or under, also have not the vitality of those born to fathers between the ages of twenty-five and forty. Such are the general rules.

As regards sterility in women, it may be congenital owing to defective development or functioning of the womb and its related organs. It may be acquired. Acquired sterility is said to exist when, in spite of the wishes of the husband and wife, no pregnancy has occurred for three years. This time limit makes a good practical rule for those who like mathematical rules. But married people will usually be directed by their own feelings as to when to seek advice.

Congenital sterility in the woman is due to the lack of proper development of the generative organs. Fortunately it is rare. When existent, it is not always possible for a doctor to detect it. But it has this practical importance, namely, that, owing to the close relation between the development of the generative organs and menstruation, congenital sterility may show itself in complete absence of the proper menstruation. It is by no means the only cause of absence of menstruation in a girl, but it is obviously one of great moment. No girl who does not have proper menstrual periods has any right to marry without a doctor first being consulted. I have known such marriages to occur. I have known such stories as this—namely, of marriage and congratulations, attempted suicide of the young wife during the honeymoon, flight from her husband

followed by a decree of nullity of marriage, all due to neglect of the advice actually given by the doctor, to whom the mother of the bride had taken her daughter. But not all cases of maldevelopment are incurable. In some, in which the lack of development is only partial, the condition can be remedied by taking in medical form the thyroid and pituitary glands of animals. Sometimes, too, marriage itself causes development to proceed to fulfilment. The defect is one of delayed development. So there is no need to despair in these rare cases, for there have been instances where married women, who had never menstruated owing to this reason, have been sterile for many years, but eventually borne children. Nevertheless, justly regarded, such women should not marry without proper medical advice.

Acquired sterility is far more common and has a number of causes, with which I shall deal in so far as women themselves would notice them.

The only natural cause of acquired sterility is age. The fertility of women in this respect follows roughly that of men, antedated by some five years. Thus marriage is most fertile when women marry at the age of twenty. When entered into at the age of thirty its fertility is diminished by about a half, and at forty by three-quarters. These are the general rules of the effect of the woman's age at marriage upon her fertility, but the age of the husband naturally has an important bearing. The maximum fertility of a woman marrying at twenty occurs when her husband is about twenty-six, of a woman marrying at twenty-five when her husband

is twenty-eight, and with women thirty or over when the husband is proportionately younger. The most fertile unions result from marriages of women of twenty or twenty-one to men of twenty-five or twenty-six.

Any disease of the womb or its associated organs tends to produce sterility, which may be absolute. These conditions are usually betrayed to the woman by the pain they give her, especially in the back, or the whites and discharge from which she suffers. Sometimes inflammatory diseases follow a childbirth or miscarriage. The woman is ill in her lying-in period and from that time her fertility may cease. Such cases as these may, however, be cured by the doctor, and the fertility be re-established, but such a cure is rare. More often if sterility follows a child-bed fever it is an absolute sterility. Such sterility may be consequent upon the first or any other child-birth. Most frequently it follows the first. One child is born, but from its birth onward the mother is rendered incapable of again becoming pregnant owing to the womb after childbirth becoming seriously inflamed and bound and constricted by resulting adhesions. This so-called one-child sterility is particularly apt to occur in the young wives of men who, at some time, have had illness and not submitted to thorough examination and treatment before marriage. It emphasises the importance of such premarital examination in men who have lived the premarital life that is common at the present time.

There are many commoner causes of inflammation of these parts leading to backache, sense of weight

in the loins and whites or vaginal discharge than this infection. In such cases barrenness sometimes results, sometimes it does not. But though one cannot say definitely that a woman with vaginal discharge will be sterile—and frequently she is not—yet one can say that she will tend to be sterile. There is no doubt that women without discharge are more fertile than women with discharge. Therefore any catarrh or more serious inflammation of the private parts should never be neglected by a woman who desires children, apart from her desire for health. I repeat that this catarrh very often will have little or no effect upon her fertility. On the other hand it may do so. It may cause her to have complete sterility or to have frequent miscarriages ; and the practical importance is this, namely, that these catarrhs and inflammations are frequently curable, and with their cure the ability to bear full term children may be re-established. Other diseases, such as tumours of the womb and ovaries, may bring about an acquired sterility, which may be cured with their cure. The signs they give may be very slight or marked. A woman may have slight discomfort, pain, flooding or other trouble, which sends her to her doctor, rather than does her anxiety to become a mother.

It is the same with displacements of the womb. They by no means necessarily produce barrenness, but they do often produce an unhealthy state of the interior of the womb, so that the natural implantation of the fertilized ovum cannot take place. Either complete sterility takes place or miscarriages occur. The usual signs of displacement that a woman

notices are long, lasting backache, pain especially when she becomes constipated, occasionally pain with intercourse, and the whites. If she have these signs she is wise to go to a doctor, for often he can cure her completely, and usually he can do her good. Her cure, too, may be followed by the re-establishment of her fertility. The same may be said of prolapse of the womb, consequent upon tears and injuries at childbirth.

There is a peculiar form of painful menstruation, which is frequently associated with sterility. The pain may occur at the first menstruation or begin at a later date. It is peculiarly violent and spasmodic. The unfortunate sufferers are made sick and to sweat by it. It does not last many hours and is relieved when the flow comes freely. This terrible monthly pain and its associated sterility may be completely cured by a small operation upon the neck of the womb. There are other peculiarities of the neck of the womb that tend to cause sterility, but do not cause pain. One famous American doctor said, indeed, that some such peculiarity was to be found in 85 per cent. of the cases of natural sterility. Treatment in these cases may have very favourable results and pregnancy occur soon after it.

Obesity is a condition that is associated with scanty menstruation and sterility.

Alcohol, taken too freely, is a definite cause of sterility. Very painful intercourse and excessive intercourse both may be causes of acquired sterility, and causes which are curable. So also is absence or deficiency of sensation associated with sterility. It is not necessarily so, but women so affected are far

more likely to be sterile than are other women. The absence of feeling seems to be anticonceptive in other ways, for such women very often are unable to retain the male seed, but one cannot in a book give the remedy for this.

There are also unexplained conditions of incompatibility between husband and wife, in which a woman, sterile in a first marriage, is fertile in her second.

There are also a number of serious diseases to which sterility is secondary, such as severe anæmia, severe heart disease, Bright's disease and advanced consumption.

Lastly, there is the sterility following operation purposely designed to bring it about, a cause which at one time was far too frequent and brought about for too light reasons. Now, however, such operations are only undertaken, after serious consideration, in forms of illness and deformity which need not here be mentioned.

Such are the conditions that cause or tend to cause sterility. Many of them are curable, and therein lies the importance of this chapter.

CHAPTER IV.

Neurosis.

Worry, Neurasthenia, and Hysteria.

"Their ceaseless troubles and distresses, displayed in a thousand different ways, are to be cured from one point only."—*Goethe's "Faust."*

To properly write upon these hydras of modern life would need a large volume at the least. If serenity is associated with a certain amount of order, of repetition, and that which necessarily results from repetition, namely familiarity without surprise, shock, or the strain of meeting the new, then one has only to look round the modern civilized world to see how very wanting it is in these characteristics. If one goes into a modern drawing-room, or a modern street, or a modern concert or music-hall, or in fact, a modern anything at all, one sees nearly invariably, crowding without order, accumulation without selection. A drawing-room has big chairs, little chairs, sofas, settees, stools, little tables, big tables, tables spread with different bits of china, others spread with different oddments in silver, others with brass knick-knacks, a crowded mantelpiece, photographs, drawings, water-colours, oil-colours, etchings, prints ; in fact, a modern drawing-room looks like a store-house of oddments, many set out like things in a shop, some sensible, many senseless and impossible

to order in such a way as to produce serenity in the mind observing them. The modern street is the same. It is a mass of confused traffic, hoots, bells, screechers, bustlers and hustlers. A modern shop is the same. Its great object is to display multiplicity, to advertise all its possessions by having them on the surface, to have no secret treasures nor any space that corresponds to leisure. The things are crammed together, each article as far as possible screaming for attention. I need not continue with the concert, where a Beethoven Sonata is succeeded by a Sullivan pot-pourri, or the diverse dabs of a music-hall entertainment. Everywhere it is the same, the same lack of continuity, the same lack of wholeness, the same lack of space and leisure, the perpetual serving up of trifles that have some oddity to attract attention, but which is of so shallow a character that it only holds the attention for a brief time, and then the mind turns to some new titivation. Serenity, which goes with calmness and wholeness, has little place in the modern world. Excitement and its faithful companion irritability—and with irritability, of course, exhaustion, for irritability is a sign of exhaustion—are the prevailing moods that have captured the people, old and young alike. Petty annoyances, they say, will drive even a philosopher to his grave, and the modern world is full of petty annoyances, owing to lack of wholeness and the serenity that produces good work. Everything is made to sell and not to last—to allure, but not to please with permanent good friendship or service. It is as if Leicester Square were going to become the hub of the world. Nothing will bear

pressure. Everything, and some might say everyone, gives way directly some great weight or duty is put upon it. Little things—there are so few big things in a rushing world, for a tearing river has no striding rollers like the broad Atlantic—little things are perpetually going wrong in a way to vex the heart of the most patient wife and housewife. The chair she bought begins to creak when anyone sits down on it. The doors begin to give when there is a high wind. The cook, who for the first week or so seemed so agreeable and so pleased with her place, begins to grumble. The closed windows let in the icy draughts. Housemaids are always breaking things in the pantry, and tradespeople are always breaking their promises. The wife herself finds that her own and her children's stock of health is as discontinuous and variable as the things about her. It shows as many unexpected idiosyncrasies and aberrations as her furniture and household fittings. Her husband's business seems also to be subject to fits and frights, and the world's face, as reported in the daily papers, is always being rendered ugly by some nasty eruption of general catastrophe, social evil, or domestic tragedy. The wife feels that she is beset with incertitude. All continuity seems to be lacking. The moment alone seems of importance, the pleasure it contains or its pain. It becomes the order of the day to fill each moment with something from without, with pleasure, business, shopping, slumming, it matters not what. Be busy, be always occupied or entertained. Keep your lives and minds filled with outer things. Such seems to me to be the advice the world gives to women to-day. It

is as if people dare not look into themselves, for if they look into themselves they fear to see the primary sources of proper life dried up or choked or perverted.

It is this neglect, ignorance and even scorn of the primary sources of life which lead to the enormous and increasing amount of nervousness, worry, and hysteria of the present day. I can only briefly touch upon these maladies. I cannot give full instructions to my readers. But I can give them some indication as to how they can avoid or rid themselves of the demons of anxiety, fear and suppressed longings and desires that people the modern world. For it is well to be rid of them. There is no greater folly than to harbour them, and even convert them into the virtue of being "highly strung." It is far better to be well balanced than highly strung. If one is highly strung, one is apt to snap and be snappy. It is not a sign of exquisite refinement, but sickly refinement. All things exquisitely refined, such as the Parthenon for instance, or the Erechtheum, are strong as well as refined, and require powder magazines to shatter them. But sickly refinement, the superficial ornate which falls to pieces at a breath of adversity, cannot be a matter of congratulation.

The sign of satisfaction is contentment. A man and woman pleased with their house do not set about getting another one. A man satisfied with his wife does not want to divorce her, and a woman satisfied with her husband does not want a lover. If she says it is natural for her to want greater freedom in this matter, it means either that she or her husband

are not sufficient in marriage. Marriage being the most important condition in married people's lives, dissatisfaction in it becomes centrifugal ; it tends to spread to all the circle of their lives. Dissatisfied married people, being dissatisfied at the core, are dissatisfied throughout. They may get momentary pleasures here, forgetfulness there, some sort of narcotic, whether of extreme business or gadding about as it is called, or an affair, but fundamentally the dissatisfaction remains. It cannot be banished. It can only be banished by the radical measure of divorce, and divorced people can scarcely flatter themselves that they have been good choosers in and directors of their lives. Divorce is not a thing to be proud of, it is an open acknowledgment of grievous failure ; and the currents of our lives, to run clearly and purposefully along their courses, do not admit of such grievous failures.

To married women, then, satisfaction in marriage is the only proper source of genuine happiness and contentment, and, with contentment, proper and natural development of her personality. Discontent warps and blights. Content, by which I do not mean a perpetual smile, but the feeling that life even when hard is right and purposeful, alone develops the character positively from a central healthy source. There may be such a thing as a divine discontent, but it should only be divine, namely, the vexations that the gods or their interpreters, the men of inspired genius, feel when they see men in vanity depart from the paths of wisdom.

I now come to the central point of my advice. Marriage is essentially a physiological condition.

Its contentment and satisfaction is founded upon sound physiology. Without sound physiology genuine satisfaction cannot be obtained. It is true that some people are born or become so unsound before they marry that they bring unsound physiology and consequent dissatisfaction into their marriages. But I am not speaking of these cases. The discussion of them, as yet, belongs wholly to the physician and not to a book of this kind. They can be bettered greatly by proper understanding and treatment. Nor am I referring to eugenics or eugenists ; I am referring to the hundreds of cases of healthy and educated people who become dissatisfied with their marriages or become nervous, anxious, worrying, neurasthenic or even hysterical, and do not know the real cause. They attribute their troubles to all sorts of outside reasons, commonly known as troubles, or else to temperament. But in the great majority of cases the true reason is faulty marital physiology.

The unhappiness and misery that is caused to married and also to unmarried people at the present day owing to faulty physiology is terrible, and the ignorance and folly of it all is just as terrible. All this worry and anxiety and mental fever and perpetual business and mad haste is not necessary in life. All the unhappiness it entails is not necessary. With sound physiology it does not exist. With it about us on every side, we yet see mothers and wives, models of happiness, serenity and health, who are wholly free from it. Such married women should be our aim, the physician's aim, at least. He cannot look with favour on the highly strung. I shall now

touch briefly on the results and nature of faulty physiology, compelled to do so by the assurance that this part of my advice to women is more valuable than any other part of the book.

Let a woman secure a healthy marital physiology. It is not always in her power to do so, but if secured it will be the foundation of her willing acceptance of life. With sound physiology—a thing quite different to the artificial health and muscles physical culturists give—there is sound foundation, and the other things, such as the ability to meet what would ordinarily annoy with serenity, such as good sleep, contentedness of mind, desire to cultivate herself and home practically and not fret with vain longings, all these will be added. Neurosis is probably altogether impossible with healthy physiological marital life. It seems to be wholly unknown to the nations of the Orient, which, except when Europeanised, found their civilisations and social spirit upon marriage and parenthood.

Neurosis shows itself in an extraordinary number of manifestations, bewildering often to both patient and friends. It is these manifestations that appear so important themselves, and they totally obscure the real physiological fault. They are such things as headache, pressure in the head, flatulent dyspepsia, some forms of constipation, general irritability, auditory hypersensitiveness, insomnia, anxious expectation, exaggerative gloomy outlook, petulancy, meticulous conscientiousness, fears and phobias of various kinds, fear of cancer, of heart disease, of a crowd, of loneliness, of loss of money, of loss of love, of insanity, of the children's health

(a fear and nervousness the children often catch from their mother), also palpitation of the heart, attacks of asthma, nocturnal perspiration, dislike of the children, feeling them a worry rather than a pleasure, dizziness, actual fainting, nightmare, loss of appetite, capricious appetite, perpetual doubt as to action, nausea, diarrhœa, queer feelings in the body, rheumatic pains, rapid pulse, mental stupor, insuperable languor, melancholy, fits of crying, hysterical paralysis, seizures and imitations of real diseases.

The list is a formidable one, but it emphasises the more the importance of proper sexual physiology to a contented acceptance and healthy appreciation of life. Neurosis is practically invariably connected with some fault in that fundamental relation of mankind which is so emphatically established by its division in the two great groups of men and women. Therefore, if a married woman suffer from these things, let her pay heed first and foremost to the natural sense and normal conduct of her intimate relations as a woman to her husband. Frequently she will find or know of some anomaly, but frequently, too, she will not be able to discover the source of her or her husband's neurosis. Then, if she know of some doctor, skilled in the understanding of human nature, and able to discover the primary physiological faults and separate them from the confusing number of secondary incidents and personal happenings, with which the woman herself overlays and obscures them, she should certainly seek his advice. He may be able to do her the greatest good and convert a life of fret, worry, and

doubt, into one of content and achievement. He may do more in cases where more has to be done. He may cure and abolish hysterical paralysis that has kept a woman bedridden for years. There seems, indeed, to be no limit to the multifarious forms by which faulty sexual physiology displays itself, nor in the good that doctors versed in psychology can effect in such cases.

CHAPTER V.

Exercise

"Man takes root at his feet, and at best he is no more than a potted plant in his house or carriage till he has established communication with the soil by the loving and magnetic touch of his soles to it."—*Hazlitt.*

HAVING dealt as far as is possible with the peculiar hygiene of marriage, we can now deal with ordinary hygiene, concerning which the pen is permitted to run with freedom. A first principle of ordinary hygiene is exercise, the purposive movement which is the characteristic of living beings.

All human beings have the habit of movement for its own sake, at least in youth they exercise themselves for the sake of exercise. In the Occident, this exercise for its own sake is largely pursued by people who have long passed their youth. In the Orient, the elder folk of some nations, and especially the women of the better classes, do not take exercise for its own sake. Some women, indeed, are greatly restrained by the Mahommedan system of purdah. Yet it is not known that these women have difficult childbirths. Indeed it seems possible that they would be found by the statistician to have easier times than European women. Whatsoever effect exercise may have upon childbirth, from the point of view of health, there can be no question as to its direct value. One has only to compare the

English women of the country, with their red cheeks and lips, and their bright eyes and animated gestures, with these Oriental women, with their wearied expressions and slothful gestures, to see how much more vigorous is the race whose women, as well as men, make a cult of exercise. It is true there are some English women who are rarely forced to purposive movement, and who care nothing for exercise, who consequently sit in chairs or in motor-cars, or lie upon the sofa and do not exert their muscles. But these women are seldom healthy. They are pestered with minor ailments, and they are wholly deprived of the glorious glow of keen vitality that is the reward of a more sensible type of living. Perhaps no women are more indolent in this respect than the Russian women, especially of southern Russia, and it is notorious that they suffer from all sorts of complaints and nervous attacks that are bred upon the sofa. Quite a number of them become invalids when they should be in the vigour of life, some become melancholy, and some actually become insane.

There can be no doubt then of the value of exercise. It is one of the really important things in life, and if it is not directly purposive, then it must be for its own sake. No one, of course, would recommend a country postman, who has to tramp twenty miles a day on his rounds, to take exercise. He is fortunate enough to have all his movement purposive. I say fortunate, for with many of us, what is not imposed by necessity, is apt to be neglected. This is particularly the case with women who live in large cities. London, for example, in

spite of its rush and hustle, seems purposely to design against exercise. If one wants to move from place to place, there are motor cars, taxis, omnibuses, railways, tubes, so that exercise is almost as unnecessary to a lady as it is to a parcel. She can be handed from place to place with scarcely a vigorous move on her own part. Even the exercise that stairs impose upon her is taken away by a lift or a moving platform. With so many conveniences, exercise depends more and more upon her own determination. She herself must decide to undertake this necessary measure for her health. Town life, as I have said, deliberately robs her of this invaluable health asset. It conspires against her, and its conspiracy is ceaseless. Even if she acknowledges the value of exercise and sets out for a walk, the conspiracy still pursues her. No sooner is she a little tired, than she has the natural desire to be assisted. Nature itself, no doubt, would assist her by making her rest for a while. Five minutes of such rest would undoubtedly refresh her, and enable her to continue both her walk and her determination. But some member of the conspiracy is immediately upon her to take advantage of her temporary weakness. A man attracts her with, " Taxi, ma'am," a tube station advertises at its entrance a map of its octopian power, buses run by, obedient to a raised hand or nod—there is scarcely anywhere where one of these seductions will not allure her, and she usually yields. She is conveyed, and others benefit by the journey which she is forced to make, and not herself. Not only does she lose the exercise, but, as time goes on, she requires more and more resolution to deliberately

walk from place to place. She yields more and more to the conveniences, until the plan of her life cannot be continued without them. She arranges to do so much, that it cannot possibly be done unless she is carried about at a greater speed than her own legs will carry her. Exercise *per se* goes to the wall, and this disaster, which might not be so great in itself, is enhanced by the fact that all purposive movement is taken from her. Her movement becomes reduced to a bare minimum. She has to move to dress herself, to come downstairs and to go upstairs, unless a lift saves her from these exertions. She has to step across the path into her motor car or taxi, or a little way to a tube or bus. But over and above this, she scarcely moves at all. All the 300 muscles of her body languish, and those of the heart get disabled for any but the feeblest exertion. Palpitations and weariness consequently come readily to her. The muscles of her chest, which alternately enlarge and compress her lungs, instead of being fine and vigorous bellows, are not able to do the work a pair of hand bellows can accomplish, as she may test by trying to blow out a candle at a distance. A moment of extra exertion will throw her into a breathless condition. It is the same with the muscles of the abdomen, which have such important functions in digestion and in aiding the opening of the bowels. They sag and become weak, fat invades them and the abdominal wall, and the youthful figure that was once my lady's pride, now becomes to her a distress that is only tolerable because many of her friends and neighbours are no better off. The muscles of her back also give way, except for the

stalwart support of her corset, and she is constantly reminded of their weakness by the backache from which she suffers. Her legs become cumbersome and feeble, and if she had at any time to jump two feet to save her life, this unusual exertion would probably be a fate to her. This weakness of her legs and the increase in her figure eventually rob her of the one exercise that still fascinates, namely dancing. She has to give it up and watch others. Eventually she becomes almost entirely a watcher, a gracious and charming one no doubt, but nevertheless always a spectator and never herself active. She sits at the theatre, she sits in concerts, she goes to watch the young folk dance, she sits in the grand stand at Lord's and sees her sons and nephews ply the willow, she goes to Henley and sits on a house-boat watching the flashing oars, she is always the watcher wherever she goes, be it a bazaar, a flower show, a garden party, there must be abundant chairs for her and her like; it is ever the same—watch, watch; watch the male or the younger and more active world go by, while she, with all the beautiful apparatus of her 300 muscles which provide the basis of such exquisite movement and such glows of health, loses them all except those which give play to her cultured and gracious speech.

Women who work in towns may eventually be allured into as pitiful a plight. The conveniences of conveyances are there to bid for their more slender purses. Hurtled through an iron bowel buried deep in the earth, with air pumped down to them and the light of the metal filament overhead, they are borne to their offices, their school, their shop, their factory.

Arrived at their place of business, often again but little true and healthy movement will be allowed them. Such as it is, it is usually of the narrow order that leads to a single accomplishment of mechanical skill, but has no good influence upon the whole organism. On the contrary it bends and sacrifices the organism to its peculiar speciality. The unwearying fingers have to keep up the eternal click of the typewriter, they have to ply to and fro the threaded needle, they have to cut out labels, paste the edges of cigarettes, do some peculiar work a thousand times and again a thousand. And meanwhile the bowed shoulders are folding in the chest and pressing the collar bones upon the area of lung, where the germs of consumption first set their threatening hold. The muscles of the abdomen are relaxed the whole day, and the muscles of the leg and back take on the position of rest. Weariness, anæmia, constipation, owing to the feeble expulsive powers of the abdominal muscles, headache, backache, feetache, eye strain, indigestion, heartburn and conditions predisposing to more serious diseases result. The very outlook upon life becomes darkened It does not get the gracious but flabby artificiality of the inert society dame, but it becomes viewed, as a feeble warrior views a war, as something pregnant with awful possibilities, or at least a long and fatiguing struggle with few rewards.

Ladies and women of the suburbs and country are more fortunate than they of the town. The shops, the houses of their friends and other places to which they have to go are at some distance from their homes, and means of conveyance are not so plentiful.

Walk as a rule they have to, and walking soon brings them its own reward. Firstly, a habit is engendered, and with the omission of the habit, a loss is felt. But the loss is more than that due to the disturbance of a habit. It is soon found that there is a definite loss of health and pleasure if walking is given up. The quality of the health is not so fine, and the pleasure of the wonderful glow and vigour that thrills through the whole body as the result of a country walk, becomes not a frequent experience, but a memory, which urges the daughter of the country to repeat her experiences. There is, in fact, in the country and suburbs, not nearly the necessity there is in town to impress upon women the value of exercise. They know it, and much of their lives are planned so that they may indulge in it. The well-to-do have games, the less well-to-do have excursions and walks. Both may indulge in gardening, though as an occupation, gardening tends to be too lonely and unsocial to be popular. But exercise they have in plenty, and there is little need to advise them upon the point. Before they are married they have become proficient in a number of games and sports, and after they are married they continue their pleasures. A few words on the relative value of games and exercise will not, however, be amiss.

There are, of course, no substitutes for walking and running. These are the purposive locomotive movements which have been allotted to human beings, and, therefore, in their value must be considered supreme. Fortunately they enter into most games. In the two favourite games of the fair sex, namely,

tennis and hockey, walking, jumping and running in all their variety enter, and enter vigorously. These games, then, should be considered as based upon natural movements and as exaggerations of them. So regarded, they are obviously excellent, provided they do not produce that which exaggeration is apt to produce, namely, extreme fatigue. A certain quantum of fatigue is to be expected from any game, if only as a result of the excitement produced by it. The excitement of the game leads to players putting forth greater exertions than they would without it, and being brought up to a pitch while the game is in progress and suffering sometimes from a reaction afterwards. Only when there is extreme fatigue, by which I mean fatigue that has not passed off before night and needs a long sleep for recovery, should the zeal for games be moderated. On the whole women are apt to take too little than too much exercise, and to be restrained rather than encouraged. Hockey seems violent and is distasteful to many women. But if a married woman likes to play hockey and she finds that she does not suffer extreme fatigue, there is no valid reason against it. As for tennis, one has only got to look at some of the married women who play at the Wimbledon meeting to see what excellent health is theirs. One of the recent lady champions is my personal friend, and her healthy face and healthy life are delightful to witness.

For older women, croquet is the best game. There is more exercise attached to a long game of croquet than one would suppose, and the interest in the game will often lead a lady, otherwise indolent, to take the exercise that is so good for her.

Swimming, Riding and Golf.

Swimming and riding one may almost call natural exercises. They are certainly two forms of movement that men and women have readily taken to from time immemorial. They are both excellent and afford ample variety; indeed, there are no forms of exercise one can so cordially recommend as these. The ladies one sees riding in London in the Park bear witness to the healthiness riding brings. R ding astride is preferable in the symmetrical exercise it gives, and is wisely superseding the side-saddle.

As regards swimming, in spite of being mistress of the seas, it is a pity England does not pay more attention to this delightful exercise. The German local authorities make a special point of giving townspeople, men, women and children opportunities to swim; but our towns are not so well provided. Still, where there are baths or bathing establishments, women could not be better advised than to take a daily swim in the warmer months, both for exercise and pleasure. The rule of not bathing and swimming soon after a meal is a sound one, for it is but an application of the general rule not to take exercise immediately after a meal, especially if it has been a heavy one. It does not matter having a swim after a light meal such as tea.

Another commendable and popular game for women is golf. Golf takes people out into fine country, forces them to walk and exercises the arms and shoulders without violence. The chief objection to it is the time that it occupies. As a form of daily exercise for the sake of health, it is well enough for holiday time, but as it demands a

whole morning or afternoon, it has not the value of walking, riding or swimming.

Rowing is a fine exercise, expanding the chest and strengthening the muscles of the shoulders and back. For women who suffer from backache and live near a river or by the sea a little gentle sculling, which is extended by degrees to a more vigorous pull, is an excellent remedy. It is also a particular good exercise for women with weak chests, who are apt to get colds and bronchitis, for it takes them to the purest and freshest air and makes them inhale it in deep draughts into expanded lungs.

Motoring is a pleasant occupation, but it is not exercise, and it too often prevents a woman from taking proper exercise. It is said to be a good way of taking fresh air and, when there is not much dust, this is so. Fortunately, the dust nuisance upon high roads has been abated of late, but often a motor drive means scouring along in other motors' dust and adding a generous quota of one's own. Dust is very irritating to the lungs, and in some trades actually leads to special forms of consumption. Motoring at a pace along dusty roads, therefore, cannot be of much benefit to the occupants of the car and it is no little bane to walkers and other unfortunates, who are enveloped in the clouds raised.

Bicycling is popular as a convenience and as an exercise. As an exercise it takes townsfolk out into the country, and this is its chief commendation. For in other respects it cannot be praised as an exercise apart from a convenience. The exercise it produces is a specialised mechanical one, and the

crouching over handlebars is the reverse of a healthy posture. As a substitute for walking, bicycling is to be emphatically condemned.

Certain forms of artificial gymnastic exercise, which are popular in some countries of the Continent, are attempting to establish themselves in England. The medical gymnastics had their origin in Sweden, and are greatly in vogue in Germany. One is often asked about them, and for my own part I cannot recommend them as a substitute or accessory to games or walking, even though they are carried out in the open air. They are very un-English. Germans do not mind coming together in large numbers and going through set motions at the command of a superior, and the discipline and harmony of movement, no doubt, are beneficial from a military point of view. But advanced as English women are they have not yet applied for posts in the army, and are not likely to do so. The chief advantage of these Swedish exercises, therefore, is lost upon them. The disadvantages are that they tend to make women muscle specialists, who are capable of performing certain peculiar and senseless feats upon bars and rings. The exercises are so set and featureless they become boring, and there is nothing so wearying as being bored, nor anything so vitiating as going through exercises solely from a sense of duty or routine. For these reasons I do not recommend set gymnastic exercises to English women, nor do I think they are likely to become popular. At schools and colleges the discipline they impose and the need of making girls do stated things gives them more justification. If such exercises are

taken, undoubtedly the most scientific and carefully thought out are the Swedish. For invalids and women who are advised by doctors to have controlled and guided exercises, the Swedish are the most suitable. They are devised not only for general exercise, but also to restore strength to parts especially weak. Thus, there are even exercises devised to lessen pelvic congestion, so as to decrease the loss at the menstrual period, and others to increase the flow. Such exercises may have great use in certain ailments, but should not be undertaken except at the bidding of a medical man.

All these exercises and games give strength and health, and some give grace, but the exercise that is peculiarly valuable in its æsthetic and harmonious qualities is dancing. Dancing is an admirable exercise and one which has the particular value that women are very fond of it. It is easy and fascinating when mastered, because the movement is harmonious and graceful instead of excited and overwrought. It presents the opposite of set gymnastic exercises. The latter are essentially mechanical as opposed to spontaneous. They are often boring, and there is nothing so tiring as being bored. Anyone knows that this is so and can observe it daily in a child that can no longer amuse itself and lolls or walks wearily along, but is at once all vivacity and excitement if a game or diversion is proposed to it. Dancing, on the other hand, is the reverse of boring. Girls can dance all night and still feel fresh to go on. This in itself is a proof that there is something peculiarly suitable in the exercise of dancing. One could wish, however,

for earlier closing hours in the matter of dances, and also for better ventilated rooms. Lately, more particularly in London, individual dancing has been taken up a good deal. It is an exercise that cannot be rivalled, for not only does it afford abundant exercise, but the movements are harmonious and graceful, and give a beauty that the various games are less efficient in obtaining for their devotees.

Unfortunately, many of these forms of exercise, which are readily obtained in the country, are difficult or impossible to obtain in town. The advances that have been made in the physical development of women by games and exercise are largely nullified by the evil effects of town life upon health and, above all, upon exercise. One hears a great deal about the evils of overwork and various diets, but the chief evil of town life is this lack of exercise. Lack of exercise kills and makes sick infinitely more people than overwork does.

Fortunately no town dwellers are robbed of the one supreme exercise, namely, walking. Walking is possible wherever one lives, and I would cordially recommend my readers, if they are unable to get games and riding, to make a point of taking a good walk every day. If they would always walk for at least an hour a day as an average, they would find the greatest benefit in health, and, if in health, they would find an unexpected addition of the cream of vitality, which is becoming almost a forgotten thing to town dwellers. Walking without any object may be boring, so the best thing is to get a friend to accompany one upon a walk or to acquire a habit

of duty to a favourite dog whose nature clearly demands daily exercise. Often the streets are slushy and disagreeable. London streets are, indeed, as uninviting at times to the walker as one could well imagine anything could be. But the believer in health will, nevertheless, sturdily pursue the daily quest and endeavour by every possible means to make the exercise interesting. If interesting it will not tire ; if dull, it will tire. This is important to remember, and interest in an exercise is as important as its amount and strenuousness.

As to how fast one should walk is really only a personal matter. The brisk walk that makes the walker feel repaid by entering the house again with a good glow, a sharpened appetite and thirst, gives its own indications. These rewards cannot as a rule be obtained by a pace of under three miles an hour. In the country a swinging walk covers as a rule over four miles an hour, but that is a pace few women care to maintain.

When walking at the pace of three miles an hour the respiratory action is said to be four times as great as when standing still. The heart beats more rapidly at first, but soon begins to beat more forcibly, the reserve of muscle action being brought into play. When this begins the peculiar feeling of ease and strength which is known as getting one's second wind, is felt.

For games and more vigorous exercise special dress has to be worn, but for walking this is not necessary. A heavy skirt, of course, inhibits walking and makes a woman tire of it soon. A hobble skirt only enables a woman to nibble her way along

the ground and precludes anything like stepping out which produces a swinging rhythm of movement that is advantageous to health and well being. Low-heeled shoes are also better for walking than the high-heeled variety, though, even when the heel is so high that the bones of the arch of the foot are distorted in a way that makes an anatomist groan, it is surprising how well women walk.

Habit enables the human frame to overcome surprising oddities. But the extreme high heel which pushes the heel of the foot several inches from the ground and puts the foot into the distorted position favoured by the aristocratic Chinese gives something of the stilt-like quality to the walk which distinguishes the unfortunate high-born dames of far Cathay. Exaggeration that leads to positive discomfort and disability is never artistic, for the suggestion of weakness destroys the sense of desirability or admiration that is a characteristic of art.

High heels are also apt to make the feet ache, mainly because they stretch certain ligaments which are intended to maintain the arch of the foot. If this is their result the best thing to do is to have shoes with lower heels, and in the morning to practise lifting oneself up upon one's toes. This exercise does through the personal will what the high-heeled shoes do through the bootmaker. The consequence is that in the former case one gains strength and in the latter case one loses it and someone else gains it. Doing this exercise twenty to thirty times every morning will soon strengthen feet that are readily tired.

If generally tired from exercise, there is nothing

so alluring as a hot bath. The warmth relaxes the muscles and causes the blood vessels to dilate owing to the same muscular relaxation. It promotes in fact a general relaxation and rest, which is very pleasant after exercise. But such a warm bath is only wisely indulged in if one is not going out again and is able to go to bed soon. It is only justifiable when one is determined to give oneself over to the delights of a kindly tiredness. If one has to go out again or take renewed exercise, the bath should be brief, cold or tepid, and be followed by a good rub down with a bath towel. This stimulates the muscles and circulation and prepares one for renewed vigour.

Similarly alcohol should only be taken after exercise if one is prepared to yield to lassitude. If one has further things in the day to do alcohol is a decided mistake. It is a good fillip in small quantities, but its effect is brief, and if one has any hard work to do it is useless to expect alcohol to do anything but hinder one.

Such are the forms of exercise women may take when they are not pregnant. What changes and modifications should be made when they are carrying ?

Firstly, obstetricians are well aware of one thing, namely, that if the womb is healthy, it is probably impossible to dislodge its fruit by any kind of jar or jolt. Only a violent and dangerous injury will do so. For this reason one is wont to advise healthy women, accustomed to abundant exercise, not to make much difference during pregnancy, until its later stages, when they cannot move so freely. I

have known women in up-country Australia ride until the last three months of pregnancy, with absolute safety and the usual benefit. Such women are, of course, expert riders and by their skill avoid the jolting and jarring which are the chief elements of danger in horse-riding for pregnant women. Moreover, the Australian horses canter, they do not trot, and cantering is an easier motion. A notable example of activity during pregnancy was the case of Madame Mère, who bore Napoleon in her womb through the escapades and adventures of an arduous campaign. So also it is a well-known fact that at least three-quarters of the women of the world go about their ordinary occupations, such as working in the fields, until the day of childbirth.

Civilized women, one may say, are much too apt to make of pregnancy a partial invalidism. They succumb to the innumerable don'ts that pester our days of freedom and give rules by which intelligence is displaced by instruction.

If healthy, then, pregnancy need make no difference to exercise. Violent games such as hockey or tennis are best avoided, and to those in England it is best to add riding, but croquet, swimming, bicycling, walking, rowing, and so on, require no restriction. Even if unhealthy and liable to miscarriages, a woman is more likely to keep in that stage of ill-health that affects the womb to miscarriage by taking no exercise than by exercise she is likely to cause a miscarriage. Exercise by promoting a healthy womb is far more likely to prevent than to cause miscarriage. In the latter months of pregnancy exercise becomes restricted to

walking. But walking should not be given up. A woman in the later months of pregnancy cannot walk fast, nor should she attempt to do so. But walk she should until she is lightly tired, for the exercise will in every way be beneficial. It will make her sleep, it will give her a good appetite, and it promotes the action of the bowels at a time when they are apt to get constipated. If she is shy of showing herself abroad she can walk out in the evening with her husband or a friend. Some women like to go to the country at this time. They could not do better, for the country is healthier and quieter than the town.

If the weather is wet, it is still not an indication against walking. Women are too frightened of the rain and are sometimes kept in a whole day by it. It is true that no wise lady will expose fine feathers or furs to a drenching. But rain, unless very heavy, is no reason for staying indoors. Provided one has on clothes that will not spoil and changes wet boots, stockings, etc., when one comes home, only good results from a walk in the rain. The smell of the earth in the country is peculiarly delicious, the air is washed and refreshed, and the beat or caress of the rain upon the face is a sensation of charm that is too seldom realized.

Lastly, there is the artificial exercise of massage. When a woman is confined to her bed or couch and is unable to take exercise, then massage from a proper masseuse is excellent. Unskilled people by their pommelling and prodding are wont to do as much harm as good. The various movements of effleurage, pétrissage and tapôtement require trained hands. Their result is undoubtedly good. Muscles

keep their tone, appetite is preserved, and sleep promoted. Many of the benefits of exercise are thus effected by massage, but only in cases where exercise is not possible should it be employed. In bed also, when an invalid gets restless and turns this way and that, massage is excellent. In such cases when a skilled masseuse is not at hand, rubbing the limbs towards the heart will often take away the irritability.

Before I leave the subject of exercise, I must warn my readers against the excessive exercise that is really the product of an uncontrolled restlessness. Exercise is essential to the healthiest quality of life, but the capacity to be still is also an essential and a sign of the healthiest life. People who are never really at rest, whose fingers are twitching or "rolling pills" or who keep fidgeting and shifting their positions, are not thoroughly healthy people. Free movement is admirable, but as admirable is the capacity of complete stillness. But this twitching and restlessness belong better to the chapter upon "nerves." Here I would only recommend to my readers to read Louis Stevenson's charming essay, "An Apology for Idlers."

Having the capacity of stillness, the question of posture gains importance. It is as well for a woman to think upon posture and to cast occasionally a glance that is genuinely critical into the glass. A bad posture does not look well, it looks ugly, and women have no right to allow themselves to appear ungainly. But a bad posture is also unhealthy, for it cramps the lungs by bowing of the shoulders and weakens and relaxes the abdominal muscles.

Amongst other things rupture is undoubtedly favoured by bad posture.

The right posture is when, without the heels leaving the ground, the body is held at its full height, the shoulders are thrown back so that the lungs have full play, and the stomach is flat and not protruded. When sitting down the relation of the head, shoulders, chest, and abdomen should be the same as when standing. The right posture should constantly be borne in mind, and by constantly correcting the tendency to lapse into the position of fatigue with drooped shoulders, head sunk forward, chest in, stomach out and arms bent at the elbow, eventually a habit of the alert and ready posture will be acquired. The matter of posture is of real importance. Fortunately most women know this, and know it better than men. It was, indeed, a painful sight to watch the posture of much of the city youth before the war. Both youths and men seemed to have no bodily pride at all. Their frames consequently became painful to look upon, they had such round shoulders, flat chests and general floppy and relaxed appearance. But as yet most of the women of the city still preserve the pride of carriage and posture, and when one comes west or goes into the country one sees on all sides English women who hold themselves beautifully.

CHAPTER VI.

Food and Drink.

"The more man approaches the elements of nature, the more the principles of his science fade away."—*Bernardin de Saint-Pierre.*

As in the matter of exercise, so in the matter of food and drink, a distinction must be made between country and town dwellers. Women who live in the country and who, therefore, take exercise, enjoy fresh air, and have at their disposal a direct supply of fresh food, need not trouble much about diet.

But for those that live in towns the subject of diet is not so simple. Firstly, the appetite is often wanting. There are various things in town life that dispose to a lack of appetite. The first and foremost reason is lack of proper exercise. After an enjoyable walk the appetite is always good. A second common reason is a lack of really satisfactory occupation. Satisfactory and enjoyable occupation is a noteworthy condition of appetite as any woman can observe in herself. It implies the will to continue and to eat well, because the food will be turned into satisfactory work. Doctors not infrequently use the term a "vicious circle," but they do not use the term a "good circle." Yet since satisfactory occupation leads to good appetite, and a satisfied appetite leads to a renewal of desire for satisfactory occupation, this recurring sequence may be well termed a

"good circle." Pleasing occupation and enjoyable exercise are the two mainstays of good appetite, and a good appetite itself is the best support of a good digestion and the best defence against indigestion. Therefore if a woman suffers from lack of appetite she is well-advised to employ herself so as to stir all her faculties into a healthy demand for food, and to make a point of taking brisk walks. Sometimes an enjoyable dance has a wonderful effect in restoring a lost appetite.

Another common cause of loss of appetite is an ill-ventilated room, and especially an ill-ventilated bedroom. Constipation is also a common cause of loss of appetite and usually brings a headache at the same time. A decaying tooth in the mouth is also a not uncommon and unsuspected cause of loss of appetite.

Further causes, apart from actual illness, are bad cooking, and in towns staleness, dirtiness, or other defect of food. Into the question of cooking I cannot well enter, but I would here mention a general and very useful rule to remember in cooking, namely, that well-cooked vegetables and underdone meat are more digestible than under-cooked vegetables and fully-cooked meat. Spiciness in food is not necessary to appetite. A good appetite will enjoy plainly cooked food; for instance, it was notable how good the rough fare tasted which we had in the South African War. Tasteful serving and cleanliness are far more necessary to the preservation of appetite than is spiciness or fancy cooking.

But as regards the food supplied in towns, a wife, who is a good housekeeper, has to be cautious and

to have some knowledge of the difficulties she is likely to meet. Some of these and the way to meet them I shall now detail.

Food is exhibited in the windows of shops and therefore exposed to dust and dirt. As a rule this does not matter much, but sometimes it matters a great deal. On windy days, when the roads are dry, one often sees eddies of dust composed of the refuse of the streets and of traffic and of disintegrated paper, vegetables, etc. This whirls into the air near by butchers', fishmongers', and greengrocers' shops and gets powdered upon the food offered for sale. In some shops the food is protected from the dust of the road, but in most it is fully exposed, and not all the glistening marble slabs, dripping water, and gleaming ice prevent the food from getting dirty, though to the naked eye it may not look so. Upon windy days, then, a wife should be particularly careful that all food after it has come from the shop should be washed with extra care under the running tap. It is still better to buy food that has not been exposed for sale and is in its original wrappers, provided it can first be inspected. When at home the food should be carefully covered, especially when the room, in which or near which it is, is being dusted. The precautions against flies, cockroaches, etc., I need not mention. An ice-chest is the best household store for food and is invaluable in the summer months.

Fresh meat and fish are better than meat and fish from cold storage, especially if this has been prolonged, but butchers and fishmongers, when asked, do not always reply with unassailable veracity. A

worse way by which shopkeepers sometimes preserve meat and fish is by the use of chemical preservatives, such as borax or benzoic acid, and serious loss of appetite and sickly feelings may result in those that consume such food. Sanitary inspectors are as strict as they can be in these matters, but they do not always detect food adulteration, and the only test an unfortunate consumer has is usually the sickliness, loss of appetite and aversion to food these adulterations produce. It is well, however, to remember them, in case food from one particular tradesman seems to be unsatisfactory, although it is not easy to say why. For like reasons oysters and other shell-fish are safer when bought whole than shelled or opened.

Poultry is sometimes kept in cold storage for over a year and greatly deteriorates. A wife can, however, safely buy poultry that has not been in cold storage more than three or four months. Complete removal of the blood is essential to good chicken meat. Sometimes one sees discoloration of the neck, and this means bad bleeding and flesh that soon becomes stale and flabby.

Eggs laid under clean conditions may be kept in cold storage for a month or even six weeks and still be regarded as fresh. If kept longer they show a change of flavour. A new-laid egg should not be older than three days. As regards canned food, one has, as a rule, to take one's chance. It is no use advising a thoroughly reliable brand, unless one can actually name one, and investigation into the matter does not give one confidence to do so.

It can safely be declared that all prepared meat

juices are inferior to home-made meat juice, that meat powders such as somatose should not be taken by healthy people who can eat fresh meat, and that all predigested and prepared foods should only be used under the direction of a medical man.

The supply of a guaranteed pure milk in English towns is at present so vexed a question amongst experts that we consumers have to be satisfied with what we get.

The adulterations of various forms of food are so multiple and often so ingenious—although not always definitely harmful—that the wisdom of as direct a supply of food as possible is obvious. In the country this is not hard to get, in town it is well-nigh impossible. This is another reason of the advantage of the country for a woman at periods, when health and good food are particularly important to her, such as the periods of pregnancy and suckling.

The question of alcoholic drinks, though not so vexed as previously, is one not free from prejudices and animosity, prejudices which have coloured experiments and facts brought against that which still has so excellent a repute as to lead to a phrase like " the wine of life."

And truly the phrase and the praise in it is merited by the rare and genuine vintages one sometimes has the good fortune to taste, but unfortunately, since the commercial side of business has overshadowed the aesthetic side, wines have become doctored, loaded, treated, and scientifically aided to such an extent that it is very difficult to be sure of securing a sound and safe wine. This deterioration,

not of wine so much as of the character of the men who supply wine, has complicated the question of the healthiness of wine drinking not a little, just as the methods of food supply in towns has complicated the question of food. Indeed, I have a shrewd suspicion sometimes that one drinks the man more than the wine, and if he be of good character and refined taste one shares these qualities in drinking his wine, whereas, if he depreciate ever so little, the good wine depreciates in like proportion, and if he be a thorough rogue then one has to look to oneself that one is not poisoned.

But the juice of the grape, purely prepared and guided into wine with taste and art, has earned the praise of mankind so unstintedly through the ages that it seems absurd for this age to profess to find out that it is the chief poison of mankind.

Laboratory and scientific experiments show that a little alcohol stimulates, but more wearies and depresses, and in so far as scientific experiments express a human truth, this is the experience of mankind. But science in a matter like this is too crude to decide. It is well known to all what idiosyncrasy people show to alcohol and to different forms of alcohol. A little alcohol will turn one's head, whereas a not too distant ancestor of that person took his three bottles of port a day with the utmost satisfaction and lived healthily to his last days. One person can drink beer, but is upset by wine, another enjoys whisky, but cannot touch porter, a third likes white wine, but is upset by red. These personal idiosyncrasies show how difficult it is for science to lay down rules about the drinking of

alcohol. Moreover, there is the quality that wine gives to life which is altogether beyond the analysis of science. In the words of Matthew Arnold, a man of singular balance and culture, "Wine used in moderation seems to add to the agreeableness of life —for adults at any rate—and whatever adds to the agreeableness of life adds to its resources and powers."

This saying of Matthew Arnold really sums up the true position of wine and beer—drinks that depend upon their aroma and the subtle pleasure they instil and not upon the alcohol they contain. Those who wish to get alcoholic effects take either quarts of strong beer, or take gin, whisky, rum, or brandy. It is these spirits, which give a crude and rapid effect, that above all have cast an ugly aspersion upon the whole subject of alcohol, and brought by their crude rudeness the delicate fragrance of the grape into disgrace.

I would advise women then, if they drink alcohol at all, to only take it at mealtimes, when in moderation it may add to the agreeableness of life. I would advise them most strongly, only to make wine or the lighter beers a social drink, and never a restorative or stimulating drink. The whole folly and tragedy of alcohol drinking springs from the word stimulant, and the idea that alcohol is a good pick-me-up. Alcohol should never be taken for these reasons, unless a doctor expressly orders it for the purpose. The most pernicious results follow upon this wrongful use of alcohol as a stimulant, especially in hot countries, and I have seen English and American women abroad indulge in those

coarse attacks upon the palate which are known as cocktails, or stinging whiskies and tansan, with the result that their complexions were blotched and spoilt, and in many cases they became slaves to the habit, and objects of pity and disgust to healthy mankind. Indeed, it is such cases, which, coming more frequently before medical men than other men, give the former such a wholesome horror of ordering alcohol in any form to English or American women. The women of the Continent are far more exempt from this disgraceful fall from all decency than are the women of our land, and with a large experience of western Europe, I dare affirm that any three lands together probably do not provide as many cases of women with the drink habit as the British Isles offer.

And one reason I believe, is, that on the Continent (as in past ages) the essentially social character of alcohol is recognized. If people drink at all, they drink at mealtimes when their friends are present, or in public at cafés. There is no secret drinking, and none of this pernicious resort to wine or spirits, because "I am a little tired; the shops were so crowded this afternoon." That is the root of the evil of drinking amongst women.

I repeat then, that if women drink at all, they should only drink when at table with their husbands or friends, and *never at any other time.* That rule alone will save them from all danger of forming a perilous habit.

As regards what they should drink, a wholesome and well-proven beverage is beer. Beer from a cask is better than bottled beer which is chemically

treated to give it a bright, attractive appearance. The lighter beers and lager obtained abroad have the advantage of containing much less alcohol than our beer, and it is a great pity that such light brews cannot be obtained in England. Imported bottled beer, however, has not this advantage.

Wine, and especially safe wine, is, of course, very expensive in England owing to the general principle of taxing quality. But wine is pre-eminently the social drink. The natural wines, clarets, burgundy, and hocks, to which no artificial alcohol has been added, are the most commendable for the daily table. Fortified wines are those to which alcohol has been added. Port, sherry, madeira, marsala, are examples of such wines. Champagne is usually fortified.

I never personally recommend spirits to women. Spirits are a far cruder form of alcoholic drink than wine. It is generally recognized that there is something vulgar about certain spirits, such as rum and gin. Even brandy is beginning to fall under this popular feeling. I wish whisky would too, certainly as regards the women. For spirits are alcohol without any of the naturalness and refinement of wine or even beer. They are essentially the coarse form of alcohol drinking. When a sudden hard and quick result is wanted, such as restoring a woman from a faint, they are permissible, but I would advise their avoidance on all other occasions, unless expressly ordered by a medical man.

Women sometimes ask: "Should they take a little wine when they are unwell?" My answer is "No, there is no need or advantage in doing so." At the same time, if they are accustomed to taking

wine or beer at table, there is no reason for leaving it off. The condition of being unwell should make no difference to a woman.

Women also ask: "Should they take alcohol in any form when they are carrying?" They think that during pregnancy they are weaker than at other times, and need building up, and that some sort of alcohol will do this for them. But pregnancy is not a state of disease or invalidism. Only civilization may make it so. The answer, therefore, is that, unless a woman feels really ill owing to pregnancy, she should not alter her habits because of it. On the other hand, if she feels really ill and weak, she certainly should not try and cure herself with alcohol, but should consult her doctor.

But it may be asked: "Are married people better without alcohol?" The question is a very pertinent one, a very important one.

Professor Forel, an acute thinker and a doctor of enormous experience in nervous diseases and insanity, says that there is a definite form of false heredity due to alcohol, which he calls blastophoria. The germ cells, that is to say, the ova or eggs of the female and the seed of the male, are naturally healthy. But if, at the time of the conjunction of these cells in conception, either mate is under the influence of alcohol, then his or her germ cell becomes deteriorated, and the false heredity is started. In other words, if at the time of conception of a child either parent has alcohol flowing in the blood, not only the child itself, but the child's children are conceived in degeneracy. Not only are the grosser mental diseases, such as idiocy, epilepsy

and feeble mindedness, so engendered and perpetuated, but Professor Forel says, the greater amount of the nervous debility, the neurasthenia, irritability, depression, indolence, incapacity, etc., of which there is so much evidence at the present day, is due to this blastophoria. In addition to his own experience, the professor quotes such striking evidence as that of M. Bezzola. Bezzola took the cases of 9,000 idiots reported in the Swiss census of 1900 A.D. He found there were two maximal periods for the conception of these idiots, namely carnival and vintage, the two periods of the year when there was the greatest chance of the parents of the idiots being alcohol-soaked.

I remember, when I first read Professor Forel's works, being gravely perturbed by this prospect of the appalling minor havoc, of which alcohol might be guilty. Interested in the matter, I attended Professor Kraepelin's lectures at Munich University. Professor Kraepelin has a Continental reputation that surpasses even Professor Forel's. His knowledge of nervous diseases is unsurpassed, and in Munich, where lakes of beer are consumed annually, he has the most typical field in the world for studying the effects of alcohol. And appalled as I was by Professor Forel's grave indictment of alcohol and indication of how it acted, I was no less appalled by Professor Kraepelin's earnest detestation of alcohol as being, even in small quantities, the greatest enemy of man. Only one glass of beer would Professor Kraepelin permit a man daily, and even that one glass he regarded as the beginning of unwisdom. These two Professors, then, the two

greatest authorities upon the question in the world, unsparingly condemn alcohol, and state that parents, in taking alcohol at the period when they are conceiving their children, plant in their children future nervousness, indecision, unhappiness, perversions, if not the graver diseases of epilepsy and mental weakness or idiocy. Married people who expect to become parents, apart altogether from any effect the alcohol has upon them, whether for good or evil, may, by taking alcohol and having it in their blood at the time of intercourse, inflict upon their children and their children's children irreparable harm. The question of taking alcohol, therefore, especially in the evening, is a very grave one.

If, therefore, I am seriously questioned upon this matter, I am accustomed first to point out to the enquirer the number of people and nations who take alcohol and yet are healthy and have healthy children. I speak also of the praise good wine has received through the ages by races and men, who have earned the high admiration of others. But I then go on to point out the undoubted increase of nervous constitutions of all kinds and the tendency to get ill or to be off colour, and for even young people to get tired. I tell my enquirer of Professors Forel and Kraepelin, and, since their experience and knowledge of the matter is far greater than mine or that of any English doctor, I advise my questioner to ponder upon what they have said with great seriousness.

For my own part, however, I am inclined to agree with Matthew Arnold rather than with the learned professors.

CHAPTER VII.

Fresh Air and Ventilation.

"I believe in the forest, in the meadow and in the night in which the corn grows."—*Thoreau.*

It has been calculated that about one-third of the blood is always in the lungs, and that the whole body of the blood courses through the lungs some 8,000 times in the twenty-four hours. Such figures confirm what everyone by vital experience knows, namely, the imperative need the body has of air. They also impress one with the need of the air being fresh and healthy, for each time the blood enters the lungs it is separated from the air in the lungs by only the thinnest membrane. Through this membrane, which constitutes the wall of the air cells of the lungs and lies in intimate union with the walls of the innumerable little blood vessels, oxygen passes into the blood and carbonic acid gas passes out of it. It is necessary, then, that the oxygen passing in should be fresh and the carbonic acid gas passing out should pass away and not be rebreathed.

A woman, cannot, of course, fulfil such conditions better than in the open air. There she has a store of fresh oxygen that is limitless, and the carbonic acid gas of the respiration passes out into an equally limitless space.

By the wonderful provisions of nature, the open

atmosphere is itself a constant bath and refresher of the air. Were it not so the air, respired by the myriad living creatures that inhabit the globe, would soon become stale. But it does not do so. First of all the air is frequently washed by the showers of rain, which cleanse it of dust, microbes and organic matter, with which it is in periods of drought overburdened. The rain, for which the British Isles has a somewhat undeserved reputation, keeps the air very fresh and clean, and at least mitigates, if it does not allay, the extra burden of dust, dirt and smoke with which our manufacturing towns surcharge it. The freshness of town air after rain is well known to all, and even in the country, when the weather is dry and dusty, the same refreshing effects are felt and the air actually becomes clearer, and one can see a greater distance owing to the air being cleaned. Thus, in spite of the damp under foot, there are few healthier or more pleasant times for a walk than after a good shower of rain, and this is particularly the case for the inhabitants of large manufacturing towns or towns with a great deal of traffic and consequent dirt in the streets.

Not only is the air washed by rain, but, wherever green foliage is growing and there is sunlight, it is renewed. The air is composed of 21 parts of oxygen, 78 parts of nitrogen and one part of argon in 100 parts. In addition, there are traces of organic matter and of other gases, and of these gases carbonic acid gas is the most important. It only occurs in the air in comparatively small quantities, namely, about three parts in ten thousand, but so vast is the ocean of air, this really is a con-

siderable amount. The carbonic acid gas is given off by the expiration of living creatures and also by combustion. Where there are many human beings living close together and there are also many fires and furnaces, there the amount of carbonic acid gas in the air is notably increased; consequently, such air as London air is not only dirty, but it tends to be foul. The provision of nature against its foulness is by renewing the oxygen in it by foliage and by means of winds. The greenstuff of the country, the grass, and especially in summer the green foliage of the trees under the action of sunlight take up and keep the carbon of the carbonic acid gas (CO_2) and let the oxygen free. They are, in fact, the factories of fresh oxygen. Consequently, green fields and forests are essential to the renewal of the air, and consequently also, country air besides being clearer is also purer than town air.

The country sends into the town daily fresh supplies of vegetables, milk and other produce. Through the action of the winds it also sends into the towns great draughts of fresh air. This air is good to breathe, and town-dwellers often turn their faces to enjoy its freshness when a fair wind is blowing through the town. The winds also travel from great distances, and with their action air that gets less refreshment in the more barren northern parts of the hemisphere are replaced by air that carries with it the fresh oxygen that has been manufactured in the vast and luxuriant forests of the tropics. The chief principle by which the action of the winds is brought about is that hot air rises and

cold air pours in to take its place. The cold air of the north pours down to the tropics to take the place of the hot air with its renewed oxygen, which rises from the vast forests. This air rises into the upper atmosphere, and, getting colder and colder, eventually slides down from above to take the place of the northern air that is pouring towards the tropics. In this way a constant circulation of fresh air is brought about throughout the whole world. In this way the whole world is thoroughly and efficiently ventilated.

The sun is the power which makes the greenstuff renew the oxygen. It does far more than this in keeping the air clean. With the help of oxygen it oxidises and so destroys putrescent organic matter. This organic matter floats about in the air, takes up the oxygen and gives off carbonic acid gas. It does, in fact, what animals do by respiration, only with animals the process is continually repeated, with putrescent organic matter, when it has taken up enough oxygen, the process comes to an end. A little of this matter is always present in the air, but in any quantity it is always unhealthy. It is most abundant in large towns and also where there are extensive marshes, where rotting vegetable matter is abundant. It is least abundant over the sea or in the neighbourhood of snow-clad mountains. The air of the upper Alps and of the sea have great purity and healthiness in this respect compared to other air. The alpine and sea air also have an exceptional freedom from microbes, which exist in the greatest numbers in the close alley ways and courts of large cities. The sun again is the enemy and destroyer of

these microbes in the air, and its purifying effects are important and are wanting where the sun rarely or never enters.

My readers will now see why it is that country air is found by them to be more refreshing and delightful than town air, and why, if they wish to keep in good health, they will seek the country air when they have opportunity, and in towns will go into the parks. There is no time when they will find more pleasure in a walk than when recent rain has washed the air, the sun is shining and a brisk breeze is blowing that is not strong enough to be a nuisance in blowing about hats and skirts. At such times by putting up their faces to the wind and taking deep breaths into the lungs, they will taste and inhale all the purity of the country. It is, indeed, a habit to be commended for women who live in towns to seek the parks as frequently as possible and to breathe the fresh air deeply so as to displace and renew the air that lies stagnant in the deeper air cells of the lungs. The fresh air and sunlight will give them a zest, health, and enjoyment that cannot be got from the streets, from the interiors of shops or the attractions of the theatre.

The description that has been given of the ventilation of the world will also explain to readers the principles of ventilation in their own homes. They live in houses, and houses, being obstructions to the wind and defences from the weather, are shut away from the automatic beneficence of nature. Consequently their owners have to use their minds to apply the ventilation to their houses which nature supplies to the great world without.

Firstly, for a room to be healthy, it must be so situated that it gets sunlight. Rooms that have no sunlight not only lose the purifying effects of the rays, but also are apt to be depressing to their inhabitants. A sunny breakfast-room is the best send-off to the day ; and it may here be mentioned that a sunny bedroom is a great advantage to a mother, not only because it is more cheerful during her lying-in period, but also because it is in a more healthy condition than a sunless room. If a reader wants to have proof of the value of sun in a room to the life in it, let her put two pots of flowers or greenstuff, one in a sunny room and one in a sunless room and note the difference.

Secondly, the windows of the house must often be thrown open. The windows of a sitting-room should be opened widely in the morning by the servants before it is used, and in warm weather certainly they should be partly opened during the day. If the weather is cold they should be opened several times during the day, so as to let in fresh air. Once an hour is sufficient and, if the room is large, this frequency is not needed, especially if the sashes are loose and cold air can be felt entering through the cracks. The windows in the halls and passages should always be kept a little open, for the warm air of the living-rooms passes up the chimney or out through the top of the window, and the air from the hall or the passages passes through the door or its cracks into the living-room to take its place. It is important, therefore, that this air should be fresh. In residential hotels or large flats this is particularly necessary, for a lot of foul and stagnant air is apt to

collect in the passages or in enclosed courts, unless they are well aired, and then this foul air will enter the living-rooms, even though the window is open, for it will enter through the door and pass out through the window.

The window of a lavatory should always be left open day and night.

The rules that apply to living-rooms by day, apply still more to bedrooms. A bedroom window should always be open a little at the top and bottom. The hot air, in accordance with the principle that hot air is lighter than cold, rises to the ceiling (a fact which may be tested in a warm room by standing on a chair or table and feeling the air near the ceiling) and passes out through the top crack of the window, and the cold, fresh air enters below. It is rarely—in my experience never—too cold in the south of England at least for the bedroom window always to be open to this extent. People are, however, getting more and more to love plenty of air in their houses, and many of them are quite unable to sit or sleep with comfort in a room with the windows closed.

Other people, it is true, manage to live long lives and healthy ones in spite of favouring the closed window. They even like stuffy rooms. Yet, as I have said, they keep well, and when one thinks of the number of wild animals, such as rabbits or sand-martins, that crowd down into stuffy burrows or runs deep into the earth, one sees that fresh air has not the invariable sanction of nature. I only say this because people are apt to run from one extreme to the other, and fresh air tends to become a fetish. I know several houses, where the rooms are often

bitterly cold owing to the widely opened windows in winter, and to the inrush of air, with which no fire could successfully contend. Still, if one is to have a fetish at all, the fresh air fetish is certainly one with great advantages.

For, if there is not fresh air, there are often grave results. It is difficult, I admit, to account for the sound health of some old people, who have at home always sat in small unventilated rooms. But most of such people have spent their days at least in the open in the country. For women who live in towns the importance of fresh air in their houses is unquestioned. Every doctor comes across women who are languid, *blasé*, and a little pale, with hints of white about their lips, instead of the fresh red, who have little or no appetite, and who wake up in the morning with headaches or furred tongues. They are apt to get upset easily, get sore throats, may sleep heavily, but can scarcely drag their heavy limbs out of bed. These women are suffering from a want of fresh air, and probably sleep with the windows of their bedrooms tightly closed. In extreme cases such indisposition is probably due to further fouling of the air than follows merely from closed windows.

When the sore throats become frequent, when the anæmia is marked and headache constant, when the appetite is altogether lost and lassitude always present in spite of the observation of the ordinary rules of health, then the drains should be held suspect. Foul sewage gas is warm and rises into bedrooms and living-rooms. The sanitary inspector should, therefore, be sent for and the drains and traps be inspected. Another thing that should be

tested is the gas. One of the most obscure cases of acute anæmia I ever saw was due to gas. A young girl became so anæmic as to get delirious and to be at death's door. Gas was suspected, but there was no smell whatsoever of gas. Eventually the floor of her bedroom was pulled up over the gas pipe and a small leak was detected. This leak nearly led to the girl's death.

In this case we could not smell the escaping gas, but as a rule there is no better test than the nose as to the state of the air in a room. It is rather amusing to read the learned treatises upon what is the precise cause and measure of the stuffiness in an inhabited room. At one time the scientists held that the culprit was the carbonic acid gas, when existing in over a definite quantity, and they set about finding out how much carbonic acid gas each individual and gas jet gave off, and estimating any that might be given off by putrescent organic matter present. But further experiments showed that, though carbonic acid gas is not healthy above a certain quantity, yet it was not this gas that caused the unpleasant effects of a stuffy room. Then they bethought them that it must be due to the organic matter in the room, especially that which is given off by human beings. But with further investigation it was found that only very dirty people gave off organic matter that befouled the air. Clean people gave no offence. Then it was held that possibly the absence of ozone might be part of the defect, but further work made it appear very doubtful as to whether ozone existed at all in the atmosphere, and whether the ozone that is largely

advertised by watering places was not in reality a myth. Then the effect of heat and moisture were tested, and it was found that a hot room, and especially a hot and very moist air was deleterious. Finally, science, as it often does, after having made a long detour, came back to confirm ordinary experience, namely, that the nose is the best test of a stuffy room, but what exactly was the actual cause of the stuffiness science could not definitely say.

The test, therefore, of a stuffy room is its smell, that faint musty smell, which is known to us all. It is not quickly detected by the people who are sitting in the room, but anyone who comes into it will notice it, and according to his or her relations to the inmates will say or think, "How stuffy it is in here!" The effect is greatly magnified in kitchens or other places, where potato peelings, cabbage or other organic matter may be decaying.

Everyone, too, knows the effect of such a stuffy room. Everyone has experienced a well-filled drawing room on a winter's evening, often with gas as a light, with the windows closed and heavily curtained. The air becomes stuffy and with the evil characteristics of marked heat and moisture. How one feels heavier and heavier, and begins to yawn and get a headache and feel too weary to do anything! Eventually one may drag oneself up to bed and fall at once into a heavy sleep and awake, especially if the bedroom windows have been closed, tired and with a headache, and indifferent to the day's work and occupation. Such evenings are due to ill-ventilated rooms, and though rarer than they used to be, are still too common.

The remedy for a stuffy room, of course, is to open the window and let in the cool fresh air. I do not recommend my readers to rely on ventilators, especially ventilators that they do not understand. Sometimes ventilators get blocked up, sometimes servants block them up as they block up chimneys because the air brings in dirt, sometimes they fail to work, and often they are inefficient. Let the architect put them in the house by all means, but let the lady of the house learn to open the windows. Let her not be too afraid of draughts. A draught blowing directly on the bare neck or shoulder of a rheumatic person will often bring on rheumatism, and a draught is generally unpleasant. But the unpleasant draught is usually from a crack in the window, or under the door, which concentrates a current of air. If the window is opened more than a crack the inrushing or outrushing air is in a sufficiently large quantity to avoid a concentrated and as it were aimed draught. A widely-opened window produces no draught, but it lets in a breeze, which blows in everywhere and is not a small limited current like a draught. Big draughts, if one so names the inrush of air through an open window, are probably never the causes of colds, whereas impure air, which irritates and weakens the mucous membrane of the nose, certainly do cause and render people liable to severe colds in the head.

Fresh air then, as regards the house, sums itself up in the necessity of opened windows. Lavatory windows should always be open. Bedroom windows should be widely open by day, and certainly always a little open top and bottom at night. Sitting-room

windows should be opened wide in the early morning, and, when the weather is suitable, should be kept open. If the weather is colder, the windows of an occupied room should be opened occasionally during the day, preferably every hour. The windows of halls and passages should always be a little or wide open. The windows of the kitchen and offices should be widely opened, if possible, at night. These rules apply to all periods of life and are especially to be observed by a woman who is carrying. The rules of ventilation for the lying-in room are not different, but they will be again mentioned under that heading. The chief pollution of the air that is to be feared by a lying-in woman is that from drains, for such air can, it has been proved, be the cause of serious lying-in or puerperal fever.

Finally, it may be said that in view of the greater purity of country air, this is an additional reason—the others being the advantages of quiet and exercise—for a woman spending the period of carrying in the country. The advantages of country air and exercise cannot be too strongly emphasised. They are proved amongst all classes, both high and low, for gardeners, fishermen, and agriculturists, are notoriously the healthiest labourers, just as farmers and country clergymen are the healthiest and longest-lived of the better classes.

CHAPTER VIII.

Warming and Lighting.

"What the day is we Cimmerians hardly know. In our eternal mist and fog it is the same thing to us whether it be day or night, for how much time can we really enjoy in the open air?"—*Goethe.*

It has been calculated that some £30,000,000 a year would be saved if only England were in a warmer latitude, and the problem of the best way of keeping warm and of warming a house has not yet been solved.

The English method of warming a room, namely by a fire, is one that often astonishes foreigners, who expect a method of warming to have warmth as its prime object. They find that there is heat near the fire, but at a little distance the air and the objects are quite cold. The heat thrown out by a fire rapidly diminishes, at three feet distance the heat received being one-ninth of the heat received at one foot of distance. A fire also wastes a great deal of heat up the chimney and only a small portion enters and remains in the room. As a means of warming a room then, the fire stands condemned, and yet the fire continues to hold a firm place in the hearts of English people. There is, indeed, little they like better than a good fire.

And there is no doubt there is good reason for this national preference of ours. One great advantage a

fire has, consists in the draught up the chimney that it causes, for fresh air has to enter to take its place, and this air enters from either an opened window or through the cracks beside a closed window. It also passes in through the door, and in flats and hotels the air that passes through the door may be the stale air of the building. If this stale air is sucked into a bedroom, even in spite of the window being open, one may wake heavy and with a headache.

But as a rule, the air enters from the window or from a well-aired passage, in order to replace the air that goes up the chimney owing to the heat of the fire. As a result, the room in which a fire is burning is kept well ventilated. The air, even though the room is warm, is fresh, and this is without doubt a great point in favour of the fire. By other methods of heating this freshness cannot be assured, and often a definite staleness is produced.

The other advantages of the fire are so well known that they scarcely need mentioning. The cheerfulness of a fire, its change and vitality and the warm bright colour of it are charms nothing else can offer quite in the same way. How much English home life would miss were the old talks by the fireside omitted, when the lights have been turned low and faces look into the glowing e ıbers and watch the changes in the interludes of silence, and are invited by them to a deeper confidence and to meditative and low-toned reflections upon this strange life of ours. The other methods of warming a room are mechanical and without interest compared to the sympathetic companionship of a fire.

Nevertheless, in large rooms especially, a fire is

not an efficient warmth distributor. The alternative methods of heating are by stoves, hot-water pipes, radiators or electric heating. The last has not yet become common, but with the cheapening of electricity will do so, for the glow lamps are handy, efficient, clean, and healthy. As regards hot-water pipes and radiators, there are several different methods in use. The radiator system is simple and it is not expensive. But all these methods have one disadvantage, which as yet has not been overcome. They make the air stale and stuffy, and create an atmosphere that produces in some people headaches, lassitude and a dry mouth and throat. Americans and Canadians seem to be able to endure great heat and dry, stuffy air, which an Englishman finds it hard to tolerate ; indeed, many an Englishman has been glad to leave a Canadian winter owing to the heat. This stuffiness of the air is not wholly due to lack of moisture, and a saucer of water placed upon the radiator does not disperse it. The exact cause of it has not as yet been determined by scientists, but common experience tells us that it is much more frequent in rooms heated by pipes or radiators than in those heated by fires.

Stoves also make the air stuffy, and if they are made of iron they are apt to smell. They heat a room well throughout, keep it warm, are economical, and require little attention. The various stoves of foreign make, and especially those made with ornamental tiles, are the best, but their unbeautiful appearance prevents them being popular in England. Some of the modern stoves, however, are much more elegant.

Gas stoves warm a room quickly, but are expensive and unattractive.

For a bedroom there can be no question of the pleasantness and advantage of a fire over other methods of heating. It keeps the air fresh, and warms the room for the period of undressing. At night, when the fire dies down, there is not the same need of warm air, and in the morning, if necessary, as in the case of illness, it can be relaid and lit again.

People are sometimes advised to keep a sick-room, a nursery, or an ordinary living-room, at a certain definite degree of temperature fixed by a thermometer, such as 65° Fahr. Such invariability and equability is probably harmful rather than good. The temperature is monotonous and tame and causes a bodily monotony and tameness. Indeed, a well-known physiologist has unkindly hinted that the monotonous temperature of the House of Commons may account for its members. At any rate, a varied temperature is better than obeying a thermometer.

The question of the lighting of rooms has undergone so much revolution of late and received so much public and domestic discussion that everyone knows more or less the various advantages and disadvantages.

The old-fashioned oil lamps have cheapness and a certain charm of diffusive light to recommend them, but they are troublesome to light, clean, and fill, and they vitiate the air. The old form of gas has the same disadvantages of vitiating and heating the air, and the light given is not good compared to its expense. The Welsbach and other incandescent

methods are a great improvement in all respects upon the old fish-tail burner and naked flame. They give a better light, are cheaper, cleaner, cooler and do not vitiate the air so much. But the handiest and best form of lighting is the electric. It is cool, has no products of combustion, and, therefore, does not vitiate the air, it creates no dirt, is steady and easy to switch on and off. The light given by it, analysed scientifically, especially as an arc light, is found to be the artificial light which most closely resembles sunlight. Thus plants grow and flowers and fruits ripen when exposed to arc light. The old carbon filament bulbs are rapidly being superseded by the metal filament lamps, which cost only one-fourth of the carbon filament lamps. The glare of the glowing wire may be found trying, for the eye looking at it is apt to be bothered by its image for some time. This disadvantage may be got rid of by a frosted globe. Otherwise, it is difficult to imagine a more perfect form of artificial light.

Lighting by day scarcely needs mention, but it may be said here that full light is healthier than dimmed light. It is a pity to have blinds half down or to let down sun blinds unless the heat is intolerable. Plenty of sunlight in a room is one of the best ways of making the room cheerful and healthy, and we Cimmerians, as Goethe called us northerners, do not have so much light and sun that we can afford to diminish what we have.

CHAPTER IX.

Baths and Bathing

"There is scarcely a religious system into which bathing has not been introduced."—*W. Alexander.*

THE daily bath has for a long time been one of the distinctions of better-class English people. The peoples of the Continent have begun to imitate us in this, as in many other matters, but the morning bath is still regarded rather as a freak by foreigners. Yet there are few English practices which have so much to recommend them as the morning bath. Women, if they have not the habit, are well-advised to acquire it.

The question arises: Should the morning bath be hot or cold? In the old days this question was often answered by the inability to get sufficient hot water for the early baths of a household. But with improved boilers, or with a geyser, the hot bath can always be obtained. Hot water is always tempting. There are few comforts that are more luxurious than the hot bath, and as a consequence a great number of people have yielded to its delights and have a hot bath every morning. There are also several reasons in favour of it in big cities, where there is a good deal of soot and dirt in the air, and arguments are sometimes drawn in its favour from people like the Romans of the Empire, and the Japanese of to-day,

who are greatly addicted to hot baths. But though the Japanese are a sturdy little people, yet, having lived amongst them, I do not see any particular need to adopt their custom in this matter and change the cold for the hot bath. The Japanese always have their bath after their work is done and were all England to follow them in this, there is no doubt England would have a vastly cleaner body than it actually has. But the custom for the morning bath has always been that the water should be cold. Luxurious people like to have the water hot, but the majority still adhere to the cold bath in the morning.

There can be no doubt that the cold morning bath has many advantages over the hot. To get out of a hot bed into a hot bath does not promise an exhilarating start to the day, nor does it give one. The only way of making a hot bath stimulating and refreshing is to deliberately jump into it and out of it as quickly as one does in a cold bath. But women will find this difficult to do, owing to the luxury of the warmth. Still if they do it, the vessels of the skin dilate, the general blood flow is stimulated and a pleasant feeling of exhilaration results.

Nevertheless, I would strongly recommend my readers to retain the old custom of the cold morning bath. It has everything in its favour. The sudden plunge into cold water, in the winter, at least, requires a daily resolution and tightens up the moral fibre. On getting out –quickly when the water is very cold—a delightful glow comes to the skin, and the bather feels singularly refreshed and capable for the deeds of the day. This glow and sense of activity is the test of the cold bath. If, in spite

of many repetitions it does not occur, the bath has failed of its purpose and a woman should discontinue it until she feels in better health. For to fail to react to the morning bath is a sure sign of feeble health or faulty constitution. All young women, at least, should react to and enjoy the cold morning bath. After it a rub down with a rough bath towel adds to the effect. The skin glows under the rubbing and a beautiful pink warmth of health comes into the cheeks. The eyes are brightened, they do not have the listless and tired gaze of those who exhaust themselves by hot baths. Cold bathers have harder nerves, do not suffer from headache and dyspepsia, are less easily worried, have a good appetite for breakfast and a cheerful outlook upon the day. Moreover, one great advantage of the cold bath habit is that women who follow it, not only do not feel the cold so much, but they certainly do not catch cold so readily. This is a great argument in favour of the cold bath, for no petty ailment is so annoying as the cold in the head.

After the bath, or whilst it is filling, is the time to take a little morning exercise, the bathroom window being open. Breathing deeply with the arms akimbo is a healthy habit to form. It fills the chest with fresh air and wakes up the deeper air cells of the lungs. It is interesting to note the expansion of the chest with such breathing exercises. The normal expansion is about two inches, but with these exercises it can often be made to reach four inches or even more. For a woman who sings such an expansion is excellent, but anyhow it shows capable functioning of the lungs.

In winter the water may become too cold, though it is astonishing what a degree of coldness one can get accustomed to. When the water is so cold, hot water can be added to take the chill off, but if too much is added the value of the cold bath is taken away and the water becomes tepid. A tepid bath is like other tepid things, a failure from being neither one thing or the other, and makes the bather feel chilly when it is over.

If the reader insists on a hot bath in the morning, let me earnestly recommend her either to make it a rapid dip, in which case she will get its stimulating without its debilitating effects, or when the bath is over and the water running away to turn on the cold-water tap and with a sponge to sponge the body well with cold water, say, some twenty to thirty spongefuls. This will give her some of the exhilaration of the cold bath without its shock. Another method is the cold shower, but pleasant as the shower is, it tends to be too much of a shock to a delicate woman. She is better advised to take a short hot bath, followed by a cold sponge.

But a prolonged hot bath without a subsequent cold sponge in the early morning can only be mentioned to be condemned. I know there are many who indulge in it, and I have given it ample trial myself. There can be no doubt in cold weather it makes one feel the cold during the day more, and also increases one's tendency to catch cold. It also makes one start the day, if not tired and slack, at least not alert and eager. Moreover, much abused as the natural oil of the skin is, it cannot be wise to wash it right away every morning by soaking

in hot water, followed by an ample use of soap. Nature is not senseless, and this natural oil is not supplied in order that we may get rid of it as quickly as possible.

In the use of soap in the morning a few words may be said. A regular soaping all over is not very feasible in a cold bath, nor is a daily soaping all over to be commended. It is a mistake to think that soaping the face with good soaps, such as Pears or Vinolia, hurt the complexion. They do not, and often a daily soaping to the face, which is exposed to the winds and the dirt of towns, followed by a good rub with a towel, works marvels with the complexion. If the skin is at all rough, soap and water should be followed by the rubbing in of a little cold cream, and then the skin should be powdered. This forms an efficient protection to the skin in cold or windy weather. Another good prescription for the skin of the face, if it is too dry, is Friar's Balsam, one ounce, glycerine, one ounce, and rose-water, two ounces.

A further point in the use of soap is not to let it get into the deeper parts of the ear. The shell of the ear should be cleansed, but it is a great mistake to stuff the ear with soap and sluice it out with water. This practice, not infrequently, leads to partial deafness, eczema of the ear, with accumulation of wax and buzzing and cracking sounds in the ear. The deeper parts of the ear know how to cleanse themselves, and it is unwise to interfere with them.

The time for the hot bath is in the evening before going to bed. Once a week such a bath is a good

addition to the daily morning bath. If the water is hard and it is difficult to get a good lather of soap, some ammonia or bath salt can be added to the water. If the water is soft these chemicals are superfluous. Delicate women who are unable to bear the cold may have a warm evening bath every day. The temperature of a hot bath is over 98° Fahr., and of a warm bath 90° Fahr. to 98° Fahr., but it is not necessary to have a thermometer to find out how warm the bath is, for the hand or the foot affords a much better test. Some people enjoy water much hotter than others can tolerate. A hot or warm bath is strongly recommended to women who sleep badly. Often such a bath, taken before getting into bed, will be followed by a long and refreshing sleep.

Swimming, as an exercise, has already been mentioned. It is such an excellent and pleasant exercise that a daily swim is a delightful habit when the weather is sufficiently warm. Sea bathing is well known for its great tonic effects, and is one of the best ways by which a woman may regain her full health.

During the menstrual periods many women avoid baths. But at this time cleanliness is as valuable and pleasant as at any other time. Dr. von Gelsen strongly recommended the bath during the menstrual period, and there is certainly no harm in a warm bath. Very hot or cold baths should be avoided. Swimming and bathing should also be avoided.

Pregnant women should also avoid very hot or very cold baths. But the warm, daily bath is good for them and the morning bath, if the chill is taken

off. Swimming need not be given up until women feel that they must give it up owing to their appearance. The same applies to sea bathing. In the earlier months, if the weather is warm, its effect can only be beneficial.

CHAPTER X.

Sleep.

"Without toil we make no progress to repose."
Thomas à Kempis.

THE healthy rest of the body is, of course, the necessary complement of its healthy activity. By the division that nature has imposed upon us in the alternation of night and day, night is peculiarly designed for sleep. The darkness and quietness are both conducive to sleep, and unless the night is passed in proper sleep the day cannot be spent in proper activity. If one sleep badly, one will act badly and live badly, with irritation and querulousness in place of the serenity and endurance of health.

Physiologists have speculated a good deal on the cause of sleep, but the cause is not really known. It is said most frequently to be due to anæmia of the brain. It is said also to be due to the benumbing effect of the waste products of the body's activity, and no doubt this is so, as anyone knows how sleepy one gets after hard exercise and great use of the muscles.

But the most striking quality of sleep is its periodicity and its close connection with some particular period of the twenty-four hours, and it is this periodic character that is the most important thing to remember in connection with sleep.

The best way to secure sound and healthy sleep is to attend to this periodicity, in other words to keep a regular hour of bedtime. Only exceptionally should this hour be foregone, and, in the case of nervous people at least, the break of routine will usually be punished by a sleepless or bad night.

It is really a golden rule for young married women to get a habit of going to bed at a regular and early hour, though in London such rule becomes more and more difficult to carry out. But it is, of course, not impossible to carry out, and for those who love their home more than the amusements outside it, it is easy. The hours before midnight are popularly known as those of beauty sleep, and there is a great deal more truth in their value to beauty than is supposed. Scientists—anyone, indeed, can try the experiment—have shown that it is much harder to wake people out of sleep in the hours before midnight than it is in those after midnight, and the lightness of the sleep increases as the hours of morning come round. Now, deep sleep means deep rest. It means a slow pulse, slow breathing, cessation from activity of most of the vital organs and complete rest for the brain, free of dreams and the tags and oddities of thought. This deep sleep is easier to obtain before midnight than after. It is the sleep of the best quality, and such sleep means the thorough restoration of the faculties to activity in the day and preserves health at the highest level, such health as is indeed the true and necessary concomitant of beauty.

One of the first rules of healthy sleep, then, is to go to bed regularly an hour or two before midnight.

An interruption of such a habit will usually impoverish the sleep, and in those who have a tendency to insomnia this result is a certainty. Though such women sleep at once if they go to bed at their accustomed hour, if they go too late or too early they nearly always have to pay the penalty by lying awake for some time, or by broken sleep.

The length of sleep has been aptly indicated by a story. A gentleman was once asking a famous physician about sleep. "Seven hours for a man, eight for a woman, and nine for a fool, isn't it, doctor?" The physician nodded. "Perhaps," he replied, "but the fool is the wisest of the three. The length of sleep of a healthy woman, who takes exercise during the day and sleeps with the bedroom window open, is given by her sleeping her sleep out. But if no exercise is taken and the room is close and ill-ventilated, a long, heavy sleep, from which it is difficult to wake up properly, results. Being an unhealthy sleep, one cannot say how long it ought to be. It ought, first of all, to be changed to a healthy sleep, and from a healthy sleep one wakes as swiftly and completely as an animal alarmed.

The conditions that induce a healthy sleep are first of all a contented mind, which in itself is usually the concomitant of a healthy body. A woman who takes little exercise and eats rich foods is very apt to get worried about matters that would not worry her did she live more simply; and worry is a potent cause of broken sleep. A woman of weak constitution or nervous temperament is still more likely to worry about matters, and will lie awake with her

mind busy with possibilities and conjectures; or she will lie in a state of half consciousness, in which all sorts of ominous and alarming half thoughts and images flit through her irritated brain.

The best domestic cure against such insomnia is a combination of the three habits of exercise, fresh air, and a regular hour for going to bed. By healthy ways of life a woman will harden herself against the worries of life. Really healthy people rarely or never worry, and certainly not so as to give them insomnia. But if these simple means and some others now to be given do not succeed, then the reader should seek her doctor for advice.

Indigestion is a fruitful cause of broken sleep and insomnia. Sometimes it occurs with cold feet, and less commonly, cold feet occur without indigestion. Both are potent enemies of good sleep. Indigestion should be dealt with by the woman endeavouring to discover what it is that does not suit her, and by her taking a dose of salts or other aperient medicine. Often a hot bottle or hot flannels laid across the abdomen will take away the discomfort or pain of indigestion, and will promote sleep. Cold feet often bother people, especially at night, and then keep them awake. The best cure for cold feet at night is to make them take plenty of exercise by day. Silk stockings are also good, and if the feet perspire the inside of the stocking may be powdered with French chalk. A further remedy that I have found beneficial is for a woman to put her feet into cold, not hot water, before going to bed, giving them a good rub with a dry towel and then putting on bed socks. A hot bottle, though a delight, is not a good remedy.

It is a substitute, and, moreover, is apt to cause chilblains.

Further ways of inducing sleep are to take a meal late and then go to bed, for it is easier to sleep after a heavy meal, as anyone acquainted with continental siestas knows. A warm bath taken before going to bed is an admirable producer of sound sleep. A glass of warm milk taken as one goes to bed has a like effect.

A nightcap in the form of whisky cannot be too strongly deprecated. No woman should ever get into such a perilous habit as is involved in the taking of a nightcap. Hot tea and coffee, as is generally known, keep people awake, but a hot cup of cocoa is conducive to sleep.

Light bed-clothing, as long as sufficiently warm, promotes a good sleep better than heavy.

If the day has been one of worry and the worry is to be dreaded in the coming days, it is often well to play a quiet game of cards to take away the worrying thoughts or overlay them with a monotonous occupation. The various games of patience have a just repute for this power. Other people find the reading of a chapter of a book, either before going to bed or in bed, distracts their thoughts from their own affairs and enables them to sleep. A further simple remedy for sleeplessness, due to worry, is to wring out a face towel in cold water and to bind it round the head. The damp can be kept from the pillow by a strip of batiste laid over the pillow. This remedy, which sounds disagreeable, is not really so, and is often very efficacious.

Lastly, married people are aware that intercourse

is conducive to sleep. Insomnia of a trying kind may sometimes arise owing to its absence in married people.

Women, when pregnant, sometimes have a great tendency to sleep, and others sleep badly owing to the dyspepsia from which they suffer. Sometimes it is said the movements of the child keep them awake, but I have never had any case in which this complaint was made without finding some other and usually curable cause of irritability, which made even the movements of the child a matter of complaint.

CHAPTER XI

Housekeeping, Hobbies, and Home Arts.

"The many make the household
But only one the home."
Lowell.

It cannot be too often repeated that one of the laws of happiness, and therefore of health, is to be able to do something, and to do it well. Barnes, one of the greatest of women's physicians, was wont to say that the great need for women was something to do. That is not so much the need in these days, for everyone tends to be infected by the fever of doing. But there is something far more needful than mere doing to happiness and content. There is the need of doing something personally and doing it well. There is, in fact, the creative need in doing. In present times, there is not a little necessity of clarity in these matters. We hear a great deal of hustling and being busy, but a good deal of this hustle and business is worse than foolish, for it often means that women are very busy in occupations to which they give their time and money, but little or nothing of themselves.* Such occupations kill time, as the graphic expression terms it, but in killing time it also kills the joy of life and promotes either *ennui* or a submission to an eternal mechani-

* The war, of course, has given much valuable and necessary occupation to women.

cally succession of actions. One of the curses of our day is the absence of personality in work and doing. The typewriter is a typical case in point. Anyone who has learnt to type, knows the pleasure there is in the first attempts and in the gradual attainment of the mastery of the machine. If a young wife learns to type, she takes no little pleasure in her first attempts and, leaning upon the shoulder of her husband, in watching him unable to detect faults as he corrects her pages. But the pleasure, when mastery is attained, soon palls, and the reason is that the instrument itself really becomes the doer, and the operator its servant. No true personality can be put into it ; it is impossible to type according to anyone's taste or to vary it according to someone's taste. The monotony of perfection is the machine's and the perfection, if so it may be termed, is of a deadly kind, for one can expect nothing but one fixed and settled quality from the machine. All the charm of mood and the varied touches that personality can give to work are wanting. The same remarks apply to such mechanical instruments as the pianola. It is true that a little more personality can be put into the pianola, but it is very little, and the praise must be given to the instrument and not to the operator.

It is, indeed, quite exasperating to see how such mechanical occupations and amusements gain upon people in these days. They offer apparent ease in that they call only for repetitive movements, and make no demands upon people's personal creative efforts. But in the end they leave people dissatisfied and discontented. Thus it comes about one

can often see a woman, who spends her time immensely busy at occupations in which the share she gives is at a minimum. She is taken in a taxi to shop, and though the choice of pretty or useful things is hers under the persuasion of the saleswoman, the making and credit of them is not hers. She then goes on to a concert, where once more she is entertained by the efforts and skill of others. Or she may, now that cinematographs are cropping up even in small towns, spend time at one of their shows, where the instrument and not she is the wonder. She may go to a theatre or other entertainment, where again she sits as passive spectator. She may go out to tea with friends, and then personally shares in the conversation, and though temporarily amused and pleased also with her own share, yet this pleasure, if her chief one, makes her life appear somewhat fatuous and empty. At the end of the day, having returned home from such occupations, she sits down with her husband to a dinner which she has not cooked or even superintended, and afterwards may spend her time in reading a novel, which she could not write, or listening to the music of a gramaphone or an electrophone, which she could not play. One cannot wonder that such occupations lead to *ennui*, which really means that a woman wonders for what purpose she is living. If she have children, her purpose may be watching and guiding their interests, but even then if she has no personal share in their guidance and company comparable to that which she hands over to the nurse, she cannot take the same keenness of interest as she would otherwise. Moreover, the very impersonal quality of her other

occupations gives her a definite basis of *ennui* which she applies to all the incidents and components of her life. She becomes thoroughly *blasée*, which word describes an appalling emptiness. Moreover, all sorts of petty trifles begin to occupy her, and failing to create anything good and positive, she creates only things that are bad and negative. All sorts of apparently imaginary ailments, which are really the expression of her rooted discontent with her life, seize upon her. Little troubles, that a healthy woman ignores, expand in her empty life to great concerns. She becomes fretful, peevish, and bored, and affects all around her with a sense of uselessness and helplessness. Sometimes in such a condition she is glad to get in the family way, merely because it is a change and for the nonce makes her important and interesting in her own eyes and the eyes of others. But the ailments and inconveniences of pregnancy are great to her ; they are genuine and definite afflictions to balance which she lacks serious and absorbing occupation or hobbies. She makes more and more exactions upon her husband and upon others, and her condition becomes more than ever one in which she demands amusement and entertainment from without. Every doctor has often met such a case, and sometimes been at his wits' end how to carry his patient through the natural process of pregnancy without an abundant crop of petty disasters resulting from it.

The golden rule of activity, then, is that a woman should always have some occupation or occupations to which she gives something of herself and for her skill in which she justly acquires her own

secret commendation and the praise of her husband and friends.

A homely instance will make clear what I mean. Let us compare the needle to the typewriter. Nothing could be more simple than the needle, nothing as a household machine more complicated than the typewriter. The work that the needle performs depends entirely upon the skill and interest of the worker. The work that the typewriter performs eventually owes little or nothing to the worker. There is amongst many wives in these days a foolish scorn for the skill of the needle. It is a scorn of which I find it difficult to write with tolerance. It is true some women cannot take any interest in the needle, but the general neglect compared to the skill and interest with which the needle used to be plied, admits of only two explanations. Either better work has come to the hands of women or else the present generation in general lacks the personality of its mothers and grandmothers. Beautiful needlework betokens fine qualities of character, taste, perseverance, accuracy, pride in one's own quality of work, and the love of making something that is a pleasure to oneself and others.

Now, say that a woman instead of going out to shop to buy a fancy nightgown, bought the material, some silk or crepon, some lace and ribbon, and then sat down to make herself a nightgown ; with a little practice she should be able to make a nice one, and, if she is gifted, a beautiful one. She has not only saved money, but she has now a nightgown that really is her own, and one in which she will take no

little pride. It is not merely a necessity or a toy of a few days' pleasure, but it reminds her of her own efficiency and skill.

Now let us enlarge this making of the nightgown. Let her do the needlework that covers the cushions in her drawing-room. The reader may smile, but in the past it was the rule and not the exception for the ladies of the house to do such needlework. The result was ugly, my fair reader may reply. The machine-made product is prettier. But what was it to the women of that time? It gave them pleasure and pride, as we know. The sitting-room became their room in a much wider sense than it is as a rule now.

But activity should in no way stop at the artistic and serviceable needle. There are, as has been said, some cases of genuine dislike to the needle from girlhood up. A woman's activity has far more scope in her own house. There is the whole house to tend. A Dutch wife has become a proverb. She cleans her house until it is a delight to the eye, and brass and pots shine with a radiance that would charm the most exacting naval officer. English ladies cannot or certainly will not be so zealous as this, but a wife can both superintend and take an active part in the care, cleansing and beautifying of her house. And she will be rewarded by the house becoming peculiarly hers, her house, her home, the home that is the expression of her personality. It will not be merely a convenient place where she lives, eats, sleeps, stores her purchases and entertains her friends.

In the matter of cooking the same thing applies.

If a woman either has a share or at least an understanding interest in the meals that are served, she will find them less matters of indifference, or of occasions for praise or blame to her cook. For it must be repeated that all arts enable a woman to put personality into her work and, according as her personal care and skill is exhibited in them, so will she find pleasure and purpose in them and not be wondering what to do or even what reason there is in life. Cooking is a very definite art, and household management is also a definite art. Other arts, which permit personal expression and which, therefore, cause a woman to feel satisfaction, the sense of personal value and not emptiness and boredom or the need of constant distraction from without, are knitting and crochet work, which may be brought up to a pitch of great excellence. Music, of course, is a supreme art, and skill in musical expression is one that gives a ceaseless source to the expression of mood and feeling. To me, it seems that in the education of girls, music should be compulsory. Then in later years many women would not regret their inability to charm their leisure hours and give pleasure to their home by means of this wonderful art.

Fortified by such occupations, and seeing about her the fruits of her labour, there can be no reason why a wife should be bored in her own home, or be ceaseless in her search of the distractions that the work of others can give her, distractions that fail to support her days, until in desperation she resorts to such ephemeral employment of personality as backing her skill at bridge affords, or even some worse habit.

I would repeat, then, that one of the golden rules of happiness is to do something, and to do it well. The house of a married lady affords her ample opportunity and choice in such doing, and by taking her opportunity she gives the house the personal quality and charm by which it earns the more endearing title of home.

There is a further feature about the modern household which I feel has reached such a pitch that it now comes definitely within the sphere of the physician. He, at least, knows how serenity is a part of health. By serenity I do not mean a comfortable placidity, in itself a condition by no means to be despised, but a calmness which, as it were, understands life, and is equably disposed to it, knowing that it can accomplish what it purposes. Now the modern household cannot be said to conduce to such general equanimity. Its technical confusion is far too great. The average household of the day is like a vessel that is top-heavy. Any small wave upon the ocean of life makes it reel and lurch in an ominous manner, almost as if it were a tidal wave. I can give as an instance the technical confusion and overloading that is necessary for an ordinary meal, and, to show how marked this is, compare it to the simple bowl, rice and elegant foods, chop-sticks or fingers with finger-bowl, with which an Eastern potentate himself is satisfied. But when we sit down to a meal to-day, the paraphernalia of preparation is enormous. It is far larger than it was fifty years ago, and then it was fully sufficient. I do not, of course, advocate an adoption of Oriental

modes. Such advice would serve no purpose but to bring a smile upon the face of my reader which would not be one complimentary to me. But I would draw her attention to the extraordinary paraphernalia of preparation which is needful before the modern dinner can be consumed. These are the necessities for one person that seem imperative. A kitchen range, pots, pans, grills and gridirons, plates and dishes of five or six kinds, three or more knives, four forks, two spoons, three glasses, carvers, knife rests, plate d'oylies, dish d'oylies, dish covers, cruet-stand, salt, mustard and pepper cellars, pots, boxes and spoons, sugar basin and spoon, sauce tureens, soup tureen, decanters—I need not go into a more extended list, but every housewife knows the multiple possessions that must be hers before even the necessities of life can be satisfied. Let her count up upon her fingers the number of things she needs to enable her to sleep, to eat, to dress, the cost not only in money but in genuine labour they require for purchase and upkeep, the amount of service they require from menders, polishing powders, the eternal rubbing of silver, glass, and metal to keep them bright, and one seems to see that a housewife's duties are on a par with those of the head of the commissariat of an army in the field. It is stupendous, and I have often marvelled that so much labour should be expended upon a table that could well be made efficient and pleasing to look upon without stuffing it like a shop window. I have also wondered how any housewife could keep the mastery of such infinite trivialities, and I find frequently she does not do so. I find that, even if she does, its retention is a matter

of constant worry and vexation to her, and often she rebels against the whole thing, and prefers to live in a hotel. At the same time, in keeping with this rebellion, there is an industrial movement in progress, forced by necessity, for a greater simplicity in the management of a household. Gas and electric cooking have simplified the kitchen, and electric stoves bid fair to simplify heating. But the simplification has not gone much further than that. It has not made the paraphernalia of the dining-room, drawing-room, or bedroom less elaborate. Yet there is certainly no artistic or physiological reason why a greater simplicity should not be attained. Only if the lust for accumulation and display are to overrule those of personal taste can this technical confusion be justified. It is the pocket and not the taste that is illustrated by it. A room is not made to be stuffed like a warehouse, nor a table to be crowded like a tray upon which a pedlar displays his wares. Space and simplicity are essentially qualities of taste, and it is far better to be proud of one's taste in the arrangement and rearrangement, the mastery in short, of a limited number of things than merely to be proud of the number, the cost, the workman's skill, and the glitter of one's possessions. It is a great truth that many conscientious women to-day are possessed by their possessions. They are the servants, the possessions are the masters. This is seen especially in the irritating regularity that is absolutely necessary in order that the household's day may be accomplished. The dinner-bell becomes a tyrant whom no one can disobey. If a servant gets in a temper and leaves, the whole household

rocks and lurches for days. There must be an exact piece of the day cut out for the reading and answering of letters, the orders for the day, the visiting and attention to the children, the inspection of the house, the paying or receiving of visits, the change of dress, until the day goes by with the mechanical precision of the clock. Each moment, each tick is filled. Everything must be precise. There is no space or opportunity for margin. There is nothing to spare. The ship sails always under full canvas. And each housewife knows that if a gust comes or anything unusual happens, then the household may suddenly be plunged into confusion, from which it only slowly emerges and is once more worked up to its state of tense congestion. Such a congested traffic of domestic life cannot possibly be healthy, yet I know how difficult it is to change. I would suggest for all who live in town that as regards food, the simple continental breakfast is a great reduction of elaborate preparation, and is, I believe, more healthy for the somewhat sedentary life citizens are bound to lead. Lunch can also be greatly simplified both in food, preparation and the spread of the table. Dinner is, of course, a matter of compromise with the husband. As regards furniture, need the drawing-room be so full of furniture and knick-knacks, each a separate purchase and making with the others merely a crowd, and so on throughout the house? And as regards time, though a certain regularity is essential in our life, I warmly recommend my readers to allow themselves a large margin, to prevent regularity becoming a tyranny, whose punishments when she fails to obey with

exactitude, are vexatious, upsetting her temper, reacting upon her health, and being as great a trial to her nervous force as the frequent threat of the rod would be to a child. Let her have a balance of time on her side. Let her give to herself at least two hours of margin. With it she will have leisure and the serenity that knows that what it purposes it can accomplish, and with it one of the very foundations of health and happiness.

CHAPTER XII.

Dress.

"The blade wears out the sheath."—*French Proverb.*

DRESS has two purposes. It preserves the warmth of the body and it serves for ornament. The latter purpose is one so peculiarly feminine that there is little for a doctor to say that is to the point. The former, based originally upon experience, is now interpreted in a closer understanding of nature.

The natural protector of the body and regulator of its heat, the skin, is a beautiful arrangement. It consists of a deep layer composed of meshes of fibrous tissue, in which fat is lodged, and an outer cuticle. In addition to this it has several vital processes by which the warmth of the body is regulated. When one is hot the blood vessels of the skin dilate and relieve the deep organs of blood. When cold, the blood vessels contract, the skin becomes pale, and the tiny muscles of the skin tighten up producing the condition of goose skin. The meaning of this goose skin has never been given, but it seems probable that the actual area of skin exposed to the cold is decreased and the underlying fat in the meshes is drawn closer together forming a thicker layer of resistance to the cold. Additional powers of the skin lie in the sweat and sebaceous glands, glands which produce the perspiration and the oil of the skin. Both of these are produced by the skin

in greater quantity when one is hot, but there is always a certain amount of production and notably of the oil of the skin even in the coldest weather. Indeed, the oil of the skin seems to be a definite protective against cold and I disapprove of the exaggeration in frequency of hot baths and soap, which have the convenient hygienic excuse of keeping the skin free from dirt. We all have a religious horror of dirt, and rightly. But I believe this daily scrubbing away of the natural oil of the skin in a hot bath is detrimental to the power of the skin to protect the body from cold, and that the shivery people, who indulge in the habit of the daily hot bath throughout the cold months of the year, bring on their excessive sensitiveness to cold themselves. One hot bath with free soaping in the week should be sufficient. For all people, who are not invalids, the daily cold bath is healthier and saves its devotees from catching cold.

The Laplanders in the winter freely oil their skins to keep out the cold, and they also wear the reindeer skin, in which they are dressed, with the fur next to the skin and the cuticle outside. This manner they have found affords the best protection against the arctic cold. The finer powers of the skin in defence against cold they cannot imitate. They have to confine themselves to the use of oil and to wearing the reindeer skin like a second skin, namely, with the fur corresponding to the deeper meshy and fatty layer of the skin, turned inwards and the cuticle, or leather, outside. It could be imitated in England by the wearing of meshy underclothing and costume and furs covered by a close impervious material.

But our climate rarely requires such extreme though simple measures.

We are content, as a rule, with laying upon the skin a meshy layer of stuff which keeps in the heat. The best materials for doing this are pretty generally known. The extraordinary American schoolmaster, who became Count Rumford and Commander-in-Chief of the Bavarian army, laid the scientific foundations of clothes in his researches to find the most suitable garments for his soldiers.

He warmed up a thermometer to 70° R. and wrapped various stuffs round it to see how capable they were of holding in the heat, noting the time that the thermometer took in falling to 10° R. He found that the order in which stuffs prevented the loss of heat (that is to say the order in which they made the best warm clothes) was hare's fur, raw silk, eiderdown, beaver fur, sheep's wool, cotton wool, the cotton wool being a little more than one-fourth inferior to the silk. Count Rumford also showed that increased thickness of clothes did not increase the heat retaining powers proportionately. He also found that the closer the mesh of a textile stuff the less was the capacity it had of retaining heat. Finally, he tested the capacity of stuffs for taking up water and he found that sheep's wool came first, then silk, then linen, and lastly cotton. The upshot of all this is that the best stuff for underclothing is loose-textured wool or silk, and that if cotton is used its texture should be loose; also that wool takes longer to wet than linen or cotton, and therefore is a greater safeguard against chill due to perspiration in summer than the two other materials.

These things are now generally known, and the value of loose-textured wool or silk, or combinations of these with cotton, which do not shrink as wool tends to do in the wash, is to be seen in most modern underwear. Too thick underwear with thick cloth costumes or dresses in winter are apt to make a woman tired by their weight alone. Especially is this the case with two or even more heavy petticoats which encumber the legs when walking. To keep out the cold, drawers or bloomers are more effective. Indeed it has been said that mankind may be divided into two kinds by the clothes; those that belong to the south, who wear flowing garments, and those of the north, who wear trousers, and the only reason why our women preserve the flowing garment is that they have been kept so free from exposure by men that they were able to preserve the southern or tropical raiment. Be this as it may, there is no doubt that bloomers are warmer than petticoats.

As regards the colours of dresses, experience has proved and science has confirmed, that white and light colours are cooler than black and dark colours. One cannot leave the question of dress without touching upon the vexed matter of the corset. The corset has had an extraordinary amount of abuse levelled at it during the last years. "There are some men, however, chiefly young and ignorant ones," writes a recent authoress, "who, by their senseless preference for impossible waists in their women folk, are greatly to blame for the prevalence of this horrible habit." In so far as ladies pinch their waists, whether at the bidding of youthful

admirers or not, this authoress is, perhaps, justified, but there are not many women who pinch their waists very tightly.

The question, apart from æsthetics and the charm of outline corsets give, is really: Is it better to suspend the clothes from the shoulders only as men do or from the shoulders and the waist as women do? The disadvantage of suspension of the clothes from the shoulders is probably slight. I do not remember ever having seen any objection to the braces in books. Yet those who rail so against the corset might be countered with the declaration that the lower garments suspended by the brace, weigh down the collarbone upon the first rib, and the first rib presses on the lung just at that spot where consumption commonly begins. The objection to the corset is that it compresses the lower part of the chest and prevents abdominal breathing. All Oriental women breathe like men. It is only women who wear corsets who are confined to breast breathing. The lung capacity of women who wear corsets is, therefore, less than it should be, and they have to breathe more quickly to get the same amount of air. Bad oxidation results, and therefore women who compress the lower part of their chests with tight corsets tend to get anæmic or fat. The stomach and kidneys are said to be pushed down. Floating kidney and displacement of the womb are said to be helped by the corset. Weak backs are promoted, and when women leave off their corsets they are said to be greatly troubled with backache. Lastly, the rubbing of the breasts by the corsets is said to be conducive to cancer of the breasts.

This is a formidable list, and if only one or two of them were certainly true, it would be a strong argument against the corset. I am not aware that any of them have been *proved* true. The liver certainly becomes constricted, but no one has shown a definite connection between a constricted liver and any forms of disease or weakness. The probability and the general trend of the evidence, however, tend to show that some are true, and are sufficient to make us regard the corset with suspicion. It certainly has a long history to support it. The Assyrians, though not wearing a corset, wore a broad waist belt, which approached in character to the corset. Roman ladies, undoubtedly, wore corsets, for Terence, the dramatist, makes a character speak of "town ladies, who saddle their backs and straightlace their waists to make them well shaped." The Norman ladies also wore corsets, and the name corset is in use in the thirteenth century. They continued to be in use in the next century, and so aroused an Emperor of Austria that he issued an edict against them and stirred the physicians of the day to fulminate against tight lacing. A little later, Catherine de Medicis brought in an opposite edict, declaring that a thirteen-inch waist was to be the measure of her approval, and literally binding her friends with hoops of steel. In the seafaring times of Elizabeth whalebone was substituted for steel and other materials, but George II. went back to wood. The gentlemen of fashion in George III.'s days wore dainty and ornate satin stays, but their male descendants rejected them and left the compressors of the pliant figure to women alone

The corset, then, has certainly stood the trial of time as regards hygiene. Nevertheless, although I think it foolish to inveigh against the corset, and feel that the matter is for the ladies rather than the doctor to decide, I shall be glad when the corset is defunct and viewed by the curious in the galleries of South Kensington.

Similarly, though the effect of the following points upon health are only indirect, one hopes to see a little more personal quality, a little less dressmaker, a little more stability, a little less advertisement in dress and fashion. Although it is quite impossible to imitate the dresses of the Greeks, yet it is possible to remember their principles and to recall that, firstly, the shape of their clothes for both men and women varied, fundamentally, scarcely at all for a thousand years. The variety and use of ornament and ornamentation varied, but not the essentials of the dress. This stability argues a stability of contentment. The Greeks and the Egyptians before them found the type of dress that suited them and their climate, and kept to it. They were not plagued with dress reformers, for there was nothing to reform. Secondly, the beauty of the dress was personal. It did not depend upon the tailor or dressmaker, for there were no tailors or dressmakers. The cloth was made, but the arrangements of it as a dress depended on the wearer, and was beautiful or less successful according to his or her skill. The measure of one dress against another was really the measure of one taste and skill against another, and not of one dressmaker and purse against another dressmaker and purse. The consequence was, there

was a far greater personal joy in the dress, and such pleasure is positive and healthy. To-day a lady, depending too much on the dressmaker, cannot have the same personal pride in it, and finds her pleasure in the feeling of possession rather than creation a less healthy pleasure, for it is connected with the feelings of envy, jealousy, and the desire to excel, often by some extravagance. Thirdly, owing to this personal quality and stability of type, the ancients were free from the fever of fashion, which began eight hundred years ago with an exaggeration of the sleeves until they had to be tied up, and has continued ever since with the same foolish exaggerations as its chief features. Such a reliance upon the dressmaker, always eager to drive women to buy more dresses, and upon exaggerations, makes the women of to-day slaves to their dresses and to be concerned more with whether they are in the fashion than with anything else. Any development of personal skill or taste in dress simply becomes impossible under such conditions, and the wanton extravagance only results in a medley of confusion and of advertisement, which makes European and American women fall far short of many Oriental women in the beauty of dress. A crowd of Burmese women is beautiful to look upon ; it displays a simple, common type of dress upon which every delicate variety of personal taste may be engrafted. But a crowd of European women is simply bizarre.

One cannot but think that behind this inability of European and American women to use their dress for beauty and taste rather than to make a

show there lurks a very unhealthy principle. Modern dress savours too much of those purposes which are desirable ends to the *demi-mondaine* (indeed, the *demi-mondaine* actually sets the fashion, which the other women follow). Modern dress, therefore, betokens too much—a competition that might be legitimate in a harem, but is unhealthy in society, and promotes and encourages competitive envy with all the harassment and petty ill-health that arise from it. Contentment and the stability that is indicative of contentment have long vanished, and in their place there is a feverish restlessness, an eternal striving for pre-eminence in the peculiar circle in which a woman moves. One has only to look at the shops of the day to see that the women are the extravagant spendthrifts far more than men, and that an enormous amount of the world's work and the sweating, which women profess to deplore, is expended in attempting to satisfy the cravings of female vanity. Modern dress and fashion, indeed, seem directly contradictory to the home, and make, not the home, but the market place, the habitat of women. "Why so few marriages are happy," said Swift, "is because ladies spend their time in making nets and not in making cages."

CHAPTER XIII.

Menstruation.

"Quotations are useful, ingenious, and excellent, when not overdone."—*Fournier.*

MENSTRUATION is the sign that a woman is, theoretically, capable of bearing children. Practically, there are exceptions, but, in general, menstruation is the common sign that a woman is in the fertile period of her life. From the time of her first menstruation to her last a healthy woman is capable of bearing children, and though commonly her child-bearing period occupies the middle years of this wide range of time, yet it is possible for the children to be born to mothers at the age of the earliest menstruation and also at the age of the latest. The earliest pregnancy, I believe, on record is one at the age of eight. Possibly it has occurred earlier, but in the eighth and ninth years pregnancy, though rare, has been recorded by doctors on several occasions. Mothers of the age of ten are by no means uncommon amongst some native tribes. The laws of the early Aryans, for instance, permitted a girl to marry at the age of eight, and to choose a husband for herself, if her parents had not found her one, when she was eleven. The latest age at which a woman has borne a child is recorded as seventy, but cases of pregnancy in women over

sixty are exceedingly rare; in women over fifty they have been often recorded.

The earliest year at which menstruation can appear in a girl is therefore the eighth, though even with so early a year as the eighth, the strictest truth has not been given, for four-weekly discharge of blood from the vagina has been noticed even in sucklings. Such cases of precocious menstruation are usually accompanied by precocious sexual development. Thus Kisch records from Diamant the case of a little girl, who began to menstruate regularly at the age of two years, and who was fully developed like a mature woman at the age of six years, and this case itself is not absolutely unique, nor the earliest recorded menstruation.

As there are these extraordinary exceptions to the immaturity of childhood, so there is the case of a woman recorded who menstruated until she was seventy-two, and Kisch reports that he himself has seen 106 cases of menstruation continuing after the age of fifty.

But putting these exceptions aside, it may be said that the normal age at which menstruation commences in England is between thirteen and sixteen, in warm countries between eleven and fourteen, in the most northern inhabited lands between fifteen and eighteen. The average age for the cessation of the monthly periods or the menopause or change of life, as it is technically and popularly called, is in England forty-five, in the most northern countries fifty, in the tropics forty. The average fertile period of an Englishwoman's life is, therefore, from fifteen to forty-five, a period of thirty years. If the menses

start very early, between the tenth and twelfth years, or very late, between the eighteenth and twenty-fourth years, then the fertile period is usually shorter than normal. Healthy child-bearing and lactation prolong the fertile period.

The years during which menstruation occurs as a physiological function of a woman's body, form the fertile period of her life, because the process of menstruation is definitely connected with the egg-bearing functions of the ovary. During these years, a woman's ovaries produce ova which if fertilized by the male seed, cause her to become pregnant. With menstruation puberty begins, with its cessation the possibility of child-bearing ends.

The process of ovulation or egg-bearing is one in which an egg bursts from the ovary and is carried along a tube, called the Fallopian tube, into the womb. Both menstruation and ovulation are periodic. Both occur every lunar month, the regularity of the menses being frequently absolutely as regular as the changes of the moon. Both, therefore, appear to have some altogether inscrutable connection with the cycles of the moon. The periodicity of menstruation and ovulation are not, however, necessarily synchronous. They do not always occur together, though both occur once in the month. Ovulation, of course, is the actual sign of fertility. Menstruation is the outward and visible sign of ovulation. By it the inner wall of the womb is shed, and thus the soil of the womb, in which a fertilized ovum is implanted to grow to a child, is renewed every month.

It is advisable in dealing with menstruation to

describe it and its phenomena, firstly as they normally occur, and secondly as they occur when incompatible with proper health. The process of "being unwell" is scarcely a fair description of a normal physiological process, yet at the time of menstruation a woman is not her usual self, and it is a time when she tends to watch herself with a little anxiety to see that everything is right and proper.

I mentioned in a previous chapter that many men have a definite physiological cycle. At the zenith of this cycle they feel well, active, hopeful and creative. There is potency in their acts and thoughts and general feeling. This is followed by a slow decline in power and the bottom of the cycle is indicated by a comparative loss of desire, a tendency to be irritable, and more or less definite depression, with lack of will and energy. This cycle, like that of a woman, may take about a month to complete itself. The cycle requires, perhaps, some skill in its detection, when occurring in men. On the other hand, a physiological cycle of monthly periodicity is, as seen in menstruation, common to all women in a normal condition of health. Its zenith of activity and zest for life is in the days that precede menstruation. With menstruation the fall begins, and the days that follow the cessation of the discharge are the days of depression. A woman, therefore, physiologically feels at her best before the menses come on, and with their onset and upon the days following tends to feel depression and to take a less bright and hopeful view of matters. This shows that menstruation is either itself a lowering function, or the evidence of a general lowering of the tone of

the body. Consequently, though menstruation is a normal physiological process, a woman is correct in speaking of herselt as " unwell " or " poorly " at such a time. She is certainly not in her full health, and though in the majority of cases she is not more than slightly indisposed and does not have to alter the normal course of her life, still a slight exaggeration of this indisposition is readily felt. Again, let us suppose that the woman at the zenith of her monthly cycle, *i.e.*, the days preceding menstruation, is well without being in full and blooming health, this is followed by a period in which she is definitely unwell, and is unwise and even unable to attempt to do things which she can do when she is well. Further, if she is in feeble health or an actual invalid, it is at the period of depression in the month, the period of menstruation and the few days following, when her sickness, both in its manifestations and in the feelings of weakness or pain it causes her, will be at its worst. This period is, as it were, the touchstone of a woman's health, therefore it is wise for her to treat it with respect, and to make herself acquainted with such signs as point to abnormalities in its course. I shall, therefore, describe menstruation detail by detail, so as to enable a woman to judge by her knowledge as well as by her feelings, when her menstruation is normal and when she would be wise to take extra care or to send for a medical man.

Menstruation is shown primarily by a discharge of blood and mucus and debris from the womb. Under normal circumstances this discharge is red in colour owing to the presence of the blood, and sticky owing

to the presence of the mucus. Sometimes it seems to be pure blood without any mucus. When there is an excess of mucus it makes the discharge lighter in colour, and this mucus is in excess sometimes when the woman suffers from whites. The pale colour of the discharge does not matter in itself but the whites do, and they are not only a sign of ill-health, either local or general, but are also sufficiently disagreeable to a woman to make her consult a doctor. Certainly she should do so if she have the whites. If the doctor cure her, then the menstrual fluid will become normal again. In other women, who do not suffer from the whites, the menstrual fluid is sometimes pale. This pallor is due to the small quantity of blood lost and is of no moment, for such women are often quite well in their general and local health. On the other hand, the menstrual fluid may not only be its usual red colour, but instead of the blood being fluid it may contain small clots. Such clots in the menstrual fluid not infrequently cause pain, for the womb has difficulty in squeezing them out of its cavity through the neck into the vagina or sheath. Clots occur in the menstrual fluid only when the amount of blood lost is excessive. They are not normal, and I would, therefore, strongly advise my readers, in the event of their noticing clots, to consult their medical men. They need not frighten themselves when they see clots, they need not think they have got some horrible disease. Very simple causes produce such clots. Nevertheless they should consult their doctor if they see them.

The quantity of the fluid passed is important. Beginning gradually, the flow, if lasting the average

period of four days, reaches its maximum about the second day and then declines. The amount is as a rule not more than requires three napkins in the twenty-four hours. More than this should be considered abnormal by my readers, unless the weather is exceptionally hot. For hot weather has a marked effect upon the menstrual flow, as Anglo-Indian women know. The amount of the flow in hot countries may be twice or three times as great as it is in England, and even become a serious drain upon a woman's health, making her anæmic, and, in her condition of poor blood, making her liable to diseases or disorders that otherwise would not affect her. But in England there is no need for a woman to worry, if the discharge does not require more than three napkins a day, unless, of course, she feels definitely ill.

Excess in the amount of the flow has a great number of causes, and, unless it seems purely a temporary phenomenon, a woman is well advised to seek her doctor. Trivial causes may lead to excess. Hot weather is one such cause, a too free indulgence in intercourse is another such cause, a too free indulgence in wine a like cause, and constipation may even have this effect. But if such conditions have not been present and yet there is excess of discharge, a woman should certainly ask the advice of her medical man. In these cases especially I would warn my readers against patent medicines and quack cures advertised in papers. Patent medicines for common complaints such as colds, headaches, indigestion or constipation are not very risky, for such common indispositions will, as a rule,

get well of themselves. But in the indispositions that affect the womb and the important organs related to it, women are very unwise to entrust themselves to advertised remedies and quacks. Yet much makes them tend to do so. Many women, and often the most self-sacrificing of women, are peculiarly economical when they themselves are concerned, and in the matter of their own health are penny wise and pound foolish. Another reason for their not going to their doctors is the very natural modesty they feel and a distaste for going into such matters even before a medical man, and so they hope to snatch a cure secretly. Lastly, women are by nature credulous, an excellent provision provided they do not fall into the hands of the unscrupulous, who trade upon their credulity. The true quack is always unscrupulous. It is part of the definition of him. Therefore in all matters of private health, let my readers carefully avoid quacks and advertised remedies. The benefit that these remedies effect is nearly always strictly limited to the dispensers of them. The patient, if really ill, merely postpones the doctor's visit, and, if only temporarily indisposed, will get well without quacks.

Scanty flow at the menstrual period may be a temporary phenomenon, and it may be the usual habit of a woman. Healthy country women, who live on a plain diet and take plenty of exercise or work in the fields, have a moderate flow compared to that of the delicate women of the cities, who live sedentary lives and have a luxurious, spiced and tasty diet. Climate affects menstruation, as has been said, and in cold weather the flow becomes

scanty, and in the northern lands of the world is said to be almost absent during extreme cold weather. So also moderation or absence of intercourse makes the flow scanty and absence of stimulation in the form of novels, plays and conversation about love and marriage. Women who put away all thought of sex, as do nuns, when once they have conquered and suppressed their desires, often are only troubled by a little show, which comes and goes in the space of twenty-four hours. Similarly fright and anxiety, especially if about a subject related to sex, may cause a scanty flow or complete cessation of menstruation. But scanty flow appearing in a woman who has hitherto lost a normal quantity, may point to a more serious condition than a mere temporary derangement or some psychological upset. There are various illnesses and ill-conditions accompanied by scanty flow, just as there are others that are accompanied by increased flow. A very scanty flow from the time of onset of puberty onwards may be due to lack of proper development of the womb, and, therefore, should this be the case, a doctor should be consulted, to whose discretion the nature of the enquiry needed must be left. It is an unusual cause, but it is a possibility, and in view of the vital issues of life's happiness or unhappiness that may depend upon it, it is one never to be ignored. For I will repeat here, what indeed I would like to repeat in each chapter, that an altogether unexpected amount of the trouble that vexes people's lives has a physiological basis. The temper is the transcript of the body. Again and again amongst my patients and friends I have found a mountain of complaint,

temper and unhappiness piled up upon some simple bodily defect or deprivation. I have often wished there was such a terse saying in the world comparable to *cherchez la femme*, referring to the body. *Mens sana in corpore sano* is not sufficiently pointed to persuade people to discover in themselves their querulousness against others and to look to the body first, foremost and always, when they wish for an understanding of their feelings and a gloomy outlook upon the world. But, when the body is ignored as when a sexually ill-developed woman or man marries, then every phenomenon of the lives of both mates becomes dyed in complaint and rendered empty of meaning to them because the fundamental basis of life is gravely at fault. The only issue for such a marriage is that which the law recognizes in extreme cases, namely, that it should be brought to an end.

Fortunately for the happiness of women, this especial cause of scanty flow is very rare. A far more common cause in the early years of adult life, whether in the married or unmarried, is anæmia, the green sickness or chlorosis of young women. Such young women are pale with a waxy complexion, which has just a hint of green in it. They are not infrequently fat but obviously unhealthy, getting breathless quickly with exertion and being subject to faintness, indigestion and constipation. Anæmia in most cases is a disease, which with time and skill is readily cured. Other sicknesses, which cause scanty flow, are some forms of chronic heart disease, diabetes, consumption, etc., diseases which give more obvious signs of their presence than scanty or

absent menstruation. Very fat women have as a rule a scanty flow, great disposition to sterility and an early menopause. During acute fevers, such as typhoid or small-pox the flow also ceases, but reappears with or after convalescence. There is a further condition, which leads to a partial or complete cessation of menstruation in early life. This is an excessive shrinkage of the womb following childbirth. It is very rare. If it occurs then a true change of life follows the childbirth.

Sudden and unexpected onset of the menstrual flow with free bleeding is always a reason for a medical man, unless there is some strong emotional reason for it, such, for instance, as marriage, which frequently brings on menstruation in the bride, though the marriage has been carefully arranged so as to occur between the menstruations. Sudden cessation of the flow, when once begun, is also usually due to some great emotion of joy or grief, though it may result from the shock of cold. Sometimes such a sudden cessation will give a woman pain, a sense of fulness in the head and pelvis, nausea and other signs of general debility. The best domestic treatment is to take either a hot foot-bath or a warm bath and to get quickly to bed. Either the flow will reappear or the unpleasant symptoms will cease. Anyhow, the cause of the cessation of the flow is usually more important than the cessation itself, which is only a secondary symptom. A warm bath and bed in themselves are an excellent treatment for shock, apart from the effect shock may have had upon the menstrual flow.

Complete absence of menstruation is, of course,

the common sign of pregnancy. Menstruation is usually absent during the suckling of a child. Its delay and eventual absence instead of periodic return is also the chief sign of the change of life. The relation of menstruation to these three important conditions, namely, pregnancy, suckling and change of life, will be discussed in the chapters describing these conditions. Summing up the question of the quantity of the menstrual flow, one can say that a scanty flow is, as a rule, not a matter of importance or urgency. Sudden and peculiar onset and an unusual amount of the flow are, on the other hand, conditions which a woman should never neglect. Unless she is sure it is due to one of the trivial causes, which were mentioned upon p. 156, she should always put herself in the hands of her medical man. If the flow is sudden in its onset and excessive in amount, then she must go to bed and send for her doctor without delay. Excess of the menstrual flow is, in a word, a condition which may be of no moment, but at the same time may be very serious in its meaning, and only a medical man can decide which of the two it is.

The length of the menstrual period is generally closely connected with the amount A heavy flow means a longer period and *vice versa*. But this is not necessarily so. Blood may come away in a few hours in sufficient quantity to make a patient seriously weak and anæmic. Obviously the amount of blood lost is far more important than the time it takes to come away, and therefore, I do not advise a woman to pay much attention to the length of the flow. The average length of the flow is from five to

six days. It may last for only a few hours ; on the other hand it may last for ten to fourteen days, but unless the flow is very slight and languid, one lasting over eight days should cause a woman to question her doctor, a piece of advice, which, however, requires qualification, as all mathematical advice does. By mathematical advice, I mean advice that directs people by figures, such as if a woman is unwell eight days, then it is normal, but if over eight, then it is abnormal. The fact is that every doctor comes across patients who are unwell for periods as long as ten days without any injury to themselves. It is not the figures that matter, it is not even the exact quantity lost that matters, for some women can endure a loss beneficially which might do harm to others. The thing chiefly to heed is the character. Now the character of the menstrual periods is its constancy. In each month the duration of the period is the same. Once a three, five, or eight-day period is established, it remains three, five, or eight days. Very hot weather makes the period longer, very cold makes it shorter. Normally, however, in England the periods show great constancy in over 92 per cent. of women. Sometimes some irregularity supervenes owing to change of habit of life, climate, or some temporary illness, but regularity in the length of the period eventually reappears. Thus a woman accustomed to England, who goes to India or Burma, may find the length of the period and the loss of fluid both increased, but this increase itself becomes regular. So also when the menses reappear after childbirth, irregularity and unusual character may for a time exist. Variation without some such

cause, either in the length of the period or the quality of fluid lost, or in both together, is the chief feature of menstruation to which a woman should pay heed. She is scarcely likely to have anything wrong with her womb and adjacent organs without a change in the otherwise constant character of her periods. But any slight derangement or the beginning of more serious trouble will upset this constancy. Constancy, therefore, should be her chief guide as to her proper periodical health.

Some seven to eight women in a hundred do, however, show a constancy only in irregularity, sometimes being unwell for three, sometimes for four, sometimes for five days, and so on, without their health suffering. The constancy of their irregularity is the feature which shows that the irregularity itself does not really matter. An irregularity which, at first watched by the doctor, continues for months, sometimes showing increased, sometimes decreased quantity lost, and which in no way affects a woman's usual health or character, obviously does not matter much, and I advise such a woman not to worry at all at her being different from others. There are in this world plenty of people, who have some such unusual physical character—such as an habitually irregular pulse, bowel action, method of sleep—and who are not any the worse for it. But such people are very apt to get worried about their abnormality and, unfortunately, some doctors—I trust unconsciously—and all quacks help them to worry. These women consequently spend a great deal of time trying to be normal and like other people. But the fact is that they cannot be normal. Their

abnormality is, as it were, their own normality, and so much is this the case that observant doctors see patients, whose pulses, for instance, are irregular when they are well and actually become regular only when they are ill. Women, then, who are habitually irregular, have no reason at all to worry. It is just their natural habit to be irregular.

As has been said, normally regularity in the length of the period is very notable. So, too, is regularity in the time that elapses between the menstrual periods. In most women this is regular, in some astonishingly so, menstruation beginning precisely at the same hour of the same day of each lunar month throughout the thirteen lunar months of the year. The interval between the menstruation is commonly twenty-eight days, sometimes it is twenty-one days, sometimes thirty days. Again, however, there is a small percentage of women in whom the intervals between the menstruations are habitually irregular. The chief importance of the regularity of the menstrual periods is that it enables a woman to tell when she is pregnant. Great anxiety about pregnancy may sometimes postpone the onset of menstruation, but the great majority of married women, if the menses are two or even one day late, are right when they suspect that they are pregnant.

On the other hand, when women, habitually regular in the intervals between the menses, become irregular, and when this irregularity is combined with irregularity of the amount lost, then the doctor should be sought. There is, as all know, always a possible danger in the unfamiliar. To the regular, irregularity is a change, it is something unfamiliar.

Irregularity of the Periods.

It may have some meaning of importance to health, it may mean nothing at all. A change of climate or style of life may bring it about on the one hand. On the other hand, such a dreadful disease as cancer may first show itself in this way, or some lesser disease like fibroid tumours of the womb may be developing. There may be some smaller cause like displacement of the womb or some changes in its lining membrane following upon a pregnancy or miscarriage. But whatsoever is the cause, the doctor is the one to decide about it, and so I would urge my readers, when such a change occurs, to consult their medical man. This visit is imperative if any unpleasant-smelling discharge comes from the front passage. The reason why this visit is so important is owing to the possibility of cancer. It is difficult to write upon the subject of cancer ; one feels one has to warn readers without frightening them. Nothing could be worse than for them to imagine that, when they become irregular, the reason of their irregularity is cancer. Such a wide-spread dread of the disease upon trivial grounds would be as bad for the health as the disease itself. And as a fact there are far commoner causes of irregularity than cancer. The irregularity of the menses, which occurs at the change of life and will be described in the chapter upon that subject, is, for instance, common to practically all women. It is only the seriousness of cancer and the supreme advantage of taking the disease as early as possible that makes one advise a woman who becomes irregular without obvious cause to go and see her doctor.

Such being the general character of menstruation, we will now enquire into what a woman feels when unwell. The condition of real health in menstruation is one in which its presence is only detected by the loss of blood, which is unaccompanied by any other symptoms. This, however, is not usual amongst civilized women of cities. The majority of girls and women do actually feel unwell, as the term implies. They have a sense of heaviness or dragging feeling in the loins and pelvis. The legs feel heavy, as if they were tired by long standing or walking. They have slight headache and slight indigestion. They flush and get hot readily and their bowels may be loose, and their desire to pass water a frequent one. They have an uneasy feeling in the stomach, they have no appetite, they feel inclined to be sick. Sometimes they feel giddy, especially when they bend down, and their hearts throb and they have palpitations. They do not sleep so well as usual, they have itching and pricking in the breasts and private parts. They have also some change of character, they become irritable and moody, or else they indulge in unhappy or in sensual or romantic thoughts. They like to be alone and shun the society of others in whose company at other times they delight to be. Altogether, there is a loss of the vitality, which makes them unconscious of their physical functions and makes them view the world with delight. Their bodily vitality is depressed and their character and thought is also depressed. All these symptoms may be much more marked. Some unfortunate women suffer a great deal of pain at their menstrual periods.

They suffer either from prolonged pain or definite cramp interrupted by interludes in which they are free from pain. The pain may be so bad as to compel a woman to take to her bed. Sometimes the pain begins a few hours before the onset of menstruation, and it may endure some hours after the flow has ceased. The pain makes them sick, and they have tenderness over the stomach or cramp. They have flatulence, diarrhœa, salivation, coated tongues, headache, neuralgia, and they get dark rings under their eyes. Their hearts beat more rapidly, they have palpitations or other signs of disturbed circulation, such as cold hands and feet, which they cannot get warm. They sometimes have a temporary skin eruption accompanying menstruation, and, if they have chronic skin troubles, these become worse at the menses. Their urine is altered, being either clear and abundant or thick and cloudy, and they pass it more frequently. Sometimes they perspire freely, they flush readily, and rushes of blood to the head make them feel giddy and even inclined to faint. But, perhaps, the most striking effect of menstruation is the change of character it often effects during the menstrual period. A bright and happy woman at such a time may become mournful and morose, a chastely-minded woman may have erotic longings and feelings, a sweet-tempered woman may become irritable and petulant. Exaggeration of the negative side of the normal character is usual. A determined, strong-minded or selfish woman may become even fierce at such a time, as some doctors and more husbands know only too well. Other wives

become so irritable that a monthly domestic quarrel may be anticipated to occur with regularity. Others feel very languid and disinclined to do anything. Others relapse into sentiment, others into tears. Striking evidence to the change in character or, rather, exaggeration of the negative side or Mr. Hyde of each character is shown in the remarkable association there is between the menstrual period and crime, and I trust in the general interest of the subject my readers will forgive me mentioning this strange association of the wickedness of the neurotic and ill-equipped opponents of society and the depressed vitality due to a physiology rendered faulty by the general divorce from natural conditions that reigns. Criminal women taken by the police have been found by doctors to be menstruating in the very great majority of cases at the time they committed their crimes. Suicide or attempted suicide is nearly always undertaken at the menstrual period. The pilfering in the fashionable shops of Paris was found to be due commonly to fashionable ladies when menstruating.

Some evidence has been brought forward, then, to show how greatly a woman's happiness and character depends upon her sexual physiology. I wish sometimes it were possible and seemly to illustrate this intimate connection more lucidly. The number of women whose ill-health or unhappy temperaments are due to faulty sexual physiology are at this day unnumbered. Our traditions no longer protect them. The paths upon which their lives are to run are no longer marked out by the wisdom of centuries—indeed, in Europe we suffer

from centuries of unwisdom in these matters. Each woman is more or less given her freedom. She is told to direct herself. She is told to become educated. Yet in these vital matters of her health and happiness knowledge is shut from her. The modern world is in these vital matters too fearfully at fault. Such conventions, customs and ideas as are about a woman are far more likely to lead her into harmful ways of life than into healthy ones. Consequently, not only do hysteria, nerves and neurasthenia abound, but they increase. Lesser maladies are scarcely recognized as maladies at all. We become content to accept life on a lower level of happiness and fulfilment. We submit to that gnawing feeling of emptiness, which is, I think, the characteristic curse of our anti-physiological time. We bear, as well as we can, with each other's apparently causeless irritability. It is human nature we think. But I would declare boldly that it is not healthy human nature, but the exaggeration of the negative side of human nature. It is mismanaged human nature. The quarrels and irritation that happen in married homes ought not to be. The fear of marriage and the discontent with it ought not to be. The feminine outcry against men, largely justified at the present time, ought not to be. It is mismanaged physiology that is at the bottom of it all. It is not a complicated question, it is a simple one, but it requires a radical change in our lives and outlook to effect a cure.

So also this suffering of women at menstruation ought not to be. It is not a healthy, natural phenomenon. It is, in the retributive justice of life,

a warning that the management of life itself is ill-done.

But my readers may well declare that we cannot set the world right at present and, meanwhile, we suffer. What they want to know is how they shall live so as to avoid, as far as possible, the rather appalling catalogue of the troubles connected with menstruation, or, if they are already afflicted, how they can mitigate their troubles or become wholly cured.

It should be quite clear that the menstrual period is a period of lowered vitality. Clearly, also, if the original vitality or health is excellent, the lowering of it by menstruation cannot bring it to a very low level, whereas, if the ordinary vitality is only just that of health or of feeble health, then the lowering of it by menstruation will bring it to a level at which the effects of weakness will be very definitely felt. It is, therefore, all important that the ordinary vitality should be kept at a high level, that the lowering effect of menstruation will not be felt. In other words, a head that never aches and a stomach that never is disturbed during the non-menstruating part of the month are not likely to be made to ache badly or be badly nauseated by menstruation. Hence, an important rule for having painless and healthy menstruations is to be healthy between menstruations.

The rules of hygiene, then, laid down in the previous chapters should be carefully followed and by their means suffering at menstruation will be prevented, mitigated or cured. A woman who, between her periods, pays no regard to her hea'th and uses up every fragment of vital energy she

possesses, cannot wonder that she has to pay by suffering during her periods. But one who pays reasonable attention to her health without the meticulous fussiness of the nervous, and who a day or two before she is unwell is careful not to get overdone, meets the menstrual period with a stock of vitality which will keep her free from, or greatly mitigate her troubles.

During the period when the menses are on a woman must pay extra heed to her health. I have known women dance, go horse-riding, or ride a bicycle during their menstrual periods, and I confess I have known some do these things without any obvious harm coming to them during the time I knew them. But such exercises seem to be against wisdom, and I would never advise any girl or woman to run these risks, though, had she experience of their harmlessness upon her side, I should feel it difficult to absolutely veto a woman who wished to go to a dance during her period. Most women are more careful. They do not walk so far as usual and they rest more, and they are wise in this, for the measure of their vitality is less. They are drawing, as it were, on a smaller banking account of health during menstruation, and, therefore, they are wise to rest. It is not necessary, of course, for them to be on the sofa all day. This is carrying rest to extremes, and it is harmful in its effects. But it is a good rule to always lie down for an hour after lunch whilst menstruation is taking place, and to reduce one's total exercise by, at least, a half.

Similarly with food, as has been seen, the menstrual period has a peculiar effect upon the stomach

and digestion, the capacity of proper digestion being reduced. A menstruating woman, even if experience shows her that she keeps a good appetite and digestion during her periods, is unwise to indulge in rich foods. She should make her diet more simple, with plenty of fresh meat, vegetables, stewed or fresh fruit and good bread, butter and milk, and not too many pastries, fancy dishes and *entrées*. She herself, however, knows what is rich and what is simple. Over-cooked, stringy meat is hard and indigestible, under-cooked, fibrous vegetables are indigestible. Lightly-cooked fresh meat and well-cooked vegetables are digestible. Good bread is desirable. Only a little while ago a friend of mine overheard in a railway carriage two commercial travellers for flour and grain express their wonder that Londoners eat the flour that was given them. In the country and the north people were wiser, they said. I do not know how much there is in what they said, there might have been only jealousy, but at any rate, it shows the wisdom of getting good flour and bread.

Women, sometimes, are advised by their friends to take alcohol in some form or other to keep their strength up when they are unwell. No advice could well be more dangerous. The menstrual periods are definite, recurring periods of depressed vitality, which occupy four to ten or more days every month. To recommend a woman to be in a state of artificial vitality by using alcohol as many as ten days every month is absurd advice. One might as well recommend anyone to beat a horse whenever it is tired, and so make it do the

same distance as it would were it not tired. Such a principle, as everyone knows, would before long lead to the horse breaking down altogether. There is no reason why a woman accustomed to a little alcohol daily should leave off her usual amount when unwell, except she have congestive pelvic pain or congestive headache, in which case she should take no alcohol, strong tea or coffee at all. To make her menses a reason for taking more is to give her a reason for contracting a monthly habit. A little later and she wil begin to take alcohol whenever she feels tired or run down, whether she is unwell or not. Little by little she acquires the alcohol habit, and at last she becomes that degraded creature, the secret drinking woman with her horrid vice, her lying and deceit, and her unhappy descent to the lowest level of human character. On no account, then, should any woman even run the risk of this descent by taking alcohol to make her feel stronger when she is unwell.

At one time doctors used to advise women, when unwell, not to take baths, but now they are not, as a rule, so stringent. I always in this matter bear in mind the depressed vitality. When any one is really tired, an extremely cold bath is bad, because the reactive glow and warmth does not occur, and an extremely hot bath, however pleasant, adds to the weariness and exhaustion. The same applies precisely with menstrual women. They are a little tired, a little below par. Therefore, quite cold or very hot baths are not good for them. But there is no reason why a woman should not enjoy a pleasant warm bath at these times, as long as she

only stays in it a minute or two, but no more. If she loses much she should omit this bath and content herself with a warm sponge. If, on the other hand, she is losing little, a hot sitz bath may aid the flow and relieve her, if she feel a fulness and a sense of the need of relief of her organs by a flow of blood.

A woman, when she feels she is going to be unwell, is well advised to take a blue pill, a dose of salts, a glass of apenta water, some cascara sagrada, or whatsoever domestic purge she uses. This is especially needful if she is constipated and her periods are painful. Constipation adds to the congested state of her womb and ovaries, and its relief will relieve her pain or discomfort.

A woman should loosen her corset when she is unwell, and not let it compress the lower abdomen. Tight garters, always unwise articles of wear, are still more unwise when a woman is unwell. So, also, she should not have very warm clothing, especially over the thighs and lower abdomen, for such clothing would exaggerate the congestion of the pelvic organs, the womb and ovaries, which the menstrual flow is relieving. At night also, for the same reasons, she should not be too heavily covered. She should go to bed early and try and get an extra hour or so of sleep, just as if she were overtired. If she is a pianist or very fond of needlework, a woman should not pursue these arts too eagerly when she is unwell. In themselves they use up her vitality, and the prolonged sitting they entail tends to cause some congestion of the pelvic organs. A woman should not sing when she is unwell. Singing

masters have told me it does harm to the voice, and I think I have noticed women are more liable to be hoarse at this time, if they sing or use their voices much. I am not sure, but such hoarseness would be in keeping with the general lowered vitality, and, consequently, for the tendency for outward circumstances, usually harmless, to affect the body unfavourably.

The lowered vitality of a menstruating woman must certainly be shielded from things that would worry her. Ordinarily, such things might worry her a little, but when she is unwell, they may worry her so much that she is aggravatingly irritable to her husband, her children, her servants, and her friends, and a general ill-temper and discomfort prevails. She should not have a dinner party or other social function at such a time, or to have to pack up to change houses, go on a visit or to the seaside, or to go out to a party or be late at theatres or indulge in any other pleasure or business that is likely to try her. She must be treated as tired, and spared. But it is only a temporary invalidism. She must not make it a reason for accustoming others to do everything for her.

Such is the general hygiene a woman should observe when she is unwell.

When she has great pain it is better that she should send for a doctor. The pain may be due to many things, which only he can find out and set right. Great pain may be due to some local disease or displacement of the uterus or to the passage of clots or membrane, or to the mouth of the womb being too narrow, or to excessive sensitiveness.

These are all causes which only a doctor can diagnose properly and set right. The only measures of relief that a woman can adopt herself are to have her bowels open, to avoid all alcohol, strong tea and coffee and stimulating foods, to stay in bed and to put hot bottles or hot flannels to her lower abdomen. These measures will often give her considerable relief. Sometimes, however, the heat upon the abdomen adds to the pain. If so, the bottles had better be put at the woman's feet. A further measure, which will often bring her relief is general and abdominal massage. If a woman knows of a masseuse who will give her such massage for some half to three-quarters of an hour once a day, she is well advised to try massage as a means of relieving her of her pain. For her headache she will often find local massage particularly good, but as all her symptoms are due mainly to the change that has its chief effect in the womb, a relief of the womb's pain and congestion will indirectly lead to the bettering of other symptoms. For her special symptoms, massage, as has been said, will do her headache good. A handkerchief damped with *eau de cologne* and laid on the forehead is a favourite and effectual remedy, and menthol will bring relief, especially to the headache that chiefly affects one side of the forehead. Phenacetin tabloids may also be taken to relieve headache, but not more than one to two a day of the five-grain tabloids should be taken without a doctor's orders, for phenacetin, like menstruation itself lowers the vitality. For the dyspepsia and heartburn, in addition to careful feeding and rest

upon the back after big meals, a simple digestive tonic should be taken. A chemist often has digestive tonics, consisting of some alkali and bitter infusion, which are suitable. Soda mint tabloids or liquorice drops are also useful and can do no harm. Patent medicines should be avoided by those who do not care to pay a very big price for a very small dose of some commonly used drugs, most patent medicines being of this kind.

For irritability a woman will find bromides useful, and for sleeplessness, veronal, but she should not take these drugs without proper medical direction. Similarly, no vaginal douching should be undertaken without a doctor's orders. Personally, I am not in favour of douching except in certain local illnesses. The vagina knows well enough how to look after itself, and interference with it in the form of douching is unnecessary and may be harmful. A thorough washing of the outer parts is, of course, necessary, but I would certainly never recommend a woman to douche herself for health's sake on her own initiative.

Vicarious menstruation is a name given to cases in which the menstruation being scanty, blood comes from some other organ of the body. Nose bleeding is the common form. It recurs monthly with scanty or even suppressed menstruation. It is very rare, but is interesting, and throws light on the general character of menstruation. Another form is seen in anæmic young women, who, instead of losing blood at the menses, merely have a white discharge.

The whites is the name given to this white dis-

charge from the vagina. It is a very common condition in married women, and especially in them who have had children. Their most common cause, in fact, is the injury of the parts by child-birth. A white discharge for a day or two sometimes follows the menses. Sometimes it continues for longer, sometimes it continues throughout each month and keeps the woman perpetually and annoyingly damp. The whites also occur apart from menstruation, not being due to any womb trouble, but only to an inflamed vulva and vagina. They may then occur for a few days between the periods, and the woman herself may think no more of it than she would of a catarrh elsewhere. Or they may become persistent and annoy the patient by the dampness or even pain they cause her.

Simple causes of the whites that a married woman may cure for herself are fatigue, too much standing, a chill, an excess of intercourse, intercourse of such a nature that her senses are excited but not satisfied, anæmia and constipation. The remedies for these conditions are obvious. For her anæmia she should take rest, good air, good, fresh food and six Blaud's pills every day.

But if none of her simple remedies are of any avail and the discharge is profuse or continuous, or yellow in colour, or otherwise unpleasant, or it came on suddenly and unexpectedly, she will have to ask a doctor's advice. If with the whites she have peculiarity of menstruation, she should seek the doctor at once. There are a great number of different causes of the whites, most of which are curable without great trouble.

CHAPTER XIV.

Signs and Symptoms of Pregnancy.

"Everything in the woman is a riddle, and everything in the woman hath a solution. It is called pregnancy."

Nietzsche.

It is obviously a matter of considerable importance for a woman to know whether she is pregnant or not. Especially is this the case when the child to be born will be the first. The possession of a child must make the greatest difference to a woman. Usually it means a very great joy to her. I have known women when they have been told they were pregnant cry for sheer joy at the thought of it. I have known others to whom, unhappily, the news was the verdict of their guilt. But, whichsoever way it be, it is always a matter of the greatest moment. A woman who is already a mother is also anxious to know as early as possible whether she be with child. The fact may necessitate a considerable change in her mode of life and occupations and many preparations thereto. At the least, it is well for her to know early, that she may take extra care of her health. Health during the carrying period is of great value, it is of great value to the child to be born. Scientists are not certain as to what is the effect of the carrying period upon the character and health of the child, for, indeed, the effects are beyond the proofs of science. Towards

that which is beyond its peculiar methods of proof, science is rightly or perhaps unduly sceptical. Certain is it that it is an old-established belief throughout the world that the condition of the woman during her carrying has a considerable influence upon the child to be born, so that its whole character and life may be affected. A gloomy, unhappy mother is thought to have a melancholy child, a nervous, irritable mother a nervous child, and so on. By the ordinary rules of heredity one might expect this, for such pregnant melancholy or irritability is probably an exacerbation of a character normally kept in control. But the belief is often more specific, and relates to actual occurrences during pregnancy. A pregnant woman, it is said, should not look upon anything deformed lest her child be deformed. The Greeks placed statues of beautiful youths in the chambers of their wives, that the child born to them might be beautiful. A pregnant woman should not see anything monstrous, else there is fear that she will give birth to a monstrosity. A pregnant woman should be shielded from shock, lest her child be born with fear implanted in its heart.

As has been said, to these beliefs science turns the ear of scepticism. They are old wives' fables, the scientists are wont to say. But, to my mind, in old wives' fables there is often more truth than is dreamed of in our philosophy, and I am often impressed with the fact that young men, coming from their hospitals armed against what they call credulity and superstition, as they become experienced practitioners, gradually come to pay heed to what they once held were idle tales. I have myself

come across cases in which the explanation that something happening to the carrying mother affected the child that is born to her does seem to be a feasible one. At any rate, the Greeks, with their practical attention to this belief, did produce children of exceptional beauty and gifts. I, therefore, think there is no time when a woman should pay so much heed to her toilet, her dress, her thought of beauty than at this time. There is a tendency for a woman, thinking of the disfigurements of pregnancy, to abandon for the time being her usual care. I would advise her not to do so. Let her attend well, not only to her health, but to those refinements and excellencies which should be added to health. Let her thought and care dwell upon the grace and beauty she can add to herself by her toilet. I think it well, also, that she should have bright and beautiful things about her. Gay flowers should adorn her sleeping and dwelling rooms. She should pay peculiar heed to the beauty of the arrangement of these rooms. They should not be crammed and overcrowded with possessions, but with things loved, properly disposed, that each may have its value. Similarly, she should guard herself against shocks, worries, excitements, many social entertainments, and such things as spoil serenity and provoke irritation. Where Greeks and scientists differ, I confess, I would prefer to be upon the side of the Greeks.

From this general point of view, as well as from the definite and decided point of view of health, it is important for a woman to know when she is pregnant. The signs and symptoms of pregnancy are numerous. They are divided into the

probable and the certain, the certain being those given by the child itself and detected by the doctor. But the probable signs are sufficient in the great majority of cases to assure a woman, her friends and her medical attendant that she is going to have a child.

A woman, sometimes, can tell the precise moment when she has conceived. I have known women who have already had children do this, and I have even known women do this who have not previously been pregnant, and events have proved them to be right. Only in peculiar cases, however, are they right. The feeling of conception is one of those rare refinements of feeling not often felt, but certainly, sometimes it is felt.

A pregnant woman, however, does soon begin to note a feeling of change. In the earliest weeks she has a sensation of weakness, she feels shooting pains and itching in the breast, she finds she has to pass her water more frequently, and she feels a little inclined to be sick in the early morning. If she has had children before, these signs may scarcely be noticeable, but with the first child they are fairly definite, definite enough to suggest to a woman that some change has occurred in her physiology.

But the decisive symptom is, of course, the cessation of menstruation. A married woman, regular in her periods, ceases to be unwell. Perhaps when she should be unwell, there is a slight show of blood, but it only appears on one instead of four or five days, and practically amounts to an absence of menstruation. Under such circumstances a married woman comes to the conclusion that she is in the family way, and she is nearly always right.

Cessation of the Menses.

When a woman is irregular in her menstruation or when she has never menstruated properly—for sometimes women of the latter class become pregnant—then the matter is not so simple. Irregularity or defective menstruation is her habit, and to detect a change in irregularity is never simple. A woman may be very eager for a child and therefore be only too willing to interpret some irregularity as the evidence of the desired pregnancy. In the early forties, when the change of life is approaching, this is particularly likely to happen. She may be just married, a period when nervousness may interfere with and delay her normal menstruation. Perhaps she is anæmic and her general poverty of blood prevents her menstruating regularly and in the usual manner of women. Perhaps she has some internal disease of the heart or other organs that makes her body abnormal and therefore its physiology abnormal too. Under such circumstances temporary absence of menstruation may mean nothing at all. Only when it is supported by other signs of pregnancy, such as changes in and enlargement of the breast, is it significant. In other cases, a sudden shock of joy or grief, an accident, the onset of an acute disease, a change of climate, are sufficient to cause a temporary cessation of the menses without the supposition occurring to a woman that she is pregnant. Moreover, it is possible for a woman to be pregnant and yet lose blood. She may have a miscarriage threatening or she may, owing to a certain very rare division of her womb into two, actually show a regular menstruation. But all these cases are exceptional, and when one is not

exceptional one should not be guided by the exceptions. The rule is that when a married woman, menstruating in the usual way, ceases to menstruate, it is a sign that she is pregnant, and it is a very safe rule to follow.

Seeing, however, that cessation of menstruation is not invariably a safe sign by which to be guided, it is fortunate that there are others. It takes more than a wheel to make an engine, and it takes more than one sign to assure a woman and a doctor that a condition is one of pregnancy. There are certain signs, which a doctor alone can discover. The signs and symptoms described in this chapter are those which a woman herself will notice.

She will notice within the first two months of her pregnancy that not only does she have pricking and burning sensations in her breast, but that they are definitely getting larger. If she looks at them with the aid of a hand glass she will see that the veins are larger and bluer than before, and that the nipple area is darker and wider. The breasts themselves feel larger and firmer, with a knotty feel when squeezed and the nipple more assertive and prominent. If she squeeze her breast near the nipple in the third lunar month of pregnancy she may be able to squeeze out a little clear fluid. Sometimes it is possible to squeeze out a little clear fluid in a virgin, either at her menses or when for some reason her thoughts and desires are dwelling much upon marriage and childbirth. But this is very rarely so, and is one of the exceptions which can safely be ignored. All these signs augment as pregnancy advances. The breasts swell, the glands in them

which produce the milk feel more knotty, the veins over and between them become bluer and more tortuous and give a veined marble appearance to the skin. The nipple itself swells and is prominent and is sometimes crowned with branny scales of dried secretion. The secretion of the breast itself is more easily squeezed out and has some opaque white matter suspended in its clear fluid. The nipple area becomes darker and wider, in brunettes appearing almost black. In this dark area some ten to twenty tubercles appear, and around it in the fifth month there is a secondary area of mottled pigmentation of the skin.

The breast changes are, then, definite. One would think that they should form certain signs of pregnancy. But, unfortunately, they do not, for sometimes they actually occur in women who are not pregnant but produce them by sheer longing for a child, sometimes they are associated with other conditions of the womb. These other causes are, however, the exceptions by which it is foolish to be guided. The rule is for breast changes to be due to pregnancy; once they have occurred owing to pregnancy their repetition with another pregnancy is not so marked, because they do not completely disappear between the pregnancies. Once a woman has had a child, and especially if she has suckled it, the breasts are always larger, the nipple area is always more pigmented than when she was a virgin, and as a rule fluid can be squeezed out. Consequently these breast signs are of greater value in pointing to pregnancy in a woman who has not had children than in one who has. In one who has

the signs are an augmentation of a previous condition; in one who has not had children the signs are new and, therefore, far more important. Squeezing fluid out of the nipple is a nearly certain sign of pregnancy in a young married woman who has ceased to menstruate. The enlargement of the breasts and veins and the increased pigmentation are also likely signs. The secondary pigmentation that begins in the fifth lunar month is an almost certain sign of pregnancy.

One of the striking associations of the female body is that which lies between the womb and the stomach. Let the womb be disturbed or at fault in any way and it is very likely to communicate its troubles to the stomach. This is well seen in the early months of pregnancy, in the well-known morning sickness of pregnancy, from which at least two-thirds of all pregnant women suffer. Why it should be in the morning chiefly I do not know, except that the early changes of pregnancy give certain strange products to the blood and these collect more in the night than in the day, when active movement helps their excretion. Other substances in the blood, such as those that collect in topers, are wont to cause morning sickness, and morning headache and nausea are well-known results of bad air, indigestion, etc.

This morning sickness or feeling of sickness shows itself usually in the first fortnight of pregnancy and disappears at the end of the fourth lunar month. A woman wakes up in the morning, and as soon as she moves to get up the feeling of sickness comes over her. She gets up quickly, is sick, and then feels relieved. She may not be troubled again until

the next morning, passing through the twenty-four hours with easy feeling and unimpaired appetite. Such is the sickness, which is so unique in its character that it has received the term of morning sickness. Often, however, the disturbance of the womb upsets the stomach more than this. Definite indigestion occurs, and to the sickness a definite nausea, sometimes accompanied by headache, is added. A woman feels a positive dislike to her breakfast, nausea taking the place of appetite. Nor are her troubles confined to the morning. Heart-burn and flatulence may affect her. She may be sick at other times of the day. She may be sick before going to bed, and not be sick in the morning at all. She may be sick soon after her meals. She may also have a loathing for food, and feel that she can only satisfy her appetite by excursions into unfamiliar realms of diet. The familiar food awakens nausea in her, and, with her change of state, she feels a craving for a change of diet. Pickles, curries, spiced dishes appeal to her. She has need of exciting the curiosity of her jaded stomach with strange or aggressive foods. Sometimes her nausea, indigestion and sickness cause her real suffering; they may endure throughout pregnancy and only be relieved by the birth of the child. Naturally, this continued sickness makes her thin. Her face gets pinched, it often gets disagreeably stained by pigmentation or rashes of the skin, and her arms and legs become very thin. In such a case a woman should always consult her doctor. She is wise to do so always at the beginning of pregnancy. If it is her first child she should always

do so. She wants a doctor's advice and she wants his friendship. She likes to know that the man who later will attend to her in childbirth is not a complete stranger. But if her sickness and indigestion is troublesome she should always go to a doctor. By some simple treatment he may set her right and save her months of discomfort and suffering. For though morning sickness cannot, and need not, be stopped (a cup of tea or coffee and a piece of toast before rising is a good remedy), nausea, indigestion and frequent sickness at odd times should be stopped. As regards the proper diet, each case has to be individually directed. A simple diet has much to recommend it, but I have sometimes found the caprice and peculiar tastes of a woman at this time a good guide to the food that suits her. Whatever food she takes she will find herself greatly benefited by regulating her bowels. Constipation, to which pregnant women are liable, always makes the nausea worse, and is often its only cause. To take four tumblers of hot water a day is an admirable rule for a pregnant woman. It is as good for her as taking the waters at a spa would be, if she also take a daily bath and exercise. If she have heartburn, some gentian and soda mixture is a good one for her, and can usually be procured from a chemist.

Not all women, as has been said, have this morning sickness when they are pregnant. But when morning sickness occurs without cause in a married woman, and is accompanied by a cessation of menstruation and by breast changes, the probability that she is pregnant is very great. None of these

signs nor their combination are certain indications of pregnancy, but if they occur in a woman, otherwise well and normal in her character and feeling, they are practically certain signs that she is pregnant.

The frequency with which a woman desires to pass her water in the first three to four months of pregnancy is annoying, and sometimes makes her get out of bed several times in the night. Its presence supports the other signs of pregnancy, but alone, it would be of little or no significance. This symptom leaves a woman after the fourth month, though it may trouble her again in the last week of pregnancy. A homely remedy for this is half a teaspoonful of spirits of nitre taken in a wineglass of water upon retiring to bed.

A general increase of pigmentation occurs in pregnancy, and is especially marked in brunettes. Where pigmentation normally occurs, there it deepens, and pigmentation often occurs where it normally is absent. Patches of pigment appear upon the trunk and limbs, round the eyes, upon the forehead and over the nose. The pigment on the face, if marked, is wont to take a butterfly shape, and is then called the pregnancy mark. It is most notable in the later months. Fortunately, after childbirth it disappears. It is apt to recur at a further pregnancy, for what occurs in one pregnancy is apt to occur in another. The personality and constitution of the woman affects the pregnancy, and the personality and constitution is the same in the different pregnancies. There is no remedy for this pigmentation, but certainly a woman who desires to avoid it—and all women do—should

make a point of keeping the bowels open daily and drinking plenty of fresh water.

The certain signs of pregnancy are those due, actually, to the child itself. They are detected by the doctor. At the end of the fifth lunar month he may actually hear the child's heart beat and later, of course, he hears it with ease in nearly all cases. Only one sign, when frequently and powerfully felt by the woman, can scarcely be mistaken by her, namely, the definite kicks of the child against the wall of the womb. When the first movements of the child are felt by the mother, the sensations are known as quickening. They are exceedingly faint. Women say they feel a peculiar fluttering sensation, usually in the eighteenth week of pregnancy. Some women seem sure of the time when they quicken, others are not sure, others mistake the movement of flatulence in the bowel for quickening. The quickening sensations come on several times a day. They gradually develop to definite and decided movements, and in the last months of pregnancy the kicks of the child leave no doubt of the child's presence in the womb. It is difficult to say as to how great a proof of pregnancy quickening may be regarded. The evidence depends so much upon the woman herself. If she has already felt the sensation in one pregnancy, she will probably recognize it in another. If, on the other hand, she desires a child, she may mistake flatulence or other internal movement for quickening. She may even mistake such movements for quickening when she is not in the family way at all. The elderly, sterile women, who, out of great desire to have a child, imagine

they are pregnant, are very positive about quickening. These cases I have described in the chapter upon the change of life. Such women may have all the signs of pregnancy, except those undoubtedly due to the child. They may have cessation of the menses, morning sickness, breast changes, enlargement of the stomach, they may apparently go to full time and then fall into a spurious form of labour and give birth to bitter disappointment only. They constitute some of the most remarkable instances of the wonderful imitative powers of hysteria.

Enlargement of the abdomen is, of course, a well-marked sign of pregnancy, but it is not an infallible sign, for the abdomen may enlarge for other reasons than pregnancy. Fat and flatus, especially in the hysterical women just mentioned, and some tumours cause the abdomen to enlarge in much the same way as pregnancy does. But there are means of distinction. Fat, for instance, is soft and podgy to the touch, whereas the enlargement due to pregnancy is firm. The enlargement due to pregnancy is gradual and progressive, that due to fat or tumours does not show the same steady growth. The enlargement due to pregnancy in the last months flattens out the navel and causes it to actually bulge a little. Fat never does this. The navel dips in as usual with fat. By this distinction a woman could always tell whether she were with child or was suffering from a quick deposit of fat. She would save herself against a mistake which in the end might be one of shame and unhappiness. With pregnancy the lower abdomen shows the first sign of swelling at about the sixteenth week. The swelling

increases, its height at the twenty-fourth week being on the level of the navel. At the thirty-sixth week the swelling is as high as it can be, being up to the ribs. In the last weeks the womb drops a little and makes a little free space centrally immediately below the lower end of the breast bone. So great is the swelling in the last months that the tense skin of the lower half of the abdomen shows evidence of stretching in scattered purple or pink coloured patches, which after the child is born are still visible, though the colour changes to bluish white. The appearance of these patches in the skin have been aptly compared to a mackerel sky. They are, however, not confined to pregnancy, but may occur when there is a quick deposition of abdominal fat. Such are the signs and symptoms peculiar to pregnancy. The ones upon which a woman herself not hitherto pregnant may rely in concluding that she is pregnant, are the cessation of menstruation, with morning sickness and changes in her breasts. These are in most cases conclusive by the end of the third month, and these conclusions are supported from the fourth month onwards by the gradual swelling of the abdomen. If she wishes to be quite sure she should consult a doctor. He is, as a rule, able to give a fairly confident opinion in the third lunar month of pregnancy and a quite certain one in the sixth month.

In addition to these signs and symptoms, there are other conditions of pregnancy, which are not uncommon, but which are not nearly common or specific enough to have any value from the point of view of diagnosis. Such are nervous changes, irritability, lethargy, varicose veins, piles, constipa-

tion, headache, toothache, salivation, skin eruptions, the whites, pruritus, cramps, breathlessness, backache, and the upset of the digestion and appetite, which we have already considered. The other symptoms we will now take in detail and their treatment. They make another formidable list, but as a fact, a fact probably many of my readers know, pregnancy often improves the health instead of diminishing it. In women who lead healthy married lives pregnancy produces a bloom, which is quite definite and gives to its possessors an added beauty. It cannot be too frequently repeated that pregnancy is a natural condition, and as such should be passed through without trouble. The constant aim of nature, whether in plant or animal life, is structural and physiological perfection. Nature does not, therefore, punish any living being for enduring a natural process that is a part of its life. Pregnancy should not be a serious matter, and is not a serious matter amongst the women of more simple peoples, whose civilization is based more firmly on the physiological principles which govern all such as bear offspring. It is, of course, impossible for the modern woman to reach the healthy level of her hardier sister of distant lands. But the nearer she is to that level, and the nearer her ancestors were, the less likely is pregnancy to trouble her. If she come from healthy stock and lead a healthy married life, then the list of common accompaniments of pregnancy above given will not interest her. They will not govern her pregnancy. Such quite healthy women are not frequently to be found, but they are to be found, and when found they restore one's faith

in the great gift of superlative health which nature or natural laws desire and can provide for women and men. In the meanwhile we must severally consider these common accompaniments of pregnancy.

Nervous changes are common in pregnancy, when the woman herself is of a nervous disposition. If the pregnancy reduces her state of health, if the frequent micturition disturbs her sleep and the sickness and nausea her nourishment, then the nervousness that is normally hers is more marked than usual. The fear of childbirth may also alarm her. Strange longings may possess her. She may have attacks of dizziness. She may be quite unduly frightened at little alarms, which normally she would not notice. To treat herself I would advise her to read the chapter on the Hygiene of Marriage and that on Neurosis. Here I may mention that there is no harm in moderate intercourse during the pregnant period, and it in itself will often help to disperse her nervousness. As other remedies, she should attend to the ordinary laws of health, taking exercise, keeping her bowels free, avoiding exhaustion and excitement. By strengthening her health she strengthens her nerves.

Irritability is also a part of the nervous change that sometimes ensues in pregnancy. It is chiefly due to diminished health and to the conditions mentioned in the chapter on Neurosis. When feeling weak and yet having the usual demands made upon her, a woman feels that she cannot do what she wishes to do properly, and she becomes irritable towards those who make demands upon her. She should, therefore, rest more and take some good

tonic such as Easton's Syrup, which she can procure at any chemist. Here, again, it is important for her to have her bowels opened daily, and abundant fresh air and sunlight will do her good. If she feels very restless, especially in the evening, a short walk before going to bed will benefit her. It is often pleasant for her to walk in the evening in the later months of pregnancy, for the darkness shields her from inquisitive eyes. If her irritability and restlessness are very troublesome a warm bath will often stop them. Half an hour of general massage, if she can afford it, is also very soothing.

Lethargy is a trying condition that troubles some pregnant women. It is chiefly due to dyspepsia. Often when she is lethargic, tends to sleep heavily, and feels fit for nothing when she wakes, it means that she is eating too much. Some pregnant women eat a great deal too much in order, as they suppose, to keep their strength up, and so they overtax their digestive system and become heavy with too much food. Therefore, the remedy for lethargy is to eat less, to take more exercise, and occasionally to take a blue pill to clear the system.

Varicose veins, the big dilated veins of the lower limbs, are sometimes one of the troubles of a pregnant woman especially in the later months. They make her feet swell and her legs so heavy that she cannot walk much. Nor should she walk much, and an excellent substitute for exercise and a treatment which is particularly good for the varicose veins is massage. I recommend it to my reader very highly. In addition to massage, she should rest during the day with her feet raised above the level of her head

to empty the large veins of their blood. When she is about by day her legs should be bandaged, preferably with Martin's elastic bandages. These her doctor will put on for her the first time, and show her how to do it herself.

Piles are often a great nuisance to a woman in the later months of pregnancy. She must treat them by temporary methods, for an operation for them at such a time would be out of the question. For their treatment a gentle daily action of the bowels is the best remedy. They are much aggravated by constipation or by strong purges. After the bowels have been opened a woman with piles should lie on her back for half an hour. Still better is it for her to have the bowels open at night, so that she can go to bed immediately afterwards. If the piles are very painful and tend to bleed, she should bathe them three times a day with cold water or a decoction of poppy heads made by boiling four poppy heads in two pints of water for fifteen minutes. Gall ointment or Pond's Extract may also be applied to the piles after the bowels have been opened. Another simple remedy is to pour hot water into the chamber before the bowels are opened. The steam arising soothes the pain and discomfort.

Constipation, which frequently affects pregnant women, is also the cause of many of their discomforts. Its effects are far reaching. Headache, nausea, depression, irritability, insomnia, loss of appetite may all be due to constipation. Pregnancy is a period when the growing child's waste products pass into the mother's blood. Small though the child is, its growth is active and swift. These waste pro-

ducts, therefore, are a notable adjunct to the mother's system. Consequently defective elimination through constipation has results during pregnancy which it would not have at other times. Symptoms of poisoning readily arise in pregnant women who are constipated. The headache, nausea, etc., just mentioned are all symptoms of poisoning. Furthermore, an extra strain is thrown upon the kidneys by constipation, and this is above all to be avoided, for the waste products of the child are already a sufficient strain to the kidneys. If a pregnant woman is lethargic and constipated, not infrequently her water becomes thick and scanty. The kidneys become affected and the waste products, gradually accumulating in the body, may in exceptional cases actually lead to fits of a serious nature. This will show how extremely important it is for a pregnant woman to avoid constipation. Indeed, if I were allowed only to give three directions to a pregnant woman I would tell her to keep her bowels open, to drink freely of fresh water, and to take daily exercise, all with the object of keeping the body free from accumulating poison. If she only bears in mind these three directions and forgets the others she will, nevertheless, stave off most, if not all, of the unpleasant symptoms of pregnancy, and she will also avoid the rare danger of being seized with fits owing to her system being thoroughly poisoned.

It is not only by taking medicine that a pregnant woman should avoid constipation. Indeed, medicine should be her last resort and not her first. There are many foods, which, in addition to their nutritive effect, have the advantage of aiding the action of the

bowels. These are usually to be found upon the breakfast table. They are porridge of various kinds, brown or oatmeal bread, jams, honey, marmalade, golden or maple syrup, cocoa or chocolate, fresh fruits, such as oranges, plums, pears, apples and grapes, or dried fruits, such as prunes, figs and raisins. A pregnant woman should, therefore, make a point of having these foods in her dietary. There are other foods which have a similar beneficial effect. Such are fresh green vegetables, many farinaceous foods, stewed prunes, apples, pears, or figs, and fresh salads with oil and vinegar. These, too, a woman should add to her dietary and make a point of eating of them in preference to a free consumption of white bread and meat.

Next to the foods, an abundant drinking of water is a good means of keeping the bowels open and the body free of poison by causing a woman to pass her water freely, which she should do. She should take a full tumbler of water before breakfast. It does not matter if it is hot or cold. The chief point is the liquid.

A careful observance of daily exercise is also a means of staving off constipation. Towards the end of her pregnancy a woman does not like to appear in public. Some women like to go into the country at this time, for they can walk in the country without being observed. They are wise to go into the country, for it is quiet and healthy compared to the town. But if they stay in the town, they can always walk in the evening, when it is dark, and they should make a point of doing so.

Regularity is another aid. By going to the closet

every morning a woman will get into a regular habit. Otherwise she is sure now and then to become constipated.

If these measures fail and a woman becomes constipated in spite of them, then she must resort to medical means. She should avoid powerful aperients and only make use of the simpler ones. She will probably have one that is her favourite and will use that. Her choice will be made from such simple aperients as cascara sagrada, syrup of figs, Hunyadi or Apenta water, magnesia, epsom salts, seidlitz powder, confection of senna, etc. Sometimes she will find these are not properly effectual. She should then give herself an enema of a pint of soap-and-water with a Higginson's syringe, or a tablespoonful of glycerine with a small glass syringe in addition to taking the aperient. For obstinate constipation abdominal massage is valuable. If all these remedies fail, as they may do in exceptional cases, she will have to consult her doctor.

When a pregnant woman suffers much, or even a little, from headache, and headache is not an unusual complaint of hers, it commonly means that the poisons accumulating in the body are not properly excreted. If, therefore, she follows out the rules just given it is probable that she will not suffer from or will get rid of her headaches. Anyhow, I would advise her against taking headache powders without her doctor's advice, and certainly she should not take the patent headache powders, which are weak editions of medical powders and very much more expensive. Phenacetin or aspirin tabloids are not likely to do any harm, if the directions on the bottle

are followed, and they relieve headache. But it is much better to prevent headache altogether, and this can be done by attention to the rules given for constipation, unless there is some condition present which requires a doctor's treatment.

Toothache is sometimes troublesome in pregnancy, for pregnancy often has a bad effect upon the teeth. If the teeth are found to be in a bad condition at the beginning of pregnancy, a woman should go to a dentist and have her teeth set right in time. She should not, however, have her teeth pulled or gas administered. In the later months it is better for her to use palliative methods if she has toothache. The simplest of these is to stuff the aching tooth with a small piece of wool soaked in carbolic acid, or chloroform, or oil of cloves. A hot bottle clad in flannel and applied to the side of the face is soothing and takes away the worst of the pain. Salivation, with sore gums, is sometimes troublesome in pregnancy. It is usually one of the signs of accumulation of poisons, and should be treated as such. For local treatment a woman will find that a mouth-wash composed of a small teaspoonful of alum to a tumbler of water is useful.

Skin eruptions may break out during pregnancy and disappear after pregnancy. They are apt to recur in a subsequent pregnancy. They are varied in nature, and if an ointment, consisting of five grains of yellow oxide of mercury to an ounce of soft paraffin is used, coupled with the measures that oppose poisoning of the system, does not do good but the eruption remains, a woman should ask her doctor what to do.

The Whites.

The whites and vaginal discharge are sometimes a trouble to pregnant women. The constant moisture is unpleasant and sometimes it provokes most vexatious itching of the parts or pruritus. When the discharge from the vagina is clear and not excessive there is no great harm in a woman treating herself by means of some simple douche. Perhaps it is best that she should in the first instance be shown how to douche herself by a doctor or a competent nurse. To do it effectually she should have a bidet, a douche can hung by a nail upon the wall, or otherwise raised about two feet above her hips, a long indiarubber tube coming from the can with a clip or tap upon it, and a glass vagina nozzle. As an alternative to the douche can she can make use of the ordinary rubber vaginal syringe or a large glass syringe, which can be boiled, both of which chemists sell. Either the can or syringe are efficient, but she must not use an enema syringe, which, with a different nozzle, is also used for enemas. The reason is obvious, and the two treatments must be kept apart. She must keep a syringe or douche can and tubing very clean, purifying them with plenty of hot water. As a solution for douching, she may use boracic acid in a saturated solution. To obtain this, she puts some boracic acid into a Winchester quart bottle and fills it up with clean or boiled water. The solution will be saturated when some white boracic acid is seen at the bottom, owing to it not being dissolved. Hot water should be added to this solution, so as to raise it to the warm, but not hot, state in which douching fluid should be used. If there is much itching, she should use with

the same addition of hot water a lead lotion (such as liquor plumbi subacetatis, a dessertspoonful to a pint of water). She must keep the bottle apart, for lead lotion is poisonous. The great point to which she must pay heed is cleanliness. Everything used must be as clean as possible. She must clean the douche can and tubings or the syringe thoroughly with boiling water before she uses them. I would advise her not to douche more frequently than once every other day, and, if this does not stop the discharge, to consult a doctor. If the discharge is yellow or blood-stained, she should on no account attempt to treat herself, and would be certain to regret it if she tried to do so. In addition to douching, she should wash herself daily with a good soap, such as Pears', and powder the parts with a powder of boracic acid, one part, zinc oxide, three parts, and starch, six parts. If the itching is troublesome she may substitute ichthyol or coal-tar soap for the Pears'. If the skin is sore she should use an ointment, either plain lanolin or resinol ointment. If she have itching apart from discharge, she should use the ichthyol soap and resinol ointment without douching, for douching is always unnecessary and unwise in pregnancy unless there is a discharge to cure. She may also try damping the parts with the same lead lotion or with a lotion of one part of carbolic acid in eighty parts of water.

A pregnant woman may suffer from cramps in the thighs and legs. Cramps are usually signs of the accumulation of body poisons, and should cause a woman to adopt the treatment given under headache and constipation. This is the way in which

she is to avoid them. If she have them, jumping out of bed and rubbing the cramped muscles will be probably what she will do instinctively. Massage of the legs is good, both as a palliative and curative treatment.

Breathlessness tends to trouble a pregnant woman in the last months. If before that time she is breathless, or if the breathlessness is marked, the case is one for a doctor. For the ordinary breathlessness a woman needs no treatment except to avoid a quick ascent of the stairs and the like, and to use two extra pillows to prop her up more at night.

The backache, if vexatious, is best treated by means of an abdominal belt, which can be procured from a surgical instrument maker. If the enlarged abdomen sags forward and causes discomfort, this same belt is the best remedy.

Backache completes the list of ailments from which a pregnant woman may suffer, though, as has been said, many women go through pregnancy without suffering from any of them. In dealing with them and in the chapters upon Hygiene, the conduct of life during pregnancy has been stated. There are only a few remaining points which it is needful to mention.

Firstly, as to clothing, women are sufficiently versed and do not require instruction. The doctor can only warn them against tight corsets and garters. The latter are especially harmful when a woman has any tendency to varicose veins.

As regards baths, fresh air, and exercise, sufficient has been said in the chapters upon these subjects.

A woman should take exercise up to the day of childbirth ; in the country, in the garden, or after dark, if she does not care to be seen. Sufficient also has been said about diet. I would only warn my reader not to eat too much with the idea of keeping her strength up. There is no wisdom in overfeeding through the pregnant period.

A woman used to be recommended to pay heed to the nipples in the last two months of pregnancy. She was told to wash them night and morning with soap and water, to pull them out gently and then harden their skin by damping them with a lotion of brandy-and-water in equal parts or with eau de cologne. This she was advised to do, in order to have them prominent and hard before the baby takes them. These measures are rendered quite unnecessary if she buy herself two "Infantibus" nipple shields from Vial and Uhlmann, Frankfurt-on-Main.* I strongly recommend them to her. They cost 2*s.* 6*d.* each, and are really invaluable in cases of depressed or sore nipples.

Lastly, there remains the question of friends and acquaintances, who often alarm a pregnant woman by unwise talk. Injudicious friends tell stories of the hard labours they or others have undergone. I cannot prevent my reader being frightened by such tales if she is nervous. I can only recommend her to read that wonderful poem, the book of Job. It is almost sure that, with due care, the issue to her troubles will be as fortunate as they were to those of the hero of that most human poem.

* At present such a purchase is, of course, impossible. March, 1916.

CHAPTER XV.

Miscarriage.

"Or as a hidden untimely birth I had not been; as infants which never saw light."—*Job*, iii. 16.

THERE are many things in this world which, because they are failures, are apt to be contemptuously ignored. Abortion or miscarriage is one of these things. It is a failure, it is a premature expulsion of the ovum, and as such it is not only a subject upon which women are inclined to be reticent, but it is one which outwardly they are inclined to ignore. The disappointment is their own private grief, the failure is something to be hidden as much as possible from the outer world. The ovum in a miscarriage is small they know. It is not like the large, healthy, full-term child. It is something which should, therefore, pass through the birth passages with ease. Theoretically and according to a woman's argument there should be little trouble in a miscarriage. With childbirth it is a different matter. There is a child to be born, through passages that will only just permit it to pass. There is the large afterbirth to follow. There are abundant preparations. The nurse has been already in attendance for a day or two. The doctor is present. The cot and baby clothes are ready. The father is divided between mingled anxiety and proud anticipation. The relatives and friends are excited at the

approaching occurrence of the most human of all events. But a miscarriage has no claim to any pomp and ceremony. It is a failure, conducted as much as possible secretly, and ignored. The little size of the ovum seems also to render it medically of little importance. The consequence is that, owing to this lack of proper mental perspective, the miscarriage is ignored a great deal too much, and time and again a woman will know and declare that her ill-health has followed a neglected miscarriage. No woman could well neglect a childbirth, if she wanted to do so. But she can neglect a miscarriage and often does so, and regrets it deeply. For it is this neglect, and not the miscarriage itself, which leads to a miscarriage becoming a matter of danger to the health of a woman.

In general, however, she is right. A miscarriage is not a serious matter. In a healthy woman the only real danger to childbirth should be when there is difficult delivery of the child owing to its unusual size or to the passages being narrow. In miscarriage, of course, neither of these difficulties occur. Therefore, a miscarriage in a healthy woman should theoretically never lead to any trouble that damages her health. And, if a miscarriage is not neglected but its conduct is put under the care of an able medical man, then one can safely say that any trouble that is more than temporary very rarely arises.

Yet so great is the neglect of miscarriage, so great is its risk in cases of unhealthy womb and vagina, or if dirty instruments are used, either medically to aid an inevitable abortion or criminally, that an investigation recently conducted in New York City

went to show that miscarriage is almost as dangerous as childbirth. The dangers, of course, were never due to difficulty in delivery, but they were due to loss of blood and to the blood-poisoning which results from lack of cleanliness and is particularly liable to attack women who have lost a lot of blood.

Miscarriage, therefore, may be strictly regarded as a miniature childbirth, in which two of the three dangers of childbirth, namely, blood-poisoning and bleeding, may occur, but the third danger of difficulty owing to the child's size and the smallness of the passages does not occur.

Women, therefore, in regard to miscarriage have to pay heed to loss of blood and to cleanliness.

The actual danger of miscarriage varies according to the week of pregnancy, at which it occurs. For reasons belonging to the nature of the afterbirth, miscarriage before the third month of pregnancy tends to come away much more quickly, more easily, and with less bleeding than in the later months of pregnancy. Indeed, in the early weeks so easily does the ovum come away that sometimes it passes undetected. The woman bleeds and takes the bleeding for an ordinary or somewhat delayed period. She perhaps notices, what look like blood-clots, and has a little more pain than is usual with her menses, and that is all. Still stranger cases have been recorded in which women aborted every month and only discovered that their so-called periods were really abortions by the fact that when they went away from their husbands they did not pass the " clots " at their menses and did not have the same recurring spasms or colicky pains.

Such miscarriages as these which occur in the early weeks (before the tenth week) of pregnancy, are clearly of little moment to the woman's health, however sad they may be to her, in that the child she desired is lost to her.

But from the tenth to the twentieth week of pregnancy, owing to the peculiarly close relation of the afterbirth to the wall of the womb, miscarriage is not nearly so easy an affair. It is for similar reasons much rarer than it is in the early weeks, but if it does occur it is much more troublesome.

After the twentieth week, the afterbirth again becomes looser in its attachment to the wall of the womb, and miscarriage becomes more frequent, and when it occurs, less dangerous. From the twenty-eighth week onwards, the child, though very delicate, may be reared, and so such early deliveries are spoken of as premature birth or delivery and not as miscarriage.

Miscarriage, therefore, in the first ten weeks of pregnancy is common and usually passes off without trouble. If occurring between the tenth and twentieth week, which is rare, it is very apt to be troublesome. The ovum does not come away properly, there is usually free bleeding, and the doctor always has to be summoned. When miscarriage occurs after the twentieth week, which again is more frequent than between the tenth and twentieth weeks, there is not as a rule much trouble. A doctor, however, or a nurse should always then be present. After the twenty-eighth week, the word miscarriage is no longer used, but the term premature birth is employed.

The Causes of Miscarriage.

The causes of miscarriage are very various. There are the causes which lead to the death of the ovum. Such causes are the acute illnesses of the mother, when her vitality, sunk very low, is not sufficient to support the life of the child within the womb. Any acute disease such as pneumonia, small-pox, scarlet fever, may cause a pregnant woman to miscarry. Certain poisons, too, such as savin and cantharides have the same effect, half killing the mother and wholly the child. Lead, too, has a peculiar effect, for the wives of men who work in lead are found to be liable to miscarry. Chronic diseases also have a like result, such diseases as chronic heart and kidney disease. A disease peculiarly liable to lead to a series of miscarriages is syphilis, a fact which should be more generally known amongst the public in view of the excellent results of the modern treatment of this disease. Other causes of miscarriage are displacements of the womb or some disease of the womb or its neighbourhood. But when all these serious causes have been enumerated, we are far from accounting for the very great majority of miscarriages. They occur for all sorts of apparently trivial reasons, behind which, however, lies a peculiar temperament or mood of the woman. This peculiar mood has one physiological basis to it, namely, the periodicity of the monthly periods. For it is a fact that a pregnant woman is far more likely to miscarry at the time when she would be unwell, were she not pregnant, than at any other time. It seems as if at this time the womb recalls its wonted duty of expressing its contents, and attempts to do so, with the occasional result of

an actual miscarriage. Such is the common physiological basis of miscarriage. The temperamental basis in the woman seems to lie in a peculiar nervousness or excitability, and, I might add, a particular nervousness in some cases. For instance, women with a peculiar horror of mice may miscarry on seeing these dangerous animals. Others, who live in terror of burglars, may miscarry if they receive an alarm when pregnant. In women of a general nervous temperament, any form of sudden shock, grief, joy or emotion may bring on a miscarriage. The taking of violent purgatives or the continuation of suckling after pregnancy, both of which normally tend to excite the contractions of the womb, may bring on a miscarry. So, too, any local disturbance of the womb in such women, such as that produced by hot vaginal douching or by ordinary intercourse, may cause the womb to evacuate its contents. A fall may have the same effect. Horse-riding, bicycling, travelling in a bumpy motor car or train, dancing, peddling a pianola, a fit of violent vomiting or coughing, all by the jar they transmit to a woman's womb, may bring about a miscarriage, and are particularly liable to do so in the first weeks of pregnancy in nervous women.

For miscarriage occurs considerably more frequently in delicately nurtured and refined women than it does in peasant women. It is most common amongst the sickly and underfed women of our manufacturing cities. By statisticians it is said that miscarriages represent a proportion of one to every five childbirths, and that some 40 per cent. of all married and fertile women at some time or other

have a miscarriage. On the other hand, amongst some women miscarriage seems almost an impossibility, and women have been known to throw themselves out of window upon discovering pregnancy and break their limbs, but retain the fruit of the womb. Others have tricked doctors by false accounts of their symptoms into passing instruments into the pregnant womb and yet no miscarriage has resulted.

The avoidance of so common an occurrence as a condition which is due to so many causes does not seem, nor is it, simple. But in the enumeration of the causes two facts were brought out, which are of decided practical importance. The first is the periodic monthly tendency to miscarriage, and, secondly, the peculiar personal tendency of some women to miscarry. These two points lay the grounds for practical measures directed against the chance of miscarriage.

The first may be so stated: All women, when pregnant, should be particularly careful during the first three periods of time, when, if not pregnant, they would normally be unwell. At such times, for instance, they should avoid going to a dance, playing any exciting game, over-walking themselves, becoming constipated, rendering themselves liable to any great excitement or emotion, and so on.

The second rule may be stated thus: That when once a woman has had or shown a tendency to miscarry, then, when pregnant, she must carefully avoid all those causes which may bring about a miscarry. The ordinary rules of health and hygiene she should anyhow adopt, when she is pregnant, but she must

add these extra precautions to them. She must avoid as far as possible all things that make her nervous or excitable. She must avoid as far as possible any chance of receiving a shock, and especially such shocks as have a peculiarly alarming effect upon her, such as mice, the sudden snap, growl and bark of a dog, her children jumping out upon her suddenly, the sight of hairy spiders, and so on. She must avoid all vaginal douching, and she must use the utmost caution in or wholly avoid intercourse. She must not ride horseback, bicycles or in jolting motor cars or carriages. She must not peddle a pianola or sewing machine. She must not go for long journeys, for long walks, or otherwise overtire herself. She must not dance either at home with her children or in the ball-room. She must be careful to avoid getting a bad cough or indigestion which causes her to vomit. She must avoid constipation. She should stop all alcohol and especially strong alcohols like liqueurs that have a quick and sudden action upon the heart and nerves. She should avoid very hot or very cold baths. She should rest more and lie down for stated times upon the sofa. If she should notice any blood at all she should go to bed and send for her doctor at once. All these precautions are more needful in the first ten and the last twenty weeks of pregnancy than the intervening ten weeks.

The signs of a miscarriage in a woman are a discharge of blood, sometimes preceded by uneasy sensations in the lower abdomen, and with the blood pain. Sooner or later, if the miscarriage is to complete itself, the contents of the womb are discharged.

The Signs of Miscarriage.

Sometimes a miscarriage only threatens. In such a case there is some bleeding and pain, but the bleeding stops and the pain passes off and nothing more happens either for the rest of pregnancy or for a variable period of time. But if the bleeding is marked—and it may be severe—and with it there occur definite, intermittent, colicky pains, the miscarriage is almost sure to complete itself or to have to be completed by the doctor.

When, then, a woman, knowing herself to be pregnant, sees that a little or more blood is coming from her, the probability is that a miscarriage is threatening or is in the process of completing itself. And in view of the ease with which a miscarriage completes itself in the first weeks of pregnancy, she may be tempted to wait and not send for her medical man. But she is very unwise in not sending. The normal and healthy thing for a woman to do is to go right through her period of pregnancy without losing any blood. When she does lose any blood, I strongly advise her always, without any exception whatsoever, to inform her medical attendant. He is trained to know what to do when physiology becomes abnormal, and any loss of blood during pregnancy is abnormal. A pregnant woman, then, noticing blood should either lie down on the sofa or go to bed and let her medical man know. She need not alarm herself, for miscarriage, with a good medical man in attendance, is not a serious thing. But for her to neglect it or merely to consult a relative or nurse would be most unwise. She should go to bed and carefully preserve all blood clots and lumps of substance, of whatsoever kind, that come

from her for her doctor's inspection. By what she shows him he often can tell exactly what has happened and exactly what she should do. Therefore, let her lie quiet and keep everything for her doctor. Any advice that I gave my readers, other than these two directions, would be harmful in obscuring their simple and very necessary wisdom.

Should the doctor succeed in preventing the miscarriage from completing itself, he will himself give his patient directions as to how to avoid further risk.

Should, however, the miscarriage complete itself, or should the doctor complete it, then he will keep his patient in bed and treat her very much as if she had had a childbirth at full term.

Sometimes the fruit of the womb dies and is retained within the womb without either loss of blood or outward signs, so that the mother does not know that her child is dead. But she will soon begin to suspect that something is wrong. The ordinary progressive signs of pregnancy cease. She is no longer sick, but has a curious cold feeling in the abdomen, as if some life had left her from there. Her breasts cease to increase in size and become soft and flabby, her womb no longer gets bigger. If she has felt the child move, it does so no longer. Sometimes a brown discharge shows itself. But chiefly the woman herself will feel that something is wrong and this, indeed, is really the only initial indication in a condition that at first has no outward signs. She then goes to her doctor. This condition is not one of danger if the woman goes to her doctor when she feels that something is wrong

or when she sees a brown discharge. It will, very possibly, mean an anæsthetic, and certainly some days in bed, but provided the death of the ovum has occurred from natural causes, there is no more danger attached to the condition than there is to a well-treated miscarriage. The condition is also a rare one, but has to be mentioned, for it is one of the cases in which a woman may be greatly puzzled and not quite know what to do.

CHAPTER XVI.

The Duration of Pregnancy.

"Time is the nurse and breeder of all good."—*Shakespeare.*

THE duration of pregnancy is variable. Upon average some 280 days or ten lunar months intervene between the day of conception and the day when labour sets in. But no single case can be decided by an average. It is impossible to say that a woman having conceived on January 1st will have her baby precisely 280 days later, namely, upon October 7th. She may have a baby that will live and even grow up to be as strong as the average child as much as twelve weeks before this date, and she may have her baby as late as five weeks after this date. The range around the average is seen to be very great. As has been said, the births that occur before the fortieth week are called premature births, and the earlier a child is born the smaller is it and the less likely to live. The births occurring after the fortieth week, on the other hand, usually produce children of large size. A new-born baby, on average, weighs between seven and eight pounds, but these late born may weigh as much or even more than twelve pounds. A date may be placed a month too late by a woman, who saw a little at the first menstrual time during her pregnancy, and this slight show she may count as a true menstrua-

tion, in which case, according to her, labour in the fortieth week would be labour in the forty-fourth week. But this miscalculation does not account for many cases of late birth. Late birth is quite genuine. Genuine cases, in which the dates of conception were accurately known, have shown a duration of pregnancy of as many as 309 to 315 days, or eleven lunar months instead of ten. The consequence of this is that, although a pregnant woman is usually accurate within a few days in her estimation of the length of pregnancy, she may be more than a month wrong. So, too, may the doctor. He is as liable to err as the wife, in a matter where there is no certainty.

For practical purposes 280 days is a useful reckoning. Within a fortnight, either before or after the 280th day, two-thirds of the children are born. The other third are mostly born over a fortnight earlier, some few over a fortnight later.

Conception is supposed commonly to take place some few days after menstruation has ceased, but, of course, it may occur at any time. In order to reckon the date upon which labour will set in, conception is supposed to occur soon after a menstrual period has ceased. The date of the last day of the last menstruation is consequently the date from which one counts the probable duration of pregnancy. There are various ways of doing this. The Rotunda Hospital rule was to add seven days to this date and count back three calendar months. Thus, if a woman was last unwell on January 20th, by adding seven days one gets January 27th, and counting back three months one gets the probable date of labour

as October 27th. The slight variety of a day or so that leap year and February introduce is of no moment in fixing a date round about which labour may be expected. Roughly, then, the rule is to add seven days to the date of the last day of the last menses and count back three months. Labour will set in, in the great majority of cases, either on the date or within a fortnight of it, either earlier or later.

Quickening is first felt about the eighteenth week. This is, however, so variable a feeling that the date of its appearance is not a safe basis from which to calculate the duration of labour.

The doctor also can measure the height of the growing womb and so find out how long pregnancy has existed, but this does not give exact information. In fact, one cannot get exactness in this matter. One can only say that adding seven days to the last day of menstruation and counting back three months gives one an approximate date sufficient for practical purposes.

CHAPTER XVII.

The Pre-determination of the Sex of the Child.

"Almost old wives superstitions."—*Cicero.*

THE possibility of pre-determining the sex of the child has always been one of interest to mankind, and would be one of importance were more definite information obtainable. As it is, the conditions determining sex are very little known. There probably are several, and it is almost impossible to unravel the effect of one from those of the others. A few indications—they have almost too many exceptions to be called rules—may here be mentioned.

Firstly in importance is the fact that the proportion of male to female births in Europe is about 106 to 100. Boys are more exposed to dangers in childbirth and later life, and, therefore, in adult life the position is reversed. Whereas the figures show that more boys are born than girls, yet in adult life there are more women than men.

The respective age of the parents probably has some slight influence on the sex of the offspring. If the husband is decidedly older than the wife more boys are born than girls. This rule seems to be true especially when the wife is about five-and-twenty and the husband ten or more years the elder. If the wife is older than the husband more girls are said to be born, but this rule seems to be scarcely a rule at all, there are so many exceptions.

Women, who have their first children when they are either very young or advanced in years, are said usually to bear boys as their first-born.

Boys are more frequently born if conception takes place ten or more days after the menstrual flow has ceased.

When the husbands have hard fare and the wives good fare there is a slight tendency for male children to be born. Any conditions that weigh on the men such as bad seasons with scarcity of food, war, sieges, such as that of Paris, tend to be followed by an excess of male births.

Some few years ago, Professor Schenk entertained Europe with the theory that, if a woman was put upon a nitrogenous and fat diet with very limited carbohydrates, a male child was probable.

Mr. Rumley Dawson has lately improved upon an old theory that the right ovary produces male and the left female children, and that only one ovary produces ova in the month. Consequently, if conception occurs in one month a male child will be born, if in the next the child will be a girl. Bearing in mind the thirteen menstruations in the year, one sees that if a male child is born upon June 1st in one year, a child born upon June 1st in the next year would be female. As an illustration of his theory Mr. Dawson quotes the children of the Russian imperial family :—

Princess	Olga,	born November	15th, 1895.
,,	Tatiana,	,, June	10th, 1897.
,,	Marie,	,, June	26th, 1899.
,,	Anastasia,	,, June	18th, 1901.
Prince	Alexis,	,, August	12th, 1904.

If the reader works out these dates, she will see that they do bear out the theory. Many instances, which I have worked out in private, have not done so, though unless dates correspond very accurately it is difficult to be sure, if the hypothesis is supported or contradicted.

It is not true that great passion tends to be followed by a male child. There seems to be no difference in such cases between the numbers of boys and girls born. Nor has it been possible to show that a passionate desire for a girl or a boy has any determining influence. Nor when conception has occurred can one predict what sex the child will be found to have at birth. The notions that if a woman is sick she will have a girl, if she carries her child centrally or to the right, she will have a boy, if the fœtal heart beat is fast, it is that of a girl, do not seem to have much truth in them when properly tested.

CHAPTER XVIII.

The Preparations for Labour.

"If I seem always equal to the occasion, ready to face what comes, it is because I have thought the matter over long before undertaking it. I have anticipated whatever might happen."—*Napoleon.*

It is well for a woman, having her first child, to have everything ready for labour by or even before the seventh month. Her baby may be born in that month, and, if it be born and have neither cot nor clothes it receives but a poor welcome. The mother also will suffer discomfort from not having the things she needs at the time. Therefore it is unwise to defer preparations. She had much better have everything ready and lay them by for two or three months than be caught unexpectedly and found wanting.

The first essential provision for labour is a nurse. A trained nurse, can, indeed, conduct a simple case of labour alone. Dr. Cullingworth, writing in the *Contemporary Review* for March, 1898, calculated that one-half to three-quarters of the babies in England and Wales are delivered by trained nurses or midwives. But even in simple cases the greater skill and knowledge of a doctor is a great advantage, and in difficult cases indispensable. For the comfort of the mother, the care of the child and the proper provision for labour and lying-in, a nurse is essential.

The Nurse.

No nurse is now allowed by law to attend to a case of labour and receive payment unless she first passes the examination and receives the certificate of the Central Midwives Board. The law applies to nurses in England and Wales, not to those in Scotland and Ireland. In England and Wales a woman can consequently always procure a nurse who is certified as having the requisite knowledge of her duties. So much is guaranteed in so far as examinations and certificates can guarantee efficiency. They certainly guard against gross inefficiency. Nurses, fortunately, take pride in their efficiency in these days, and amongst the better class kind I have very rarely come across defect in cleanliness, which, from the doctor's point of view is the most important fault a nurse can commit. Naturally one comes across nurses with some defect of character, but on the whole I am impressed by the general high standard of conduct in nurses who are well treated in the homes of their patients. For it must be remembered that in so far as a mutual bargain goes the nurse is at a disadvantage. The patient can choose her nurse, but the nurse can very rarely choose her patient, and a case once committed to her care she is bound to conduct it, unless she has very grave reasons for not doing so. A doctor is not dependent upon the kindness of his patient and her household as is the nurse, who is their guest.

Some books for wives have many pages of advice as to how to choose a nurse. She should not be old, she should not be young, she should not be slovenly, she should not drink, and so on, but I think one has to leave this matter to the acumen of the wife and

the recommendation of her friends. Seeing how much her own welfare is wrapped up in the pleasantness and capability of her nurse, the wife is not likely to go searching for an unsuitable one. As for age, a nice nurse, who is conscientious and knows her work, is better than a slovenly, disagreeable nurse, whatsoever their respective ages may be. There is only one point I would ask my reader to observe with regard to her nurse. It is to see that she is a nurse and not a pseudo-doctor, and not to ask or allow the nurse to give her medicines or wine without the doctor's orders. Even an aperient should not be given by the nurse unless the doctor in attendance tells her to give it. A wife should ask the nurse to call upon her three months before she expects the baby. She will then arrange terms, and also become acquainted with the nurse. The nurse will also give her a list of things she will need for herself and the baby. She can also get a list of things needed for the baby from a shop, but as a rule a shop list is too large, not in individual items, but in the number of each item required.

As regards the things she will need for herself, the following is a suitable list :—

Two mackintosh sheets for the bed, a yard and a half by a yard.

Two dozen large wood-wool sanitary towels.

One dressing-jacket for the lying-in period.

Four binders, a yard and a quarter long and half a yard wide, made of stout roller towel material. Ready-made abdominal belts with straps and buckles cost more, but are more convenient.

The Mother's Requirements.

A roller towel with the ends free and not sewn together.

A packet of stout straight pins for pinning the binder, and one of safety pins.

Two hot-water bottles.

A packet of cotton wool and one of gamgee tissue.

A bed pan.

A night commode. This can be hired after the baby is born, for it will not be needed until the lying-in period.

Two enamelled bowls, for holding antiseptics and cotton wool swabs.

One enamelled dish, also for antiseptics.

A feeding cup.

A tin bath such as is used for washing handkerchiefs, etc.

A strip of linoleum to protect the carpet.

Three washhand basins. One is sufficient if there is also a basin with running water and waste.

A large jug for boiling water.

Available means for plenty of hot water.

Clean sheets, nightdresses, personal and bed linen in sufficient quantity for three to four times the ordinary weekly use.

For the baby the following is a sufficient list. If more things are found desirable, they can be bought when required :—

Cot with mattress, linen, blankets and small pillow.

Four vests.

Four swathes.

Four pilches.

Three night flannels.

Three day flannels.

Four bibs.
Four nightgowns.
Four monthly gowns.
Two robes.
Two dozen diapers.
Two petticoats.
One cloak.
One shawl.
One head flannel
One bonnet.
Three flannel squares.
A baby's bath.
Two "Infantibus" nipple shields (devised by Dr. Albert Stern and procured from Vial and Uhlmann, Frankfurt-on-Main).

A wife is also wise, if she does not already know the doctor she proposes to call in, to make his acquaintance before labour sets in. It will be very unpleasant for her when in labour to await the coming of a man strange to her. I also strongly recommend her to ask her doctor to see her a month before she expects to be delivered, a precaution that is peculiarly necessary if she has not had a child before. By examining her in bed—often by an abdominal examination only—he will be able to tell if there is any undetected smallness of her pelvis or other reason for anticipating difficulty. And in no case is the saying that to be forewarned is to be forearmed more true than in such a case. If a woman has already had a baby without trouble this precaution is not so necessary, for the normal birth of her child shows that she has a sufficiently roomy pelvis. Even then, however, it is a precaution that

has value, for there are rare conditions of tumour which make labour difficult, and the earlier these conditions are detected the better.

The room in which a woman is to be delivered has to be prepared. A sunny, airy, quiet room is always preferable. The chief preparation of the room should be in making it spotlessly clean, both from the doctor's and the housewife's point of view. It should be turned out before the expected time of labour and all the commonly unattainable places must be exposed, and the dust and dirt located in them abolished. Such places are to be found under the canvas cover of a spring mattress, under the bed itself, at the top of and behind wardrobes, etc. All accessory and unnecessary drapery must be removed, such as heavy curtains, the valances of the bed, mantelpiece borders, and the carpet even, which may else be soiled. The other curtains and blinds must be clean, the carpet must be cleaned, the floor scrubbed. A thorough cleaning is the way by which to prepare an ideal lying-in room, and a wife in her own house should choose the room she can most readily prepare and which has the brightest aspect.

Lastly, the closets and drains must be thoroughly flushed with Sanitas or some other disinfectant fluid. If there is any undesirable smell, if the water runs away and leaves a dry pan, or if anything else appears wrong, the sanitary inspector should be called in and the matter set right. Foul air or sewer gas must at all costs be avoided in a house where a woman is about to lie-in.

CHAPTER XIX.

Labour.

"All women labouring with child."—*The Litany.*

LABOUR is childbirth. The dictionary definition of labour is travail or the pangs and efforts of childbirth. The term labour has now come to mean the whole process of childbirth, and not only the pangs and efforts by which delivery is effected. Thus, medical men speak of the mechanisms of labour, difficult labour, induction of labour, when they mean the mechanisms of childbirth, difficult childbirth, and so on. A woman who is going to have a child often wants to know what it is that happens. It is, of all events, one of the most strange to women. They marry, they conceive, and they bring forth, the common fate of most women and yet most strange. Some women accept this common fate without questioning. They do not concern themselves with what it is that happens to them. They become pregnant, and after ten lunar months they fall into labour and the child is born—that is all they know or care to know. But most wives are more interested in this most intimate process of their lives, and it is for their sake that I shall give an account of the matter, which I shall endeavour to make as lucid as the subject and my exposition permits.

The Physiology of Pregnancy.

The egg of the woman is produced by the ovary or egg-bearing gland, a walnut-sized organ which lies near to the womb. There are two ovaries, one on the right side and one on the left side of the womb. A tube, called the Fallopian tube, passes from each ovary to the top or fundus of the womb. This tube is lined by little fringed processes, which wave to and fro towards the womb. The egg drops from the ovary into the trumpet-shaped mouth of the Fallopian tube and the fringes waft it into the womb. The egg has not power of motion of itself. The male seed has. Each male seed is provided with a mobile tail. The womb itself is shaped like an oval brandy flask. Its neck projects into the vagina or sheath. The male seed, which is very minute, passes from the vagina through the neck of the womb into the body of the womb, and usually makes its way into the Fallopian tube, where it meets the egg. The two unite, and from the moment of their conjunction a new being is brought into existence. In other words, the mother conceives. The fertilized egg is now wafted by the fringes of the tube into the womb, and becomes embedded in the spongy lining of the womb, precisely as a seed falling upon the ground becomes embedded in the soil. The embryo or future child is, for protection's sake—the protection of its delicate substance against jars and harsh movements—surrounded by water, which is enclosed in a delicate membrane, which is joined at one place to the embryo, this junction eventually lengthening to become the cord or navel string. This constitutes the so-called bag of waters. From the delicate

membrane enclosing the waters little processes or rootlets grow into the spongy lining of the womb, and so the embryo gets nourishment. These rootlets are slender in their hold upon the womb. At the end of the third month of pregnancy most of the rootlets wither away, while a group of others increase in size and penetrating power to constitute the placenta, the large, fleshy disc-shaped organ which at childbirth forms the most conspicuous part of the afterbirth, so-called, because its birth or delivery follows that of the child. The placenta acts as lungs, stomach and kidneys to the child as long as it is in the womb. The child is connected with the placenta by the cord or navel string, along which its blood vessels pass. The child's blood is carried along these vessels to the placenta, which is composed of a mesh of child's and mother's blood vessels, only separated from each other by the thinnest membrane, through which nourishing substances pass from the mother's blood to the child's blood, and waste substances pass from the child's blood to the mother's. The mother's womb, therefore, contains the child floating in the bag of waters and the placenta. The bag of waters is enclosed by a delicate membrane which is pressed closely against and slightly adherent to the wall of the womb. At one place this membrane (or membranes, for actually, there are two lightly glued together) suddenly thickens to the disc-shaped placenta, which is more closely attached to the womb than are the membranes. Floating in the waters and passing from the navel of the child to the centre of the placenta is the umbilical cord or navel string.

The Physiology of Labour.

Labour is the process by which the womb frees itself of the child, the bag of waters and the placenta, and they are all brought into the world.

In order that this may be brought about two things are necessary, firstly, the opening of the mouth of the womb with the dilatation of the vagina and front passage to a width sufficient to allow the child to pass, and secondly, an expelling force. The chief expelling force is the muscle of the womb itself, though it is aided by the voluntary expulsive efforts of the woman, who hardens her abdominal muscles and strains when she feels the child descending. The contractions of the womb in labour are intermittent and painful. Hence, they are known as the pains. In the so-called first stage of labour these contractions of the womb slowly pull open the mouth of the womb, and each time a contraction pulls the mouth of the womb a little open, a portion of the bag of waters protrudes through it. The process is like that of pushing a door open against resistance. One pushes and opens it a crack and inserts the point of a boot or other substance into the crack to keep it open whilst one rests one's strength for another push. The womb does precisely the same in the first stage of labour. It makes an effort, an effort painful to the mother, and pulls the mouth of the womb open a little. At the same time it pushes a protrusion from the bag of waters through the small opening It then rests. After a rest it again makes an effort, and again enlarges the mouth of the womb. When it is large enough for the child to pass, the membranes enclosing the waters split open, and some of the waters

run out. This is known as the breaking of the waters.

All is now ready for the passage of the child. The head of the child is in some 95 cases out of 100 the first to pass and to be born. When the mouth of the womb is wide and the waters have broken, the contractions of the womb push the child down head first through the mouth of the womb, vagina and front passage into the outer world. This is known as the second stage of labour and is the most painful stage. During it, the woman feels the need of ridding herself of the child and by straining or bearing down helps the efforts of the womb. After the birth of the child, the womb usually rests for some minutes. Then it makes another effort or succession of efforts, which result in the after-birth, the placenta and membranes, from which the water has escaped through the large rent made by the child. This is known as the third stage of labour. Such is the process of conception, the growth of the child in the womb and the delivery of the child and afterbirth at the time of labour, which will probably interest and certainly instruct the reader. She is, however, more concerned to know how she is to tell when she is in labour, what will happen to her, what are the best things she can do, and how she can be saved from pain.

Sometimes a wife will have her nurse with her for a few days before the baby is born. She and the nurse will be able to get everything ready. The nurse will see that the room is quite clean, that basins, soap and other requisites are to hand, that the linen and baby's clothes are laid out in drawers,

so that she knows where to put her hand upon them, and so on. Then when the wife falls into labour the nurse will be able to assure her and will take all decisions as to when to send for the doctor and how to dispose the preparations. A nurse is always trained to know how to do these things.

In the event of the woman not having her nurse with her, it is important that she should be able to tell when labour has begun and to distinguish it from false alarms. False alarms are caused by pains in the stomach, which the wife mistakes for the beginning of the pains of labour. She is very apt to mistake them, when the child is her first and when she is very nervous about the onset of labour. These false pains are apt to come on in such cases about three weeks before labour. The characteristic by which they may be distinguished is their irregularity in time, nature and distribution. Sometimes they continue for several minutes together or much longer, like ordinary abdominal pain. Sometimes they are colicky, sometimes a dull ache. They pass from one place to another or are very general in character, they are felt not only in the stomach, but also in the loins and back and even in the lower limbs. The true pains are felt in the small of the back, and the intervals between them are definite in their regularity. They come unexpectedly, last a short time, and pass away completely in the early stage. It is difficult to describe pain, but these true pains are aching or boring in character. They may feel like a belt around the waist starting from the small of the back. They are accompanied by "show" in most, though not in all, cases. This

show consists of mucus, usually blood-stained, that is found at the front passage and shows that the vagina is already being lubricated for the passage of the child. The false pains, on the other hand, are not accompanied by show. The false pains, as time passes on, continue to be irregular, or they pass away. The true pains do not do this. The intervals between them shorten from an hour or half an hour to twenty minutes, they are felt definitely in the small of the back, they become more painful. This regular increase in character is the sign of true labour pains.

But in the early stages, when all is said, it is not always easy for a woman to distinguish false from true pains. It is, moreover, not uncommon for a woman to have niggling stomach pains some hours or days before the true pains begin. She is also in an anxious state and fears to trust to herself. Therefore, should she be in doubt, or too anxious to let a couple of hours or less elapse that the nature of her pains may become evident, she should send for the nurse or doctor. If, on the other hand, she thinks her pains are false pains she should take a laxative, which in any case will be good for her, and lie down with a hot bottle or hot flannels to her stomach. If the pain passes away under this treatment there will be no need for her to send for the doctor or nurse.

Excluding these spurious pains, there are commonly other signs that labour may be shortly expected. The womb falls before labour and the woman notices its fall, perhaps by her noticing a greater prominence of the abdomen, more often

by a change in her symptoms. The change is one of transference. Before the womb was high up in the abdomen, now it sinks down a little into the pelvis. Consequently she breathes more freely and feels easier in the region of the stomach and chest. The pelvic passages and organs, on the other hand, feel the increased pressure. Consequently she passes her water more frequently. She feels the need of having her bowels open more frequently, which is a good thing, for the lower bowel should be cleared of its contents before childbirth. If she have whites they are increased in amount. These changes occur a day or two before delivery in women who have had children, but some two to three weeks before the birth of a first child. In many women, however, they are hardly noticeable. Their presence, then, warns a wife that labour will not be long deferred, but their absence does not mean that labour is not soon to be expected.

Sometimes a day or two before labour sets in a little mass of mucus, known as the mucus plug, is discharged from the front passage. This is not noticed by most women, but if it is, it will warn them to expect labour in a day or two.

There are women, especially those who have already had children, who, apart from all distinctive signs, have reliable intuitions that labour is about to start.

Generally speaking, dull pains in the small of the back of short duration, with definite intervals between them, show that labour has begun. If they are accompanied by a blood-stained mucus or show at the front passage, then labour has certainly begun,

with exceptions so rare as to be practically unimportant.

Having started, how long may labour be expected to last before the child and afterbirth are born? This, like all questions relating to the much varied manifestations of life, cannot be given a definite answer. Only averages can be given and general indications and the extremes stated. I remember two cases which greatly impressed me as a student. In one a lady friend of mine was having tea in the drawing room. She was pregnant with a full term or nine calendar months' child, her third. She had a sensation of something falling and rose to go upstairs, but she had not reached the stairs before the baby, a healthy boy weighing 10 lbs., was born. Measured by the pains, the length of her labour was only a few seconds. Similar cases of very brief pains are by no means uncommon. I have attended women who have had their babies unexpectedly in shops, cabs and in the street. The second case was that of a woman in the East End with her first child. She fell into labour and, though there was no doubt she was in labour, her pains were feeble and often would pass away altogether for some hours. For seven days and nights this tedious labour continued, but at no time did the woman show any signs of distress either by a raised temperature, rapid pulse, severe pain or mental distress. She was a quiet, subdued woman, who had worked hard all her life and I think was actually enjoying her freedom from the accustomed toil. On the seventh day she delivered herself, without difficulty, of a healthy child. Similar cases of lingering labour are also not uncommon. They

are very trying often to all concerned, and especially to the doctor, upon whom both wife and relatives urge artificial delivery, although he knows that such a delivery is bad treatment, resulting in bad tears of the neck of the womb and outlet of the vagina, which are apt to cause all sorts of trouble later.

Such are the extremes of the duration of labour, namely, from a few seconds of pain to feeble pains enduring with intervals for seven days. But some 90 out of every 100 cases of childbirths fall into the class of normal labour. In these cases the child's head is born first and the child and the afterbirth are delivered within twenty-four hours of the onset of labour, without any artificial help being given and without complications. A duration of twenty-four hours is too long for the average duration of labour. Twenty-four hours' duration is the limit time for normal labour. Most labours are shorter than this. At the Rotunda Hospital we found that in women bearing their first child the first stage of labour occupied about twelve hours; in women who had had a child, about six hours; the second stage of labour occupied two and one hours respectively; the third stage took about half an hour. In the first childbirth parts have to be stretched which have never previously been stretched, hence a longer time is taken. After the parts have once been stretched labour is more speedy, and theoretically it should be speedier with each successive childbirth. In actuality this is usually the case, though with later pregnancies, owing to a weakening of the muscles and vital forces, labour tends to become longer again.

The time may seem long to the reader and she shudders with dread at the prospect of so prolonged a period of pain. But the actual period of severe pain is not so long as the above statements seem to indicate. Of course the pain depends on the personal capacity of the wife to feel and endure pain. Some women are very patient and only cry out when the long, strong pains, which immediately precede the birth of the child, are upon them. Others are upset, excited, and cry out with pain and for chloroform from the commencement. Personal control on the part of the doctor and nurse calm them greatly, but there are, of course, some women who really do feel the pain acutely and have not the stoical control over themselves which others have. The only advantage, on the other hand, that one can urge for the usual duration of labour is that it gives the wife time to send for the nurse and doctor and it gives them time to make the necessary preparations without the confusion of hurry. It may be good fortune to have a child rapidly and painlessly born, but to be overtaken whilst shopping or in the street or in a train is the reverse of pleasant, and the danger of such unexpected childbirth to both mother and child is greatly increased. Children have been known to have their skulls fractured by falling upon the ground in sudden unexpected deliveries, and others have fallen into the basin, when the mother was at the closet, thinking the feelings she had were no more than those indicating a need of relieving the bowels. The most fortunate labour is a natural delivery occupying some six hours in all, and there is a very fair chance of a woman having this fortunate labour.

Initial Action.

A woman, we will suppose, has fallen into labour. She has been previously examined by her medical man who has told her that the child is lying in the womb in a favourable position. She notices the show at the front passage. She feels an aching pain in the small of the back, and these pains last about a minute or so and recur every half hour. What is she to do? We will also suppose that her husband and a servant are in the house with her. She sends her husband for the nurse, and, if she has previously had quick labours, for the doctor also. She also sends for her mother, and some friend, who will be in the house whilst the child is being born. If she can telephone to all these people, so much the better. If it is in the early morning and she thinks she can spare the doctor until breakfast-time, knowing him to be very hard-worked, he will be grateful to her, but he will certainly come at once, if she asks him. She will tell the servant to light a fire in her bedroom if it is at all cold, and to light one in the kitchen so as to have plenty of hot water ready. She herself will prepare her dress suitably. She will put on a clean nightdress, a dressing jacket, and over them a dressing gown. The nightdress can be rolled up above her waist at the later stages, so that it is not soiled. She will not put on a corset or abdominal belt; at such a time there could not be more inconvenient and hindering attire. If it is cold weather she can put on one or two vests, a petticoat and stockings. Whilst she is waiting she can have a cup of tea and some bread and butter. The lightest food at long intervals will suffice during normal labour. Indeed, she will often only feel inclined for

an occasional glass of water or cup of tea, and this is quite sufficient for her.

The nurse arrives, and the first thing she will probably do is to find out for herself whether her patient is really in labour. If a doctor is going to attend, the nurse will probably not make a vaginal examination or feel a pain as it is called. It is impossible to say exactly what any particular nurse or doctor will or will not do, but as a rule, when a doctor is to attend, a nurse does not make this examination. The nurse, having satisfied herself that labour is in progress, asks her patient about previous labours, if she has had any, for one labour tends to resemble another in length. She tries, in fact, to estimate the probable length of labour and the strength of the pains, in order to judge of the need of summoning the doctor at once or later. For no wife can expect a doctor, who has other patients to see, to be present from the first pain and to wait about hour after hour, whilst labour progresses in the usual slow but straight-forward fashion.

Having made up her mind about these points, the nurse then sets about preparing the room, the bed, the basins, etc. In the meanwhile she will tell her patient to walk about or sit in a chair, for during the first stage of labour, before the breaking of the waters, it is better for her to be about and not to lie down the whole time.

Perhaps the nurse will get her to help make the bed. This is how the bed should be made, either this or some similar arrangement :—

1. A hard mattress—never a feather bed.
2. A blanket.

3. A sheet.
4. A mackintosh.
5. A draw-sheet.

These are all tucked in under the mattress.

6. The binder laid out and fixed at the edges to the draw-sheet by safety pins.

7. A second mackintosh overhanging the edge of the bed so as to protect the underlying clothes.

8. A draw-sheet, which lies loose upon the mackintosh and is not fixed by pins.

The rationale of this arrangement is as follows. The woman is delivered upon the upper draw-sheet. It and the upper mackintosh become soiled by the waters and blood that are always lost after the birth of the child. These fluids are scooped off the draw-sheet and mackintosh as well as possible into a tin bath placed on the floor under the edge of the bed, the bath itself being placed upon a piece of oil-cloth or other stuff, which protects the carpet. After this has been done, the patient is cleaned and dried, the upper draw-sheet and mackintosh are pulled away from under her and she now lies upon the binder and second draw-sheet. The binder is unpinned and bound round her. Within the following twenty-four hours or so, when the discharge has become moderate in quantity, the second draw-sheet and mackintosh are pulled away and the woman now comes to lie upon an ordinary bed. In this way she is provided with fresh, clean layers to lie on with the least possible disturbance. The upper bedclothes are made sufficient to keep her warm. During childbirth their edges are pinned together with safety pins, in order that they may all

be moved and thrown back together, and not severally, when there is need.

In the first stage of labour the nurse also pays heed to the patient's bowels and bladder. She sees that she passes her water frequently and she sees that the back passage is emptied. This is most important, for, matter coming from the back passage during the birth of the child, which squeezes the stuff out in its descent, makes it difficult to keep the childbirth clean and adds to the risk of infection with consequent chance of fever in the lying-in period. Moreover, a full bladder and back passage undoubtedly delay labour and in some way make the pains tedious. Therefore, the nurse is almost sure to give her patient a soap-and-water enema, which will relieve her, hasten the birth of the child and eliminate as far as possible a common source of uncleanliness. When the bowels are opened, she uses the chamber or commode, if she has it. She should not go to the closet, because, as has been said, there are rare cases in which the child has been born and actually drowned whilst the mother was at the closet. It is a rare accident, but it is well, of course, to avoid all risk.

Not infrequently the pains in the first stage of labour make a wife sick. If she vomits much she will have to go to bed or certainly lie down for a while; for this she can also try sips of iced soda water. Brandy she should not take without the doctor's order. Again, sometimes the pains decrease in intensity, decrease in frequency, and eventually die away altogether. The wife in these cases finds herself inclined to sleep and so she goes to sleep and

wakes up later refreshed and with the proper pains.

This is practically all a woman need do in the first stage of labour before the waters break. Even if she is very excitable and makes a great to-do about the pain, there is little or nothing more that she herself can do. Nature has to take its course. Whilst the pains are on, the wife usually catches a tight hold of something. Often pressure in or rubbing of the back eases her, and this the nurse will do for her. On no account should she bear down. She will not gain anything by bearing down except weariness from her exertions. There are some nurses who tell a patient to bear down with every pain in the first stage, but they are quite wrong in doing so. A woman should emphatically not bear down during the first stage. As the first stage advances her pains will become more frequent. The intervals between them, at first half an hour or an hour, continually shorten until when the first stage passes to the second the intervals may be only two or three minutes to lengthen again with the pains of the earlier part of the second stage.

The doctor usually comes as soon as he is called, and certainly as soon as he can. Sometimes he cannot come at once, being engaged at a serious case elsewhere. He may, for instance, be actually delivering another woman at the time when he is called. When he comes he will want to examine his patient to see that the lie of the child is a good one and that all is likely to be well. To find out this he will examine her abdomen, whilst she lies upon her back in bed. He may make a vaginal

examination, or take a pain, in the popular phrase. Perhaps he will not do this. In the great majority of cases it is not absolutely necessary, though it may be helpful to the doctor, in ascertaining the nature of the labour. It is useful to him for the sake of diagnosis and for discovering the effect of a pain. But it does not help the woman. Many women believe that it helps them, but it does not. Indeed, it is not only unnecessary in most cases, but it brings with it a slight element of risk, for it may give rise to infection and give the woman fever when she is lying-in. Before the days of Semmelweiss, the great Viennese and Hungarian physician, and before the work of the late Lord Lister, this taking of a pain was often fraught with the greatest danger to women. Students, midwives and doctors half a century ago made frequent vaginal examinations. They did not know anything at all of microbes and the need of antiseptics. They took the pains with unclean and microbe-infected hands in hospitals, sometimes coming directly from the *post-mortem* room to the bedside without washing their hands. The results were appalling. Sometimes as many as twelve women in every 100 in lying-in hospitals died from the effects of fever after childbirth, and half those who escaped death left the hospitals with crippled health. So terrible was this slaughter and disease which the doctors, students and midwives caused, that industrial populations were actually threatened with destruction owing to the mortality and invalidism that accompanied childbirth. But Semmelweiss and Lister have changed all that. By the use of antiseptics the vaginal

examination has almost been robbed of its dangers. Nowadays the mortality in hospitals is about one mother in 300, and the one unfortunate usually dies from quite other causes than infective fever, such as hæmorrhage, associated severe heart disease, consumption, bad deformity, etc. Nevertheless, it is the teaching of the most up-to-date medical schools that vaginal examinations should be avoided as far as possible. Personally, I do not often make them myself, but follow the process of labour by feeling the child's progress by examinations of the woman's abdomen, and by a means known as perineal palpation. I also forbid a nurse to make vaginal examinations, with rare exceptions.

If, when the doctor has made his abdominal examination, he finds that the case instead of being a normal one is abnormal, with a faulty lie of the child or other defect, then the whole complexion of the matter is changed. Towards the end of the first stage will probably be the time which he finds most suitable for setting the matter right. I need not describe what he is likely to do. There are so many different treatments, according to the many different conditions he may find present. It is sufficient to state that in the event of his finding it necessary to do something that will cause great pain, he will first give his patient chloroform.

If the doctor finds that all is well, he endeavours to estimate when the child will be born. This he will do in the first stage by finding out about the woman's other childbirths, whether they were quick or slow, and by estimating the strength of the pains. As regards the latter estimation, a doctor is in an

unfortunate position. The pains, though not under the control of a woman, are certainly affected by her nervous state. Consequently, it happens with annoying frequency that when a doctor enters the room he frightens away the pains. He waits and waits, and still the woman has no pains. He finally has to abandon the estimation of the pains and to rely upon the less skilled observation of the pains and their effects which the nurse reports to him. If he thinks the child is going to be born soon, he will naturally stay. If, on the other hand, he thinks it will not be born for some hours and he has other sick people to see, he will inform the nurse when he will come back and where to send for him in case of need, and will leave the house. By staying he can do no good. Labour is a natural process. All the world over the female has to give birth to its young. Ninety out of every hundred childbirths are naturally effected without any interference from the doctor. He knows this. His profession teaches him above all to trust to nature. Consequently, with this trust and his experienced knowledge, a doctor feels fully justified in leaving his patient when he does not think the baby will be born for some hours.

But, though he trusts nature, there are times when she plays him nasty tricks. There are times when he has scarcely left the house before a few strong, sharp efforts of the womb unexpectedly deliver the child. The modern doctor, who refrains from the slight risk entailed in making a vaginal examination—an examination which gives him more accurate information as to the probable time

of the birth of the child than does the abdominal examination alone—is more apt to be surprised in this way. Nevertheless, the risk to the patient in such a case is exceedingly slight. The very fact that the baby is born so swiftly and with such little warning means that the labour is as natural and free from risk as is the birth of their young to animals or of their children to less civilized women. It means that the mother is one whose physical perfection has not been spoilt by the artificiality of civilization. If, therefore, this incident should happen to one of my readers, I pray her to take pride in her physical perfection, to be grateful for her easy childbirth, and not to blame the doctor, who, dealing above all men with imperfect and spoilt nature, is apt to be taken off his guard by perfection. To sum up, the first stage of labour, from the wife's point of view, is simple. She does not go to bed unless the doctor tells her to do so, as he may do in certain cases. But dressed in loose garments she sits in a chair and occasionally walks about, as she feels inclined. When the pain comes, she does not bear down, but if her back is very painful, she asks the nurse to rub her back. She passes her water as frequently as possible, and the nurse will give her an enema. She takes a little light nourishment, such as tea and thin bread and butter, or beef tea and soft bread, unless she is sick during the first stage. She is better with the nurse only, but there is no harm in her seeing her mother and husband, provided they are not in a state of nervous agitation. The ease with which she passes through this stage, depends largely upon her own

nervous organization and the confidence with which her nurse and doctor inspire her. It is not my duty in a book to tell her to be calm ; that I must leave to those who are with her. I can only assure her that childbirth is a natural process, though a disagreeable one, and that in the great majority of women it will accomplish itself, if foolish interference is avoided, without harm to either herself or her child.

The second stage of labour is ushered in by the breaking of the waters and the change in character of the pains. The breaking of the waters will immediately be evident to her by the fact that she suddenly becomes wet when a pain is upon her. The water is, in itself, harmless, and does not permanently stain a carpet as blood does.

The pains now, instead of being of an aching character, are pains that make her feel the definite need of expelling the child. This change in their character is usually quite distinct. With a pain she becomes red in the face, she closes her lips and strains, hardening her abdominal muscles, in order to assist the expulsion of the child. And she does definitely assist. In the second stage, bearing down, as this straining is called, is of the greatest use in hastening the birth of the child. Sometimes, when the pain is very severe, she cries out, and if she first strains and then cries out, it does not matter. But, if she cries out from the beginning of the pain, the birth of the child will be delayed owing to the lack of her assistance, and she will have to endure her pains for a longer time.

She will now go to bed, and if the doctor is not

already in the house, he will be immediately summoned. He is very necessary for this stage, though once more I must insist that labour is a natural process, and in most cases he will not have to do anything to actively assist. But he is necessary, firstly so that he may see that all is well, and if all is not well to do what is required, and secondly, to give confidence to the woman. Both of these services are particularly necessary in the case of a woman with her first child. The first childbirth is the one that excites most anxiety and alarm, and this anxiety and alarm cannot be better assuaged than by the presence of a doctor, for the woman then knows she has skill and experience in her service. The doctor need not necessarily be in the room the whole time. Sometimes he will conclude that it is better for him to be in another room until the nurse sends for him. He will not stay in the room, for instance, when his presence frightens away the pains, as it may do even in the second stage. But he will have everything ready so that he can act immediately, if he considers it necessary to do so or when the child is actually being born into the world, at which time he will be present as a matter of course, and in fact for some considerable time before the baby is born.

He may or may not make a vaginal examination after the waters break. As I have already said, in the majority of cases it is unnecessary. It never hastens labour one whit, but sometimes it is wise to make one. A woman need not fear she will have the disagreeableness of much taking of the pains nowadays.

The nurse, of course, remains in the room with the

wife. She keeps the room at a proper temperature, and sees that it is well ventilated, for a woman in labour wants plenty of fresh air. She also keeps her patient covered with sufficient clothing, for often she will shiver, although she does not often feel cold in spite of her shivering. If she does a cup of hot tea and hot-water bottles will make her warm. The nurse rolls up her nightgown to prevent it being soiled and puts socks on her feet if they are cold. She also helps her patient to pass her water. Sometimes the bladder gets too full, from the woman being unable to pass her water. Hot flannels over the pubis will usually make her do so. Sometimes the doctor finds it necessary to pass a catheter to draw the water. This is a comparatively simple and painless matter and need not be dreaded by the patient.

The nurse will also keep the external parts clean that they may be clean for the passage of the child. This causes no pain at all. A woman in England is commonly delivered on her left side, a method sanctified by convention as convenient for the doctor and pleasant for his patient, for by it she suffers from the least possible exposure, but mechanically very disadvantageous. She need not, however, lay on her side for the whole of the second stage. Labour is quicker if she lies on her back, propped up by pillows.

The chief thing that the wife has to do in order to help labour is to bear down or make straining efforts with the pains in order to hasten the passage of the child. This she herself will feel only too ready to do. The nurse puts a hassock or foot-stool at her feet,

She also ties one end of the roller towel to the end of the bed and gives the other end to her patient. When the wife feels a pain beginning she places her feet firmly against the hassock, grips the roller towel, sets her teeth together, holds her breath and pulls hard with the pain. Towards the end of the pain, if she feels inclined, she can cry out, but if she cries out at the beginning all the extra force that is obtained by her straining is wasted. When she is bearing down the doctor or nurse can give her considerable help, if she is on her side, by pressing a knee into the small of the back and pressing with the hand placed over the dome of the womb. Sometimes, however, this gives her pain and therefore is omitted. Between the pains she removes her feet from the hassock and stretches out her legs straight. This she does in order to save herself from cramp in the legs, which is apt to occur at this stage. If she has cramp, the nurse can relieve her pain by a vigorous rubbing of her legs.

The pains of the second stage become longer in duration, more painful, and with shorter intervals between them as labour progresses. Certain signs now show themselves, by which the doctor and nurse know that labour is well advanced. The doctor will now certainly stay in the room.

It is at this period that chloroform is usually begun. The doctor gives the patient a lint mask to hold over her mouth and nose, and drops chloroform from a drop bottle upon the mask. The patient inhales the vapour deeply at the advent of a pain. When the pain has passed she continues to inhale the vapour, and when a further pain comes the doctor

drops more chloroform on the mask. In this way the patient is kept lightly under and does not feel pain. If more deeply under the mask falls from her hand and she breathes air only, until again in the condition of light anæsthesia. In this way all danger from the chloroform is obviated. The one disadvantage of its use is that it tends to take away the pains, and has then to be discontinued.

A new method of anæsthesia during labour is that which is brought about by injections under the skin, and is known popularly as "twilight sleep." The name gives its effect. The patient is kept asleep, but on the borderland of wake. She can be made to answer questions, and groans during the pains. It is not generally used yet. It has great advantages. It can be used from the beginning to the end of labour. The doctor has to be present during its exhibition, and it can, therefore, only be used throughout labour, if he can spare the time. It is not invariably effective or wise. The child is often blue-looking and sluggish at birth, but recovers quickly. I have used it in private cases and seen it charm away the pains and terror of childbirth.

If, in the course of the second stage of labour, the doctor thinks it advisable to use the forceps, those long thin metal hands which grasp the child's head and enable the doctor to pull the child out, or if he deem that some other manipulative treatment is necessary, then he will put his patient more deeply under chloroform. She need not be afraid. There is practically no danger at all in her having even deep chloroform, for women in labour bear chloroform with exceptional ease. I would only warn

her here that in some of these manipulative treatments the child will not always be born when she comes round from the chloroform. In some cases the manipulation has for its object not the birth of the child but the putting of the child in such a position as will enable it to be born. In rare cases, for instance, the child lies across the womb and cannot be born at all, and the doctor has to put it into a position in which it can be born.

But in ordinary cases of labour, when the patient comes round from the chloroform she finds that the child is born. Not infrequently there is some tearing of the hinder wall of the front passage due to the passage of the head of the child. In women with their first child this tear is very common, and in later deliveries it is by no means rare. This tear has to be stitched up. To leave it unstitched is bad treatment, for an unstitched tear leads to many troubles sooner or later when the woman is on her feet again. Some doctors stitch these tears immediately after the child is born, when their patients are still benumbed by chloroform. Others wait until the afterbirth has been born. Even if they wait, stitching rarely causes much pain, for the parts have been so stretched that women do not feel the passage of the needle as they would normally.

When the woman comes round from the chloroform, she will probably find herself lying on her back or she will soon be placed on her back. The child is born, the third stage of labour, in which the afterbirth is delivered, has begun, and this stage is conducted with the woman on her back. The child lies between her legs and she will probably hear it

cry. Soon after its birth the cord is tied in two places with thread soaked in antiseptic and cut between the ligatures with scissors that have also been surgically cleansed. The child is then taken away from the mother. If it cries and is lively the nurse wraps it up in a flannel and puts it somewhere, where it is warm and out of the way. If it appears lifeless or feeble, then the doctor takes it, and, by different treatments, brings life to it, unless it is actually stillborn. He then turns to the mother again, and attends to her during the delivery of the after-birth. This is in nearly all cases a simple matter.

After the birth of the child the womb rests. The pains cease for a few minutes. Then one or more pains recur with the object of bringing the afterbirth into the world. The pains are, however, not severe pains, and the mother can rest assured that with the birth of her child her troubles are really over. These pains produce the afterbirth usually within half an hour of the child either alone or with some slight assistance on the part of the doctor. Trouble with the delivery of the afterbirth is so unusual that the mother need not consider it, nor need she trouble about hæmorrhage, which is equally rare in well-conducted labour. If there is trouble with the after-birth or if there is hæmorrhage, she has the doctor by her and he will know what to do. Part of his treatment will probably be giving his patient a hot douche and this she will not find unpleasant.

But in nearly all cases a doctor will find no necessity to douche his patient, so that all that remains to be done after the delivery of the after-

birth is to get her as clean and tidy as possible, to put on the binder and then to let her rest, the doctor staying with her and in the house for a while in order to be sure that all is well.

First the nurse or doctor scoops the fluid and blood that have been lost in the childbirth into the bath lying at the side of the bed. The doctor then turns his patient on her left side and gently cleanses the outside of the private parts with pledgets of wool soaked in a mild antiseptic. He turns her on her back again, lifts her up a little and wipes her buttocks dry with a clean towel. He takes a pad of gamgee tissue, ten inches by four inches wide and two inches thick, which has been scorched at the fire, and when cool places it against the front passage. A dry pad is far more comfortable to the patient than a wet one. He again lifts her a little and the nurse pulls away the draw-sheet and upper mackintosh and the mother now lies upon the binder and the clean draw-sheet beneath it. The doctor then adjusts the binder, the support of which is grateful to the mother. Moreover, if she have a tear, which, of course, has been stitched, the binder keeps her legs pressed together. The binder is said to preserve the figure, and women, therefore, do not like it to be omitted. I do not believe the binder has this virtue. I have seen many mothers in different parts of the world, where the binder is unknown, and they have as good and often better figures than women who have had binders ; indeed, so good have their figures been that strangers never took them for married women. The binder is certainly not a natural thing, and a great deal of proof is necessary to show that any unnatural

tight girding does good. I am often amused at writers who cannot find language strong enough to denounce the corset and are equally emphatic in advocating the binder. If a mother desires a binder I put one on, but if she does not desire it I do not insist upon it, for I think it possible that a tight binder and flatulence combined lead to malposition of the womb. If she is indifferent I put on the binder, for it is better to do the conventional thing to indifferent women, lest, if omitted, they blame one afterwards.

Plenty of bedclothes are now put over the mother and a hot bottle put in her bed, for she often feels cold after labour. She will now want to see her baby, and if it is ready it will be brought to her. She may notice that the child's head has a peculiar shape or a swelling upon it, and, if forceps have been used, she may notice marks upon the sides of its head, but she need not worry, for this moulding of the child's head and local swelling are due to the pressure of labour upon it, and pass away in a day or two. So, too, the marks of the forceps will pass away. The doctor will probably tell the nurse to put the child to the breast for a few minutes. There will be no free flow of milk, but the suction draws out the nipples and also reflexly helps the firm set of the womb which follows labour. The baby is then removed, the mother, if thirsty, has a small cup of tea or a little water, and the mother encouraged to sleep after her travail. The room should not be darkened, for the nurse, who stays in the room, must have a good light so that she can watch the colour of her patient. The doctor, satisfied that

all is well with both mother and child, gives his final instructions, and leaves. Labour is over and the lying-in period begins.

Such is labour with nurse and doctor. Not infrequently, however, in women who have already had a child, labour is so quick that the baby is born before the doctor arrives. If the nurse is present, this does not matter very much, for such quick labours are obviously easy labours, and are quite safe when a trained and capable nurse is with the mother. She knows what to do. She knows when to cut the child's cord, what to do to the baby if it does not breathe properly, how to deliver the afterbirth if the doctor is still absent, to keep the afterbirth for his inspection when he arrives. She has been taught and examined in these matters and her certificate shows that she has certainly had the knowledge at one time, just as a doctor's degree shows that at one time he had the requisite skill and knowledge to satisfy his seniors. Consequently there is very little danger in such quick labours when a nurse is present.

Sometimes, however, even the nurse is not present. In such a case anyone in authority, who is with the mother, should send either a servant or neighbour for a doctor at once and also for a nurse, and bring one or other or both back with them to the house. In the meanwhile the baby is born. I would advise anyone with the mother at such time not to cut the cord. Even if the afterbirth is also born, there is no harm in leaving the baby joined to it, until either doctor or nurse arrives. But if the baby does not appear to breathe, then it lies with the attendant to

do her best to restore life to the child. She must take some clean thread or fine string and tie it round the cord in two places close to each other and about two inches from the baby's navel, tying tight knots. She must not waste time boiling the thread. She then severs the cord between the knots with clean scissors. The baby is now free. She wipes out the baby's mouth with a piece of her handkerchief, fitted over her little finger. She turns the baby over on its side and gives it some smart smacks upon the back and buttocks. This usually makes the baby cry, and, if it cries, then all is well. If it does not cry, let her take some brandy or whisky and rub the baby's body, back and front, with it. Meanwhile, if there is someone to help her, he or she should prepare a hot bath in a footbath, a baby's bath or large basin. The attendant takes the baby and, supporting its head in her hand, plunges it into the hot water, in which she must be able to bear her hand easily. This sudden plunge usually makes the baby gasp. If it does not, let her take the baby out, dab it quickly with a towel and again plunge it into the bath. If it still does not breathe properly, or not breathe at all, she can do no more. She should wrap it lightly in a flannel and wait till the doctor or nurse arrives. If anything is amiss with the mother, all she can do is to send or telephone for a doctor to come with all speed.

CHAPTER XX.

The Lying-in.

"To a mother a child is everything; but to a child a parent is only a link in the chain of its existence."—*Disraeli.*

THE doctor will usually call and see the mother within eight hours of the birth of the child, but if the child was born at 10 p.m. he would not call at 6 a.m., but after breakfast. In the meantime, what is the mother to expect?

She will naturally spend the time completely at rest. She will most probably sleep, the nurse sitting by her or going in every now and then to lightly feel her pulse and see that it is slowing down, as it should do after labour. When she wakens she can have some light nourishment. She can have an egg beaten up in milk, milk-and-soda, arrowroot, jelly, bread-and-butter and tea or other light food. She should also pass her water within twelve hours of the child's birth. To do this she first rolls over on her face, and with the nurse's help she gets on her hands and knees, keeping her thighs pressed together if she has been stitched. In this way, as a rule, she will experience no difficulty in doing so. If she cannot do so, the nurse will place hot flannels over the lower abdomen or place her on the bed pan in which hot water has been poured, so that steam rises. If these measures fail, then either the doctor

or nurse will have to pass a catheter and draw off the water. This is not painful, but is not agreeable. Fortunately, it is a treatment that rarely has to be repeated, for the only reasons why a woman cannot pass her water are either bruising of the passage during labour or loss of the tone of the abdominal muscles, both of which conditions recover, except in rare cases, within twenty-four hours of the child's birth.

Sometimes, when the labour or loss of blood has weakened the patient, it is not, at first, wise to let her roll over on her hands and knees to pass her water. When it is wise and when not wise rests with the doctor. The mother in the first twenty-four hours will require five to six light meals of the foods above mentioned. Oranges and grapes are also pleasant to take. She can have as much fluid as she likes. I say this, because some nurses restrict her fluids, and she suffers greatly from thirst in consequence. There is no harm in her having plenty of water, home-made lemonade, barley water or other bland drink. It will not make her sick, unless she gulps down a tumblerful at a rush. Even if she has had prolonged chloroform she can have as much fluid as she likes, provided she drinks slowly and a little at a time, and stops if this makes her feel sick. She will find it easy to drink from the feeder which she bought before labour.

In this twenty-four hours, when she is awake, the baby will be brought to her. There is no reason for keeping the baby away, provided it is seen that she does not go to sleep with the baby at her side,

for she might injure it when turning in her sleep. If she appears or feels inclined to sleep, the baby should be taken out of her bed and put in its cot. The baby, in addition to occasional teaspoonfuls of warm water, if its mouth is dry, should be put to the breast for ten minutes three times in the first twenty-four hours. This is valuable to both mother and child. It stimulates the breast to produce milk, draws out the nipple and stimulates the womb to remain firm and not get flabby with consequent excess of discharge and after-pains. The large womb, which weighs some thirty-five ounces, shrinks in six weeks, until it weighs only one and a half ounces. This process is called involution, and its normal course from the first day onwards is certainly helped by suckling.

The question of visitors in the first twenty-four hours is one that depends greatly upon the temperament of the mother. It is a question, therefore, for the judgment of the doctor, and he will leave instructions with the nurse and husband. The husband himself can, of course, see his wife as soon as she has rested, and can pay her short visits. Her own mother will probably wish to see her, and there is, as a rule, no reason why she should be forbidden. For the rest, it entirely depends upon the character of the woman and the character of her friends. Anyone whose injudicious talk will excite or alarm her must be forbidden the room, and to be on the safe side it is best, always, to forbid such would-be visitors. Even the husband has sometimes to be forbidden. For instance, at the Rotunda Hospital we had a patient, already in the fourth day of the

lying-in period, whose husband visited her and spoke sharply to her. She had previously been quite normal in pulse and temperature. At 5 p.m. her temperature, when taken, was 103° and her pulse 96. At 10 p.m. her temperature was 98° again and her pulse 76, and neither ever rose again. This was clearly a case of nervous temperature; at least, we could find no other reason for it than the fright she received from her husband. The case also shows the importance of keeping lying-in women from disturbing effects.

There is no need for the bowels to be opened in the first twenty-four hours. It is better for the woman to avoid such disturbance. If she had an enema before childbirth she will not, as a rule, feel any desire to have them opened. There will, of course, be red discharge from the womb after childbirth, and this the nurse will see is soaked up by the sanitary towels. These she will change as often as there is need, usually every two or three hours for the first day or two, and she will clean the parts carefully with antiseptics, wiping with a swab of wool from before, backwards, using one swab for one wipe. If the discharge seems too large in amount and if there is any quickening of the pulse accompanying it, the nurse will inform the doctor by letter or telephone at once.

The room must be ventilated every three or four hours if the weather is cold. If warm, the window should be kept open at the top or bottom.

For the first night the baby should not sleep in the mother's room, lest its crying spoil her sleep.

In the second twenty-four hours the baby should

be put to the breast six times. There is rarely milk yet, but if there is so much the better. The true milk usually comes on the third day, sometimes it does not appear until the fifth. If it appears late, the mother should still persevere, for the milk is sure to come. The baby must be given ample opportunity to suck, and must not be taken away if at first it does not succeed in taking the nipple. The nurse can usually manage to press the nipple out. If it will not come out, then the "Infantibus" nipple shield should be used. This nipple shield clings by suction to the breast, whereas other nipple shields slip. It is the most valuable adjunct to suckling that has been invented. With its use the nipple, if depressed, will be drawn out in a day or two, so that the baby can take the nipple directly. With it there is no possible excuse for not suckling the child on the score of depressed or ill-developed nipples. Two "Infantibus" shields should be kept, so that the nurse can use one and cleanse the other, in the way which she has been taught, keeping it in washing soda, scrubbing it, and boiling it, at least, once a day. If the baby does not take the shield, let the nurse squeeze out a little of the secretion of the breast and wet the nipple of the nipple shield. This will induce the baby to suck.

Before feeding, the nipples of the breast are washed with a little warm water and some clean linen. After a feed, they are again washed with a solution of boric acid, followed by water, and finally dabbed with a solution of equal parts of brandy and water to keep the skin of them firm. If the skin gets

rubbed off, a sore nipple may develop or a painful cracked nipple. These are readily cured by some simple treatment, such as the use of friar's balsam, if in addition to the treatment the "Infantibus" shield is also used. These cracked nipples, therefore, no longer offer an excuse for the giving-up of suckling. Many German doctors of great repute, by using these shields, have been able to get every mother without exception to suckle her child. Only in the very rare cases of severe illnesses, therefore, need the mother's breast be refused to the child. The moral responsibility of not suckling her child rests wholly upon the mother and the ill-advice sometimes given her by her friends and the nurse. Personally I think the present fashion of mothers refusing the breast to their children is deplorable. Never in the world's history in any countries outside European civilization is there to be found an instance of a mother, not afflicted with grievous disease or subjected by some weighty reason, not suckling her child. The fault, however, lies very largely with the medical profession, for women all the world over follow a fashion, whereas suckling is one of the things as regards which the medical profession are trained and under bond to see properly carried out. The nation entrusts its health and the health of its children in our hands, and it is our bounden duty by authority, instruction and persuasion, to see that the babies are nourished with the natural milk and that the strong bond that unites the mother to the child she has suckled should be secured, for such love is of the utmost social value. It is really our fault that so much

artificial feeding exists, and with this nipple shield any excuse we make on the score of depressed or sore nipples has no justification. The only genuine justification for not giving the breast to the baby is serious illness on the part of the mother or cleft palate of the baby, which prevents it sucking. I do not believe that there exists a healthy mother who is not provided with the proper milk for her child. Nature has not given her a womb in which to bear her child and forgotten to give her the proper breasts for its nourishment. Such an idea or excuse is patently absurd.

From the third day the baby should be put to the breast every two hours during the day and once between 11 p.m. and 7 a.m. If the mother wants full rest the first few nights, the baby can sleep in another room and be taken in once in the night to its mother. Then its cot should be placed by her bed, and by day it should also be by her bed. By the fifth or sixth day she will be able to lift it in and out herself, if all is well with her. She should take the baby into her own bed by day, provided that she does not feel inclined to fall asleep. The baby likes the warmth of her body and will sleep better at her side than in its cot. Moreover, its little body against the mother's will promote her love for her baby, and love is a very important social factor. I do not hold with the pedantic doctors and nurses who separate the mother and child. A mother loves to watch the baby's face and feel its little hands, and all love should be encouraged as a source of personal health, of purposeful life, right guardianship, and social strength. Those who

attempt to separate mother and babe on hygienic grounds are to be compared to the cranks who attempt to forbid kissing also on hygienic grounds. There are things in this world that far surpass hygiene in importance and must be placed above the reach of science.

The baby does not require butter-and-sugar, a little castor oil, or any of the other concoctions some nurses desire to give it. They are wholly unnecessary. The baby's toilet and the guidance of its health belong, as subjects, to the books for mothers and not to one for wives.

The food the mother receives on the second day of the lying-in should be the same as she had in the first twenty-four hours, with fish or the breast of chicken for lunch or dinner. On the evening of the second day the mother is given an aperient if the bowels have not already been opened. The system being properly cleared, she will now be able to take what she likes, and to eat at ordinary meal-times, provided it causes her no indigestion. For this reason her ordinary diet is the best for her, for it is the one to which her digestive organs are accustomed. If she is accustomed to a little wine or beer there is no harm in her having it, and it is probably an aid to a digestion accustomed to it. But if, during pregnancy, she has had no alcohol, there is no need for her to have it during the lying-in and suckling period. There is a popular notion that stout enriches the milk. In Munich, famous for its beer, there is a popular saying that beer gives strength. Both sayings have much the same basis. The old style of nurse liked stout. She took it, she

had the usual self-approval, and, therefore, stout was good. Consequently stout got a reputation, but its reputation will not stand a searching examination. There are millions of women who suckle and rear the healthiest children without touching stout. The only value in the stout from the point of view of the milk is that milk requires water and that stout introduces water into the system. But it is better that a woman should take water alone than stout.

Similarly, it is an error to think that milk produces milk. Drinking cow's milk will not have any direct effect upon the breast milk. Its effect is indirect, for milk is a liquid food. Any other fresh foods accompanied by water have the same effect upon the breast milk. Indeed, if milk is taken between meals it is harmful, for it tends to take away a woman's appetite. With the meals, it is a very wholesome drink, and a hot glass of milk before sleeping is also beneficial. If a mother feels she wants something between her meals a cup of beef tea is preferable to milk.

The amount of food a lying-in woman should take should not be too large. A woman must not overfeed with the idea of keeping her strength up. The amount of food taken is obviously personal. It cannot be regulated by weight and measure. Overfeeding is seen when the woman feels a great distaste to the food pressed upon her and suffers from flatulence and indigestion. Both in the amount and kind of food and liquid she takes I recommend her to be guided by her general habits. The stomach does not want to be treated to one form of diet at one time and another at another. It has its familiar

pleasures and tastes, and is best pleased when these are regarded.

Every day in the lying-in period the nurse will take the mother's morning and evening pulse and temperature and will record them on a chart. This chart is an almost sure indication of the general progress of a lying-in woman. Nearly all abnormal conditions of the lying-in period will cause a quickening of the pulse or raised temperature, or both together. The chart, therefore, is an invaluable record to the doctor. It tells him at a glance when all is well or when to be on his guard. Of course, he makes other examinations as well when he calls. He feels the womb from the abdomen to see whether it is shrinking in the proper way. Between the tenth and fourteenth day he usually fails to feel it. After some six weeks the womb is quite small again. He also examines the discharge. This normally is red for some three days, then brown, and, becoming more watery, ceases about the fourteenth day, but so varied is it that no definite rules can be laid down. It may remain red for ten or more days. The doctor rarely makes a vaginal examination, and rarely gives a douche, for these things are not necessary in a normal lying-in. In the past douches in the lying-in period were given as a rule once a day, but all modern teaching and the experience of the most successful lying-in hospitals and clinics are against the routine use of the douche.

There are occasions when the douche is required, these occasions being indicated by fever, quick pulse, or unpleasant character of the discharge. The uncivilized woman does not lie-in as does the civilized

woman. She is upon her feet either soon after the birth of the child, or at any rate within a few hours, and there can be no question that she recovers from her labour better than does the civilized woman. The abdominal muscles, having action, recover their tone. She does not suffer from constipation. Her womb, which has not been squeezed and kneaded by an attendant at childbirth, is not bruised. Her upright position allows the discharge to run out properly. The position assumed when lying in bed is a bad position for the proper drainage of the discharge. It collects in the vagina, and there not infrequently it becomes foul, as all stagnant animal fluids tend to become foul. Fever results and the woman is made ill. A great deal of childbed fever has no other origin than this, it is a bed or bad drainage fever. To avoid this, douching used to be used, but douching was found to introduce germs in many cases, and, therefore, as a routine treatment has been largely abandoned. In order to get proper drainage in suitable cases with the assistance of the nurse, I let the patient sit upon the commode when the bowels are opened from the third day onwards. The nurse watches her patient and takes her pulse before and after to see whether the movement affects her. I have never found anything but good result from this permission, but I only allow it in suitable cases. This simple treatment alone will frequently cure foul discharge. In any case the mother should be allowed to turn over on her side in bed from the very first, if she feels strong enough to do so, to prevent the discharge collecting in the vagina and to permit it to drain into the pad. A collection of

foul discharge in the vagina is the real cause of the so-called milk-fever, for the discharge goes foul between the third and fifth days as a rule.

The womb contracts periodically during the lying-in in order to squeeze out the discharge. As a rule these contractions are scarcely felt by the mother. In some women for the first five days or so of the lying-in they cause definite pain, gradually diminishing as the lying-in period progresses. They do not bother mothers with their first child, but are more common with later childbirths, especially if the womb has been much stretched, as by twins or a great quantity of water. Suckling of the child brings on the contractions of the womb and, therefore, these after-pains, but as they are beneficial to the womb in that they squeeze out discharge and clotted blood, this is all to the good. If they are troublesome a hot bottle should be laid upon the lower part of the abdomen and this will soothe them. The doctor will also give a medicine, which helps the womb to contract, but at the same time mitigates the pain.

The nurse attends to the sanitary towels, changing them whenever the discharge soaks through them. She also cleanses the outer parts morning and evening.

She washes the mother's body daily by sponging it with warm water.

She adjusts the binder every day. It usually tends to ruck up quickly after adjustment and to become useless, if ever it has any use. It may be left off upon the seventh or tenth day.

The nurse attends to the ventilation and warmth

of the room. A fire is not necessary at night, unless the weather is exceptionally cold. No slops or dirty linen must be left in the room.

As regards visitors to the lying-in woman, her husband, her children and her mother may see her and talk with her, provided she does not get tired. Other people are best kept away for a week, but the matter is one largely dependent upon temperament. There are some women who are all the better for seeing their friends. There is no need for her to be dull. She can have papers and books after she has had a good night's rest, and on the fourth day, if she feels inclined, she can sit propped up in bed and do any fancy work she likes.

A lying-in woman should always try and sleep in the afternoon, and usually succeeds in doing so. She should sleep well at night. Sleep is most important to her. The lying-in period is a period of rest, and sleep is the best form of rest. If she fails to sleep the doctor must be told, and, if no doctor is in attendance, one should be consulted. Sleeplessness in the lying-in period is a serious symptom and one not to be neglected. Veronal, obtained from the chemist, may be tried in mild cases, but if it fail for one night only then a doctor must be summoned without delay.

When may a lying-in woman get up? I would like to answer this by the bull that she should be getting up when she is in bed. I mean by this that if she is strong, she will be allowed out on the commode, when the bowels are open, she will be allowed on the fourth or fifth day to sit up when she is having her meals, she will move freely in bed, sit up

without support and generally display an activity which does not comport with staying in bed. Such indications combined with a steady pulse and temperature are those by which one can judge when a woman should get up. One also notes the discharge. If it is pale and slight in quantity, as it should be between the tenth and fourteenth days, then there is no hindrance to her getting up. If on the other hand the discharge is still red, delay or certainly caution is wise. If, upon getting up, the discharge becomes red, a woman should lie up until getting up does not cause it to become red. She lies up for two extra days and then tries again, noting and being guided by the colour of the discharge.

Most women lie-in too long with the tendency there is to caution and invalidism in all these matters. I have allowed some mothers, whose labours I have conducted without any sort of interference at all, and without rubbing, kneading and bruising of the womb, to get up on the fourth day, as they seemed quite well and the discharge had ceased. They have never had cause to regret getting up, and their abdominal muscles and womb probably profit by the natural massage movement gives. Even if there is a slight discharge, there is no better position than the upright in order to permit of it running away. But only particularly healthy women can get up as early as the fourth day.

As a general rule, the tenth day may be given as the day upon which a lying-in woman, in whom all is normal, may first get up. If labour has been troublesome, then it may be wise for the mother to

stay in bed for a few more days. If there has been hæmorrhage, if the patient has been torn and stitched, if she has been ill during the lying-in period, then she will get up when the doctor finds it is safe for her. For these conditions one can lay down no rules. But if the labour and lying-in period have been normal, it is foolish for a woman to lie in bed for three weeks. Bed is the best thing for rest, but too much bed produces weakness. Many women who say they feel weak after child-birth, really feel weak because they have stayed in bed too long. They get weak by this prolonged stay in bed, at the very time when they want to be strong, namely at the beginning of the suckling period. For these reasons a woman should not stay in bed for over ten days, unless there are strong grounds for her doing so.

The first few days she is up, she should rest for an hour in the afternoon on the sofa and go to bed early. She can go out for a drive or a short walk on the fourth day, and resume her ordinary life after she has been up for a week, provided she does not undertake any unusual or immoderate exertion. The womb, as has been said, takes six weeks in the process of shrinkage and some doctors advise their patients to rest for all these six weeks, but they are quite unable to explain why one should rest during a perfectly natural process that goes on throughout the human and mammal world.

Moreover, as we progress in knowledge, so we learn that these processes are better performed when there is movement than when there is rest. Move-

ment strengthens the body. Rest without corresponding exercise weakens and causes loss of appetite, constipation and indigestion. This loss of appetite, indigestion and constipation are above all to be avoided by suckling women. I, therefore, advise my readers, if the feelings of their own bodies tell them they feel well and desirous of action and exercise, not to stay in bed for over ten days, and by the eighteenth day to regard themselves as recovered from childbirth. I do not advise them to start flying about town or playing tennis. At least two months should elapse before the strenuous exercise of games other than croquet should be taken up, and then it should only be indulged in with great moderation during the suckling period. But shopping, housekeeping, house arts, visiting friends and such like employments will do a mother no harm when she has been up from bed for a week and feels in good health. I have found women who follow this course decidedly better in their health than women who live for weeks in a condition of semi-invalidism and dependence upon others.

One point remains for consideration, namely, how to stop the milk in the event of the child being still-born or dying soon after its birth. To do so, a simple method is to spread an ointment, composed of one part of yellow wax and eight of olive oil and warmed before spreading, upon squares of lint. One square is laid over each breast, a hole being cut in the centre for the nipple. Glycerine of belladonna may be used instead of this ointment. Some cotton wool, also with a central hole, is then placed over each breast. Round the chest a firm binder is

bound. If the breasts become very engorged, the binder should be undone and a teaspoonful or so of milk removed by a breast pump, without disturbing the wool or lint. The breast pump must be used as sparingly as possible.

CHAPTER XXI.

Lactation.

"A little thing consoles us, because a little thing afflicts us."—*Pascal.*

LACTATION or suckling, of course, begins in the lying-in period, but the term usually denotes the period between the end of the lying-in and weaning.

Suckling is a natural process, and one has to protest at the outset against the common statement, to be found unfortunately in medical books as well as in popular speech, that suckling is an exhausting period. Because the child sucks milk from the mother's breasts, therefore the mother becomes weakened, such is the argument. This is not true. Healthy women are the better for suckling. They have love, they have fulfilled purpose and success to sustain them and give them power. If it is a woman's purpose to bear, love and suckle children, why should its attainment exhaust her? Success and achievement strengthen, they do not weaken, and healthy women suckling their children often acquire an added bloom of beauty. A mother's zest for life is greater, her digestion is better, she feels within herself how good it is to live. Purpose and love are such great aids to health that they quite outweigh the effort of the daily manufacture of the milk. Suckling, in short, is an addition to

and not a detraction from the health, if it is properly carried out.

There is a further physiological fact that promotes the health of the suckling period. It is a wise provision of nature that a suckling mother very rarely becomes pregnant and she does not menstruate. Her physiology is by nature devoted to the child that is hers and not to further fertility. The rule is not invariable. Menstruation may occur during suckling and be followed by another pregnancy. Should this occur, then the child must be weaned. But it occurs so rarely that practically it may be ignored. The ordinary marital relations, then, may be indulged in with due moderation without the fear of a new conception following quickly upon childbirth. This enables the inter-relation of husband and wife, which is a valuable asset to their good temper and feeling towards each other, to occur without the dread of a quick recurrence of pregnancy or the harassment that is so commonly associated with preventive measures. Good temper and freedom from sexual anxiety on the part of the mother are definite factors in causing a sweet and healthy flow of the milk, and nature by a wise provision has aided their attainment.

Great advantages, then, accrue to the healthy mother who suckles her child. Her own health is strengthened, her love for her child is firmly established upon foundations that will endure throughout her life, her husband, as the father of her child, is also secured more firmly in love towards her. Only the sickly mother should refrain from suckling when the doctor tells her to do so. It is rare to find a

mother without actual disease who cannot gain the advantages of suckling if she is properly guided. In fact, the question of non-suckling should scarcely occur, and it may be that a society in which it does so frequently occur as in the present is doomed to decay by the retributive justice of nature to such as affront the immutable laws which sanction human life.

The mother gives the child one breast every two hours during the day and once during the night in the first month of its life. It might be said that it is more natural to wait until the child cries, for the child itself will so inform the mother when it desires food. Babies so fed are, I believe, as healthy as babies regularly fed. But regularity teaches both child and mother that there is a time for all things. That the child responds to regularity is seen by its tendency to wake up when feeding time arrives. If, on the other hand, it is fed whenever it cries, then the mother must be prepared for a long series of disturbed nights.

Before putting the nipple in the child's mouth, it should be cleaned with some warm water and clean linen. When suckling is over, it should be again cleaned with water, followed by boric acid and a lotion of equal parts of brandy and water. The baby's mouth is also gently wiped out with warm water and with clean linen wrapped round the little finger. These precautions are taken to prevent the mother getting a sore nipple or a cracked nipple, which will cause her pain at suckling and may lead to an abscess of the breast.

If she gets a sore or cracked nipple she should paint

the nipples twice a day with friar's balsam, washing it off before the child is fed. She should also make use of the "Infantibus" shields, which rest the nipple in a way that other nipple shields fail to do. The difficulties of depressed nipple and cracked nipple with the subsequent fear of abscess of the breast have been practically overcome by Dr. Stern's useful invention.

After the end of the first month the baby should be fed every two and a half hours during the day and once at night; after the third month three hourly feeds during the day and once at night; after the fifth month three to three and a half hourly feeds by day and none at night.

If the breasts become very full, a woman is sometimes advised to rub them or to get some one to rub them with olive oil towards the nipple. This, I think, should only be done by a nurse, who has been properly taught at a school of massage. Rough and improper handling of the breast may promote inflammation and abscess.

The heavy breasts are inclined to sag down, especially in women who have borne many children. This is uncomfortable and in hot weather may result in a moist eczema at the fold of the skin. A proper breast support, which may be bought at a draper's shop, is the remedy for sagging breasts.

It is important, of course, for the mother to keep as healthy as possible during the suckling period. She should follow the lines laid down in the chapters on hygiene, for the rules of health during suckling are not different to those at other periods of life. A few special points will now be noted.

As regards food, the ordinary diet that is agreeable to the mother should be taken. Her digestion will be accustomed to it. Foods that give her indigestion and such foods as pastries and much spiced foods she should avoid. Green vegetables and fresh fruits, once supposed to be harmful to nursing women, can be taken as usual. They will do good, for they tend to prevent constipation. In the matter of drink, she should take plenty of fluid—if fresh milk, at her meals only and not between her meals. Alcohol is unnecessary, but if she is accustomed to a little wine or beer she can take it. If she feels she wants something between meals, she should take a cup of beef tea or some jelly. If at any time she feels faint, she should sit or lie down and take an egg beaten up in milk. She must avoid overfeeding to keep her strength up, for it will give her indigestion and lower her strength.

She should take plenty of exercise in the open air. As regards horse-riding, bicycling and tennis, if she is accustomed to them they will do her no harm after the second month, provided she indulges in them with care and moderation. An hour at a time of any of these exercises should be enough for her. Her shopping, visiting and walks with the perambulator, will give her exercise in the open air.

She cannot well go to a ball without neglecting her child, but an hour or so of dancing at her own home or at a friend's will not do her any harm after the second month. If any of these exercises overtire her, or give her pain, then, as a matter of sense, she will give them up and confine her exercise to walking.

There is no reason why she should not go to places

of amusement, provided, of course, she does not leave the child too long. A nursing woman is apt to become depressed if her days are made too monotonous, and, if she becomes depressed, the quality and flow of the milk are one or both diminished. Therefore, she should have amusements, but, of course, not be rushing after them. For similar reasons she must avoid worry. I have already said sufficient in previous chapters upon worry, but the astonishing fact may here be mentioned that worry actually seems to reappear in the milk. Trouble or shocks so alter the milk that the baby sometimes becomes peevish and may get griped or have diarrhœa. The mother should have occupations to employ her time and to prevent any worry she may have becoming aggressive. She will have her household duties and arts, her friends to see, and her baby. There is no reason, therefore, why a nursing mother should not be sufficiently employed.

She should see that the bowels are opened regularly. For this purpose she should refer to pp. 197 to 199. Strong purgatives should be avoided, for these drugs pass into the milk and often upset the child.

The child is usually weaned in England in the ninth month. In China and other countries the child takes the breast in addition to other food, until it is three or even four years old. The breast is given to the child when it is thirsty. Children do well with this late breast feeding and pregnancy is avoided for three or four years. Late suckling, combined, of course, with some solid food, has, therefore, considerable sense and human approval, but it is rare in Western European civilization. Further it ob-

viates the use of cow's milk, and I believe cow's milk, though sometimes inevitable, is a dangerous food for infants, as it readily becomes infected.

The child should not be weaned in hot weather, for, in cities especially, cow's milk is liable to become contaminated in hot weather and to cause severe and fatal diarrhœa.

Sometimes a child has to be partly or wholly weaned before the ninth month, when either the mother or child is not doing well. Such cases of premature weaning should be decided by a medical man. If the mother become pregnant again, the child should be weaned. In such a case the milk tends of itself to dry up, often with some suddenness. If the mother acquire any chronic or acute disease during the suckling period, the child must be weaned quickly in a day or two.

Ordinarily, weaning should occupy a month to two months. The breasts should be treated as described upon p. 274. At first one, then a second, then a third breast meal should be omitted in the twenty-four hours, and the bottle or spoon-feed substituted for it, until the breast milk is omitted altogether.

The menses may occasionally begin during suckling, but are not a reason for weaning. After weaning they appear again. At first they may be irregular and a woman may lose more, and for a longer time than she is accustomed to do. This need not cause her to worry, for regularity establishes itself in a month or two. If the excessive loss is sufficient to make her feel ill or to look pale, she should consult her doctor.

CHAPTER XXII.

The Change of Life.

"The world's a scene of changes, and to be
Constant, in Nature were inconstancy."
Cowley.

THE change of life, or menopause, is the term applied to the period of time when a woman is passing from the condition in which it is possible for her to have children to the condition when it is not possible, owing to the decline and eventual cessation of her sexual quality.

The most conspicuous sign of the change of life is the change in and final cessation of the menses, but there are a number of other accompanying signs. Some of these are obvious to the woman herself, some are only known to medically trained men. With the former this chapter will deal, with the anatomical and functional changes in the womb and ovaries, which are associated with the symptoms, the chapter will not deal. It is sufficient to state that all the generative organs undergo atrophy.

The age at which the change of life sets in is various. In Northern Europe it usually sets in between the ages of forty and fifty, most commonly between forty-five and fifty. If it does not occur in this decade, it is more usual for it to begin after fifty than before forty. It rarely begins before thirty-five or after fifty-five.

The causes which tend to produce an early onset of the change of life are those, which, in general, have had a weakening effect upon the woman. Such are a succession of exhausting pregnancies, severe fever after childbirth, the death of a much loved husband, the troubles of unexpected poverty, a life of sterility, and the destruction of health by disease. Excessive stoutness is also associated with an early onset of the change of life. Sometimes the change may unexpectedly follow a pregnancy or miscarriage which has been accompanied by severe hæmorrhage ; it may even follow a pregnancy without hæmorrhage. Prolonged lactation stretching over three years is said sometimes to induce an early change of life. The change is usually late in its onset in women who have led healthy and successful sexual lives, who have been happily married, have had several children, whom they suckled, and who have enjoyed good health.

Menstruation may in rare cases cease at a comparatively early age and, after an interval of some years, may recommence. These rare cases are very peculiar, for pregnancy may actually occur in the interval of no menstruation. The recrudescence of menstruation may be due to other causes, and therefore is always a reason for asking medical advice.

The time occupied by the change of life is also various. Sudden and permanent cessation of menstruation, whether occurring at the usual date or not, is commonly consequent upon something abnormal, such as childbirth with severe hæmorrhage, an acute infective fever, or a great shock. It is, therefore, associated with some grave condition,

which in itself causes a woman to place herself in the hands of a medical man.

It is usual, of course, for the change of life to begin gradually and occupy many months in its fulfilment; indeed, some three years may be said to be the average period during which some symptoms of the change are felt by a woman. Sometimes it occupies as many as five years.

The prominent sign of the change is the alteration in the menstruation. This alteration may be summed up in the loss of regularity and usualness. The regular interval between the menses changes, and the regular amount lost at the menses also changes. It is usual for the length of time between the menses to increase. Instead of being twenty-eight days the interval becomes one of six weeks, ten weeks, six months, a year even, and then again shorter intervals. The irregularity is so great that in each woman it shows some peculiarity. In quantity the same irregularity and inconstancy is shown. Usually, the flow is scantier. In rare cases scantiness of flow without marked change in the intervals between the menses is seen. In other cases there is an increase of flow, which may amount to actual flooding, making the woman pale, and this may be followed by a scanty flow at the next period. The changes, generally, are so varied that detailed description is useless, every variety and combination of varieties occurring. A woman, therefore, need not be alarmed by any peculiarity she thinks is hers. I advise her, however, whatsoever the particular form of change that occurs, always to consult her doctor. To my mind, for a woman to

ask advice whensoever the regularity of her periods is changed, with the exceptions mentioned in the chapter upon menstruation, is a golden rule for the care of her health. There are some serious causes to changes in the character of the menstruation, and these serious causes screen themselves, as it were, behind natural causes, and are overlooked in this way. But if a woman follows this rule, they will not be overlooked, unless their nature is so obscure as to escape a medical man.

A great number of other changes occur with the change of life besides the alteration in the character of the menstruation. Indeed, the term change of life itself is a very apt and descriptive one. The change is a complete change. The whole constitution of the woman and the view of life she tends to take alters. Again, the effect of the change upon women is as variable as are their characters. Upon the healthy and maternally successful women the change of life does not, as a rule, lay a heavy hand. Indeed, it seems scarcely to affect them. They glide smoothly into the period of honourable age. Such, clearly, is the positive natural course. It should be possible to live without the infliction of critical years, and it is possible. It is, fortunately, not infrequent. But there is also the less happy picture. There are, unfortunately, a number of women who do suffer at this time. They feel the irregularities and eruptions of the transition period very markedly. They pass through a period of physiological anarchy. Consequently, the change of life has been called the "critical age." In its manifestations and diversities it is undoubtedly a

critical age, and it is even asserted that there is a greater mortality at this period than at other times of life. Other statisticians, on the other hand, contradict this assertion. But whatsoever figures may say, common experience shows us that the term "critical age" is thoroughly justified.

The kind of women who suffer most at the change of life are those who have suffered before the change of life sets in. A stable constitution can endure a period of anarchy, but a weakly one suffers proportionately. Consequently it is wise to enter into this period of life in the best state of health possible. At any time ill-health is troublesome and depressing, but one may say that ill-health during the change of life is ill-health multiplied by two or even four.

If one had to name the particular feature of the change of life, apart from, though associated with, the changes in menstruation, it is the anarchy, as it were, of the circulation of the blood and of the nervous system. Congestions and aberrations of the blood and nerves cause the various disagreeable symptoms from which women suffer at this time. Thus the circulating system is guilty of strange doings, which at other times might excite alarm. Not only is there a tendency to flooding, which itself is an unusual feature of the circulatory system, but there are apt to be hæmorrhages from other parts. Nose-bleeding is the commonest of these forms, and the bleeding, unless severe, is a welcome relief to a full-blooded woman. It is interesting to note that the end of menstruation not infrequently repeats the character of its onset in this and other symptoms, so that if nose-bleeding was a characteristic of the

period of the onset of menstruation, it is likely to be a character of the change of life. The same, indeed, may be said of indigestion, nervous conditions, or any other symptoms.

Another distressing irregularity of the circulatory system that may vex a woman at the change of life is palpitation. Following upon some exertion or emotion, or for no apparent reason, the heart begins to throb. The throbbing heart causes the greatest discomfort to a woman. She feels a rush of blood to the head, her head is hot with severe headache, her cheeks burn, she sees little black things dancing before her eyes, she hears a buzzing noise in her head, she is giddy, she thinks she is going to faint her pulse beats very rapidly, she feels she is going to choke, she is sure that there is something seriously wrong with her heart and she lives in dread that she will be visited by a stroke. But she can be assured that there is nothing seriously wrong with the heart. The change of life never causes heart disease, but it does cause these sudden attacks of palpitation, which make a woman think she has heart disease. She can, therefore, be assured that, though undoubtedly disagreeable to her, the palpitations only show a disturbance of the normal traffic of her life, and when order gets rehabilitated she will be no more troubled. Meanwhile a strict attention to the rules of hygiene previously stated, and those mentioned at the end of the chapter, with sometimes a suitable medicine from a medical man, will often work wonders for her. There is only one thing, however, she should not do. She should not take a glass of wine or spirits when she feels giddy and faint. It

will do her no good. As a fact it will make her headache and flushing worse. She may, however, feel mentally better for the time being, and therein lies the danger of these restorative nips for a condition like palpitation, which at times may be frequent.

A frequent circulatory sign associated with, but sometimes separated from, palpitations, is the rush of blood to the face causing the cheeks to burn. This symptom again shows the resemblance between the period of the onset and that of the cessation of menstruation. An elderly matron with grown-up children may be exasperated to find herself blushing like a young girl at some casual personal reference to herself, or at a remark which, at other times, she would scarcely notice. The rush of blood so easily brought about may as quickly leave her cheeks and pass to some other part of her body, making her back or abdomen feel suddenly warm. The flushings are sometimes associated with outbreaks of perspiration. Even when menstruation has ceased the flushings are still apt to recur and so prolong the period in which the symptoms of the change endure. They are apt to be exaggerated at times so that the woman feels she is going to be unwell, but she is not unwell. They are mitigated by a careful regard for the health and eventually pass away.

Other conditions, which are secondary to the disturbed womb and circulation, are an unreliability and disturbance of the digestive functions. There is a congestion of the lining membrane of the bowel, which may manifest itself in attacks of diarrhœa, sometimes alternating with constipation. There is a tendency for a woman to feel "liverish," with lack

of appetite and heavy feelings after meals, and she may even have slight jaundice. Piles are apt to bleed at this time of life, and, unless the bleeding is fevere, the loss of blood, as in nose bleeding, does a sull-blooded woman more good than harm. Heart-burn, eructations, nausea and flatulence are further signs of the lack of proper order in the digestive organs.

The irregularity of the blood supply may also show itself in the skin. Flushings and the freedom of perspiration have already been mentioned. Tingling, itching, and pricking sensations in the skin are not uncommon. Skin eruptions may appear at this time, and a troublesome eczema or acne arise. Both are wont to affect the head and face. Here one may also mention the tendency of hair to appear on the face. These obvious disfigurements are very trying to a woman. The hairs can be removed, but whilst the change of life is in progress the skin eruptions can only be controlled. They cannot, as a rule, be cured. Fortunately, they are wont to pass away as the change becomes completed.

A very troublesome skin disturbance is that which causes itching and irritation of the private parts. Frequent bathing with a lotion of carbolic acid, one part to eighty parts of cold water, followed by powdering with a powder composed of boracic acid one part, zinc oxide three parts, and starch six parts, or the use of ichthyol or coal-tar soap also stop the itching. If the trouble continues, a doctor can often better matters. Sometimes the itching is associated with the whites, which are frequent during the change and sometimes show a periodic character as if

they formed a substitute for the menses. For this a woman may try douching with boracic lotion or lead lotion followed by a careful drying and powdering of the parts.

The nervous changes are as frequent as the circulatory changes at this period. The nervous system becomes unreliable, just as the circulatory system becomes unreliable. Changes in the sensibility of the skin are frequent. Tender spots and areas appear and vanish. Backache, neuralgia, pain over the heart or over the stomach are all apt to visit women at the change of life, and show the general instability of the nerves. Irritability of temper is unfortunately common, and may be a great trial to the husband and children. Women are apt to lose their power of judgment, and their power to think clearly and to remember things. They become restless, hesitating, indecisive, moody, and depressed. Sometimes they sink into definite despondency. They fear they are going insane, just as at other times they fear they have heart disease. They sleep badly and are troubled by distressing dreams. A further evidence of the looking-glass resemblance of the cessation to the onset of menstruation is seen in the fact that these dreams are like young girls' dreams of love, enhanced by the knowledge women have acquired. There is, in fact, a recurrence in the desire for love, and in married women the need of intercourse, and, if they have had no children, the desire for children. Both of these latter symptoms may become excessive and pass as it were from the region of the will and sense of propriety. The pleasure in intercourse normally

continues for some years after the change of life has occurred, but at the time of the change of life it may become so strong as to cause women considerable distress. The desire for children sometimes so surpasses the will and judgment that women actually make themselves believe they are with child. I had a Welsh patient once, who, though nearly fifty years of age and childless, was sent to the Rotunda in Dublin by a doctor for delivery. Both he and she thought this precaution needful owing to her advanced age. On examining her I found her stomach protruded owing to her being stout and also owing to her arching her spine in a peculiar manner. Such cases are by no means rare, and such women even eventually go through an imitation of childbirth. The historic example of this strange fantasy is that of Mary I. of England.

Finally, a general change in the body and figure is more common at the change of life than no change at all, some women becoming stout, some thin.

The list of ailments from which women tend to suffer at the change of life is, it will have been seen, a long one. These ailments are vexatious, they are a decided trial both to the women and the people of their households, until the final favourable outcome into normal health is reached. Not infrequently women pass into a condition of health that they have not previously enjoyed. Lingering relics of the change of life may occasionally affect them even throughout the sixties. But such affections are only occasional and do not spoil the general enjoyment of health. Nevertheless, the years of the change of life are years punctuated with distress in

the great number of women. Only the women who have had happy marriages illuminated by health, love, respect, the gift of children whom they have suckled, can hope to pass through it without affliction. In these afflictions again one seems to see a retributive justice dealt out to generations that have not based their civilisation upon a wholesome and direct recognition of the physiological nature of men and women and its social regulation,—without which the social life of man must be a mockery and a sham,—namely, sex through marriage and the responsibilities and joys brought about by the procurement of children.

As a consequence all the recommendations and advice that medical men can give, by which the afflictions of the change of life are mitigated, are really recommendations of the observance of sound physiological life. The chief means by which these afflictions can be avoided are those already mentioned, namely, healthy marriage and healthy child-bearing and lactation. The life must be physiologically sound in order that its change may be also sound. Taking this for granted, one next has to consider what sort of hygiene and remedies may be adopted during the change of life itself.

One of the most useful remedies for the irritability, flushings, perspiration, insomnia, giddiness, and general circulatory and nervous discomforts, is the use of the hot bath. A woman should take such a daily bath at a temperature between 99° and 100° F., that is to say, a little above the temperature of the body, and stay in it for fifteen to twenty minutes, occasionally adding hot water to keep up the heat.

This bath brings the blood to the skin. For the time being the irregularity of the circulation meets its master. The blood is generally summoned to the surface. The skin becomes pink; and this disciplinary measure has a decidedly good effect for the rest of the twenty-four hours. The hot bath is decidedly better than the cold bath during the change of life. The vigour the cold bath gives the body is wont to be irregularly exhibited. It is order rather than stimulation that the body needs, and this order the hot bath brings. The skin after the hot bath should be well dried. If it shows roughness a free inunction of lanolin should be used. In the private parts it should be carefully soaped, dried and freely powdered daily, if the parts tend to be moist.

Daily exercise is equally important to women at this time. They must not consider themselves invalids, but as people whose physiology is for the time being disorderly. Daily exercise, such as has already been described in Chapter V., should be taken. But, as regards special features, it should be more regular than at other times of life. It should be a regular daily walk, and may be supplemented by some simple forms of gymnastics, such as are supplied by special apparatus. For women suffering from great irritability of the skin, the digestion and general feeling, general massage for half an hour a day is a very valuable remedy.

The bath, if taken in the evening, or general massage are also excellent means for gaining a refreshing sleep at times when sleep is troubled or interrupted by waking periods and distressing dreams. Abundant sleep is very valuable in helping

to preserve the order of the bodily processes, and, therefore, women at this time should adopt regular hours for going to bed and try to get in one hour of sleep before midnight. Breakfast in bed has advantages at periods of exacerbation of the symptoms, for not only does it bring an extra period of rest, but it also prevents the occupations of the day, at such times tending to be felt as worries, being entered into too early in the day.

The food at this time must be as simple and well-cooked as possible. Stimulating foods or foods that add to the amount of uric acid are certainly to be avoided, for the body responds erratically to stimulus and displays an exacerbation of symptoms and discomforts that otherwise are not particularly bothersome. Some foods as sweetbread, liver, kidneys or any glandular substance are unsuitable. Hot curries are unsuitable, Worcester, A1 and other sauces unsuitable, any heating spices or condiments unsuitable. In the same way the amount of meat should be moderated and reliance placed upon eggs, fish, fresh vegetables and meal foods. A full meat diet makes demands upon a woman. It is a stimulating and exciting diet, and, therefore, at this time is decidedly unwise. Foods which help to keep the action of the bowels in proper order are particularly valuable. The sense of fulness tells women in clear terms that the body requires relief, and, if the bowels are not properly open, this sense of fulness is aggravated. Fresh and stewed fruits, green vegetables, lettuce, cabbage, cauliflower and fresh garden products, good jams and honey should be constituents of the daily table. Fresh milk is a good food,

but should not be taken between the meals, for it destroys appetite.

In addition to these foods, which are beneficial in preventing constipation, an occasional purge of blue pill, a dose of salts, Apenta water or vegetable laxative will bring a woman great relief, for the free action of the bowels is very efficacious in relieving the general congestion of the body.

The liquids taken at this time should also be bland. I strongly advise women at the change of life to give up alcohol in all forms, or at the most to take only a little light wine. Alcohol tends to act like a trigger to a cap, and sets up an explosion, which by timely wisdom could be avoided. Strong tea, strong coffee, strong beef extracts are for similar reasons inadvisable. Water is the best drink; the mineral waters are also good.

It need hardly be said that intercourse is a cause of excitement and should be moderate at this time. If women find desire troublesome and its frequent satisfaction followed by depression, irritability and other signs of nervous instability, let them consult their doctor. Some local treatment may cure them.

Finally, I would recommend my readers to peruse the chapters in this book upon hygiene, and so order their days. But let them avoid becoming invalids. Occasional rest in bed is valuable, but to give up daily occupations is folly. Only let them avoid occupations that worry them or exhaust them. Let them be moderate at this period of physiological anarchy and their reward will consist in the moderation of its symptoms and a calmer passage to the healthy and stable years that follow it.

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