

MEDICAL
ASPECTS OF
MARRIAGE

by

John Ryan, M.B., B.S., F.R.C.S., F.I.C.S.,

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By the same Author

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JOHN RYAN M.B., B.S., F.R.C.S., F.I.C.S

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INTRODUCTION

Much of the reading in this pamphlet is elementary. Space and absence of diagrams of necessity limit details of anatomy and physiology. It is hoped, however, that this brief synopsis of lectures given by me will be of assistance to engaged and newly-married couples, who may not be able to attend Marriage Preparation Courses. Medical terminology, so far as possible, has been avoided, and if used, a simple explanation is given.

For those who would like to make a fuller study of the subjects discussed, there are of course many excellent books written on every aspect of marriage. If in these pages I have only referred to the two publications of which I have been author and co-author, it is because in these, the reader will find continuity and fuller exposition of an approach to marriage which I have briefly described in this pamphlet.

MARRIAGE

Men and women have a natural affinity for each other expressed in a desire to live together and to create. Marriage is a mutual agreement between two people to live together and to understand each other, for their spiritual, mental, and physical benefit, for the benefit of their children, and for the benefit of the community.

It is obvious that this agreement will have far-reaching effects, not only on husband and wife, but also in the society in which they live. Every marriage is of interest to the community. Failure in marriage has not only its effects in the home and family life, but also on the stability of the nation.

It is not within the scope of this book to deal with the spiritual side of marriage, but no reference to the medical side of this voluntary agreement would be complete without stressing the importance of the spiritual bond. Sex education will never be sufficient, or indeed justified, if it is taught as a remedy in itself for the many problems of married life. Only a strong spiritual background and recognition of the objects and obligations of the Sacrament of Marriage, will overcome some of the set-backs (if they should occur) in married life. These reverses are bound to occur, as we are human and prone to make mistakes. Particular care must be taken in the case of mixed marriages, to explain to the non-Catholic partner the obligations he or she is undertaking by marrying a Catholic. It must not be thought that mixed marriages always go wrong; mixed marriages can be and often are successful, provided both understand clearly the obligations of Catholic marriage.

THE FIRST PRINCIPLE

You will note that I will be stressing the word "understanding" in discussing physical relationship between man and wife, for in this word lies the real meaning of successful physical marriage. I want to avoid, as far as possible, the words "sex intercourse" as I think it is an ugly phrase and too confined in its meaning in comparison with the term "physical relationship".

First and foremost, it must be recognised that besides differences in anatomy and physiology in man and woman, there is usually a wide difference in their sex reactions and sex urge; particularly is the latter true in the early days of marriage. The man must realise that on reaching maturity, his sex impulses are fully developed—he is capable not only of sex relationship but also of experiencing the natural pleasure of sex. Not so in most women—do not mistake in courtship days signs of emotionalism in the woman as sex urge. Remember that it may be some time after marriage that her normal sex urge is known to her, though man knows it at maturity. Your understanding of this fact will influence your married life. In man, understanding will call for gentleness in your sex approach, self-sacrifice in your sex urge, showing your love for your partner in your thoughtfulness of her feelings. It is man's privilege to guide his bride gradually, with loving consideration, in the development of her sex consciousness, and be rewarded by her life-long respect, which will stand him in good stead throughout his married life. You will then have succeeded in achieving an understanding of the first principle of marriage "mutual respect and understanding".

And now a word to women on this first principle: Understand your husband is sexually mature. Show your appreciation and confidence in him, when he seeks to help and guide you through the early months of married life. Never permit the idea of your giving in against your will to enter your sex relationship, but only thoughts of trust and love. The first year of marriage is most important, and misunderstandings on sex relationship at this time may have disastrous effects throughout your married life.

THE SECOND PRINCIPLE

The second principle is that husband and wife understand the meaning of the words "mutual desire". There is no place in sex relationship for the unwilling or frightened state of mind. If you have followed the first

principle correctly and have been perfectly frank with each other, your relationship has NOW reached the second stage. YOU will see that physical union, the result of sexual desire of mind and body is a complex function. Nature prepares both parties for the act and the preparation of the genitalia for the act of coitus begins in the brain itself. The desire to consummate marriage starts a complicated mechanism in the human body to prepare the sex organs for their part. As human beings we have the will-power to start or slow down this process. The mechanism is under our control. Sex relationship should only occur when both parties are controlling their actions. Sex relationship is broken down by one party forcing his or her OWN desires, and is wrong physically, anatomically, and psychologically. There is little to distinguish this sort of sex expression by one party from the sex behaviour of animals. Married life cannot survive on animal instincts. This means that your sex relationship must be governed by a spirit of self-sacrifice and should never be brought down to the level of beasts. In other words, it must only occur in the strict understanding of what is meant by the words "mutual desire". It is quite obvious that the control of this relationship, if it is to avoid selfishness* will mean an understanding of the feelings of each party by the other, and the will of each to sacrifice his or her feelings to the aim of "mutual desire". Briefly, sex relationship should take place only when mutually desired.

THE THIRD PRINCIPLE

This is a real understanding and strict observance of the principle of "chastity in marriage". It is remarkable that anyone should think that the need for chastity before marriage is more than that for chastity in marriage. Is it because marriage chastity is more difficult or is it because there are so many who fail to understand its meaning, though they would be shocked at any lack of chastity before marriage? Beware of the false friend who seeks to laugh away your troubles, if there should be troubles in

your sex relationship, particularly by making fun of marriage chastity. Such advice, if accepted, will lead to a fall, morally, mentally and physically. If you feel you need advice, go to those who are trained to give it. Realise your troubles have been experienced by others and put aside any nervousness, or perhaps shyness, and place them before a qualified adviser. Speaking from a professional point of view, I have always been amazed how small and easily curable problems in physical relationship between man and wife, are allowed to become unnecessarily difficult, because of the ignorance of the fundamental principles of marriage.

It is the opinion of many lawyers that a large number of people in the divorce courts have reached their unhappy state of mind primarily because of misunderstandings on sex relationship. The outward signs may show themselves in accusations of cruelty or desertion, where the hidden and true cause of the breakdown of the marriage is really lack of understanding and adjustment of sex relationship. This may be due to the wilful disregard of the principles of marriage, or, as I have suggested, to ignorance, due to lack of education and preparation for marriage.

I hope the understanding of these three principles may help you to reach the purpose of this discussion, namely, that your marriage may benefit you spiritually, mentally and physically.

ANATOMY AND PHYSIOLOGY

When we study the human body and the manner in which it functions, we are studying what are known as anatomy and physiology. It is quite clear that only a very short account can be given here of these vast subjects; it will be confined to the organs of the human body that are used in creation and sex relationship. As far as possible, medical words will be avoided. Some general information will, I hope, help you to understand this subject.

First, let us think how creation happens. For this to take place in mankind a male cell (spermatozoon) joins a female

cell (the ovum) inside the body of the female. Now the ova are stored in the ovaries, which are two in number. The immature ova themselves number many thousands. Some 350 to 450 ripen in the course of a woman's reproductive life. They begin to ripen or become mature when a girl reaches the age of 12 to 14 years, and at this time certain changes inside the body occur. Briefly they are as follows. —

Once every month an ovum becomes "ripe", and breaks through the surface of the ovary into the abdominal cavity. It moves into one of two tubes which have one opening in the abdominal cavity and the other into the "womb", known medically as the uterus. It is assisted into the tube by growths at the free end of the tube which are like tentacles and which enclose and gather up the cell. Having entered the tube, the ovum may or may not be "fertilised" in this position. Two things can therefore happen (a) it may become fertilised as a result of sex intercourse or (b) it may die. It is important to realise that if the cell is not fertilised within 48 hours of its breaking through the ovary (some medical authorities believe the life of the ovum is very much shorter), its death will certainly take place. Supposing that it is not fertilised, what happens? During the period when the ovum was preparing to erupt from the ovary, there have been changes taking place in the lining membrane of the womb itself. These changes have been that the membrane has become thickened, has developed an increased blood supply and has thrown itself into folds. Why has this been done? The purpose is that, if the ovum should become fertilised, by the time it reaches the womb a bed has been prepared for it in the folds of the membrane, so that it may lie in these folds, attach itself and obtain nourishment from it. So pregnancy begins.

If fertilisation has not taken place, this preparation has been all in vain, as there is no object in preparing for a dead ovum. What then is the result? The womb later gets rid of much of the membrane, with resultant haemorrhage.

together with the dead ovum, and this process is known in the woman as "menstruation" or the "period". It occurs in the non-pregnant woman in normal health, once each month, during her reproductive life.

About the age of 45 the ovary is no longer able to supply ripe ova, menstruation gradually or abruptly ceases, and there occurs what is commonly called the "change of life". I have referred rather fully to menstruation because accompanying these physical changes there are psychological phases which may have quite an effect on the woman at these times, and particularly when the change of life comes along. You will therefore see that the man must realise that he must give sympathetic consideration to any physical or mental results which may occur at the time of menstruation and change of life.

In the ovary itself there is also a second type of cell which secretes a chemical substance which is taken directly into the blood stream. This substance is known as a "hormone", and is mainly responsible for the development of female characteristics of the human body.

The uterus, or womb, is a pear-shaped organ, roughly the size of a pear, and capable of being enlarged to 500 times its normal size during pregnancy, and shrinking back to its normal size in a few weeks after the birth of the child. I have mentioned that at one end of this organ there are the two tubes, one on either side, leading from the ovary to the womb itself. At the other end is an opening which is normally closed. It only opens at the time of menstruation or at birth. This end of the uterus leads to a canal about 4" long, known as the vagina. It is lined like every other cavity in the human body with a special type of membrane and leads to the exterior, and to the outer genital organs of the woman. At the entrance of the vagina are glands which secrete a lubricating fluid essential for coitus. The opening of the canal at the outside is protected by two folds called the labia, two on each side, and normally the walls of the canal and the folds are in apposition. There is also between the folds protecting the

entrance, the opening of a tube (the urethra) which leads to the bladder. In addition between the folds there is the highly sensitive gland which is known as the clitoris. In the virgin there is, close to the entrance to the vagina, a fold which is called the hymen and which has a small opening. This opening is enlarged on first coitus, commonly referred to as breaking the hymen. There may be slight flow of blood at this time as a result, and some slight discomfort.

Now let us turn to the anatomy and physiology of the man. Just as the woman has two ovaries, so the man has two testes. For quite a time before the male child is born these glands are within the abdominal cavity just as the ovaries are permanently inside the woman. Before the birth of the child, however, the testes leave the abdominal cavity and come down through a canal in the groin. They become external organs surrounded by a sack which is known as the scrotum. They constitute one of the visible outer genitalia of the man. The testes themselves produce the male cells or sperms and can produce enormous numbers of them, in fact millions. Moreover the testes are able to produce mature cells more or less throughout the whole of the male adult life contrasting with the woman whose power to produce mature ova generally ceases about the age of 45. In the dropping of the testes into the scrotum they remain attached to the inside organs of the male by a cord called the spermatic cord. This contains the duct or canal called the vas deferens to which I will refer later. In the woman the ova depend for their movement along the tube to the womb on small cilia in the wall of the tube. In the man, the sperm cells themselves have the power of movement exercised by a "tail", provided the fluid in which they move is suitable. This fluid is, in part, present in the vas deferens so that this canal serves in the first place as another storing place for the sperm cells and secondly as a channel by which the sperm can, in the act of coitus, gain access to the vagina of the female. In fact, these two channels meet together inside the man at the base of the bladder. Also around this base there is a gland

called the "prostate" which amongst other things stores a second fluid which, with the vas deferens fluid, makes up what is known as the seminal fluid. This seminal fluid together with the sperm in it are conveyed to the female in the act of coitus. It is quite clear that there must be some way of transferring the sperm stored together with the seminal fluid from the inside of the man to the vagina of the woman. In fact, there is another tube leading from the base of the bladder to the exterior, which is partially internal and partially external. The external portion of the tube, surrounded by soft tissues, makes up the external organ or "penis" of the man. The soft tissues around the external tube have very special characteristics, the most important of which are

- (a) They are very loose in texture and under influence of stimuli from the brain, may receive a much increased blood supply, and
- (b) the nerve endings as a result of the engorgement by blood, become much more sensitive.

The result of the engorgement is that the organ can become considerably bigger; a state of "erection" occurs; and in this condition it is able in the act of coitus to pass the seminal fluid and sperms to the vagina of the woman. Though only one ovum as a rule in the female can be fertilised or is ready to be fertilised, at any one time in the menstrual cycle, the actual sperm passed for this purpose in one act of coitus number approximately 60-150 million; yet only one sperm is used for the actual fertilisation. Moreover, the testes are able to restore the spent cells within 24 hours, in the fertile man.

The above is only a brief outline of the anatomy and physiology of the reproductive organs of man and woman, and I must point out that I have made no reference at all to the higher control, namely, the brain; nor have I referred to the important part played by what are known as the "ductless glands" in sex relationship. The reader will realise that this is only a summary and a fuller

explanation can only be given with the help of diagrams, and further detailed instruction.

Before concluding what I have to say on the subject of anatomy and physiology there is only one other point to which I want to draw your attention: From the moment we begin life as an embryo, and cells multiply for the formation of our body, there is also developed a special set of cells called the "germinal cells", which will be set aside and used when we reach maturity. These cells have certain elements of our father and our mother, and, when we mature, we will pass these elements to our children. Therefore we are not only the children of our parents, but we are also the children of our grandparents and our great-grandparents. You will thus see that though our powers to create do not go beyond our own span of life, as custodians of the germinal cells, we are immortal. You will appreciate the significance of this fact when we are dealing with hereditary diseases.

NON-CONSUMMATION

It sometimes happens in marriage that normal intercourse has not taken place and therefore one of the purposes of marriage has not been fulfilled. Should this state continue, it may be a reason for a decree of nullity both in civil and ecclesiastical law. If the fault lies in the man it is generally due to "impotence" or inability to carry out the sex act, and in a very large percentage of cases it is due to psychological reasons. For some considerable time the incidence of impotence has been increasing, or at least, doctors have seen more of it, and it is possible that the reason for this increase lies in the conditions of life as a result of two major wars in half a century. If the cause for non-consummation is on the woman's side it is more often than not a physical cause and less often psychological. The most common reasons in the woman for non-consummation are overdevelopment or too great sensitivity of the hymen, or roughness and lack of consideration on the part of the husband, making intercourse painful and

difficult. Of course, there can be more serious abnormalities in the woman, but whatever the cause is, it is essential that the couple should consult their doctor, because in addition to the physical results there are invariably very disturbing psychological effects as a result of non-consummation. A delay in obtaining advice always makes matters worse. Fortunately the cause is generally simple and easily put right, but the effect may be of serious consequence, if the couple neglect to seek advice.

STERILITY

A marriage is deemed to be sterile in this country if there is no offspring after normal relationship has taken place more or less regularly for two years, and birth control in any form has not been used. In America the time interval is considered to be less—sterile marriage is classified as such after twelve months.

Sterility may be temporary or permanent. The cause may be trivial or serious and it is essentially a condition where a doctor should be consulted.

Inability to have children has always been regarded as a great misfortune throughout the ages, while it is exceptional that children are considered anything but a blessing. Until the last fifty years it was thought that in most cases of sterility the woman was to blame, but it is now thought that at least in 50 % of sterile marriages the fault lies with the husband, at least in part, if not entirely. In ancient cultures such as the Chinese it was known, however, that husbands were often sterile, and the cure of sterile marriage was often directed to the husband instead of the wife.

There is more often than not, more than one cause for sterile marriage. In many cases we are not able to ascertain the cause at all. Climatic conditions, what we eat and drink, have all been thought to have some relation to sterility with slender scientific justification. Even the colour of the skin was thought to have some relation to fertility; thus we read that the Mahomedan wise man chose a

woman whose skin was brown, for he believed that she would be more fertile than a fair skinned woman. Hypocrates referred to adiposity as a cause of sterility; a host of other contributory causes have been partially proved or disproved. Physical fitness for instance does not necessarily imply fertility; unfortunately many of the physically unfit, such as the active tubercular, often are very fertile. Athletes and the physically fit may, by comparison, be relatively barren. It is not uncommon to see trained athletes temporarily sub-fertile or sterile, but when their training ceases, their fertility increases.

It would be also true to say that muscular development in a woman is not necessarily advantageous to child-birth and may not even be advantageous from the point of view of fertility. Much research work has been done with little conclusive results to find out the effect on the fertility of a community of such things as under-nourishment, unhygienic conditions, extremes of climate, and the effects of certain types of diet. One would have thought that with the spread of western civilisation and the consequent improvement of living conditions, fertility expressed in terms of larger families would increase; in fact the opposite has taken place and indeed the increase of large families is generally found in the less civilised and often in inferior hygienic conditions.

BIRTH CONTROL

the limitation of a family may be

- (1) Unintentional
- (2) Intentional

Unintentional: This is covered by what I have said about sterility. Often the public are overwhelmed by the constant propaganda in favour of means of limiting the size of the family, and it is seldom recognised how prevalent is barren marriage. It is estimated that one marriage in every 10 in the U.S.A. is barren. The same is probably true in this country.

Intentional. There are many forms of intentional birth

control, but I will only deal with (a) the most widely used i.e. contraception and (b) the use of the safe period.

(a) Contraception:

You are all aware of the Catholic teaching on birth control by contraception, and it does not call for any comment from me. My approach must be entirely from the medical viewpoint.

Contraception means using mechanical or chemical means or both to prevent fertilisation. It may interest you to have the opinion of many gynaecologists in this country on the medical aspects of contraception. Briefly it is as follows:

- (1) No form of contraception is entirely safe for the purpose for which it is used.
- (2) Many medical authorities support the view that in some cases the injurious effects of the use of contraception are demonstrable psychologically and physically.
- (3) Many who use contraceptives and have no moral scruples about their use, would willingly give up this practice if they were aware of alternative means of family limitation, other than abstinence.
- (4) Many doctors both here and in America hold that quite a large number of sterile marriages may be the result of the use of contraceptives in early married life. This opinion I think, is gaining much ground.

There is some clinical evidence to show that in the seminal fluid of the man there is an unspecified or unknown substance which is absorbed in the act of coitus into the blood stream of the woman and has an advantageous effect upon her general well being. The popular form of male contraception (the condom) eliminates the possible absorption of this substance.

In chemical contraception the intention is to destroy the sperm cell, but there is also a good deal of evidence to

show that the same chemicals can injure the lining of the vagina and particularly change the natural flora.

(b) The Safe period

It is quite impossible for me to deal fully here with this complex subject and I will confine my remarks to a few generalities and observations. First of all it is necessary to realise what the term means. It means that in every married woman's cycle there is a period in which she is most unlikely to become pregnant and a period in which the chances of her conceiving after intercourse are very great. Strictly speaking there is no such thing as the "safe" period; and indeed unless the reproductive organs of the woman have been removed or unless the husband is absolutely sterile, it is possible under certain circumstances, however improbable, that conception as a result of coitus may occur at any time in the cycle. This remark applies even if any form of contraception is used. Secondly, the use of the safe period is a form of family limitation but not a form of contraception. Contraception, as already stated, is the name applied to a mechanical and chemical means to stop the spermatozoon from reaching the ovum, and is a direct interference with the normal act of intercourse. In the use of the safe period there is no interference whatever in the normal coital act between husband and wife.

From what I have already said you will remember certain facts about the life of the ovum. You will remember that the ovum can be fertilised only within a very short time after rupturing through the ovary. That being so, for conception to occur, coitus will have to take place a short time before, or during the life of the ovum; a short time before because (depending on the fertility of the husband) the spermatozoa may live inside the female for some hours after coitus; indeed it has been estimated up to 72 hours. In view of the above remarks there must be a considerable number of days within a woman's cycle when pregnancy following intercourse is very unlikely to occur. These days are known as the "safe-period".

It is known that certain conditions affect the time of rupture of the ovum from the ovary (what is known as ovulation) and these conditions must be taken into account when advice on the safe period is given. Obviously the safe period may differ in each person and in certain circumstances vary in the same person.

For those who wish to study more fully the spiritual directives governing the use of the safe period, reference should be made to Pope Pius XII's Address to Members of the Congress of the Italian Association of Catholic Midwives 9th October, 1951 and to the Address of His Holiness to the Family Front on the 26th November 1951.

A summary of the theological and medical aspects may be obtained from "Marriage a Medical and Sacramental Study" by Keenan and Ryan (Sheed & Ward 1955) and the practical medical ways of estimating the safe and unsafe period are dealt with fully in "Family Limitation" by John Ryan (Sheed & Ward 1955).

I must impress upon you that anybody who wants advice on the safe period should consult a doctor specially trained to give it. I must also stress that the use of the safe period is governed by both spiritual and medical conditions and these should be enquired into by those considering its use.

HEREDITARY DISEASES AND PREDISPOSITIONS

in general, hereditary diseases can be divided into two main categories

- (1) Those which are apparent
- (2) Those which are hidden

This means that certain conditions in one or other of the partners contemplating marriage are quite apparent to themselves and almost anyone, whereas the hidden conditions are hidden to the partners concerned. Only after an exhaustive examination by a doctor, with a know-

ledge of the complete history of their forefathers, are they brought to light.

Let us first take the "apparent" hereditary diseases. We can say that where a person with an apparent hereditary disease marries one who is normal, then the chances of any children being normal or abnormal are about equal. If both parents have an apparent factor, the chances of their having a normal child are small. When you weigh up the risks you must take into account the good characteristics of the normal partner, and the type of apparent disease in the abnormal one.

Now consider the hidden factor. This factor may be transmitted through quite a number of generations, and never show itself until the man or woman marries someone else with a hidden factor. It then comes out in the children. In some countries, as in certain parts of Switzerland, where you get a close inter-marriage in the communities, it is not uncommon for this hidden factor to manifest itself periodically.

Another example is in the marriage of first cousins. The actual danger of first cousins marrying is not that they are first cousins, but in the fact that there may be a hidden hereditary factor in both which will come out in their children because both sides of the family possess the hidden hereditary factor. If Mr. A. married Miss B. all would be well, although Mr. A. may have a hidden hereditary factor, but if he married his first cousin, who also had that hidden hereditary factor, there may be an apparent manifestation in their children.

Those of us who wish to marry may be divided medically into three types: (1) those who are apparently healthy, (2) those with defects which are not particularly serious from the hereditary point of view and (3) those with defects which are obviously very serious.

The serious hereditary diseases are:

- | | |
|--------------|----------------------------|
| (1) Syphilis | (4) Mental deficiency |
| (2) Epilepsy | (5) Deaf Mutism |
| (3) Insanity | (6) Haemophilia (Bleeders) |

Among the less serious diseases from the point of view of marriage there are heart disease, tuberculosis, diabetes, congenital deafness (or early deafness running in a family), goitre, asthma, certain skin diseases and cancer. We know little as yet about the last named from the hereditary point of view because we do not know the fundamental cause.

When we are thinking about the serious hereditary diseases that may be present during pregnancy, it is well to remember that the seriousness of the condition is the actual disease, and that pregnancy is just a complication. The main object as far as treatment is concerned is the treatment of the disease which existed before pregnancy.

Syphilis:

I want as far as possible to avoid all the complicated aspects of this disease, and only make a few general remarks which may be helpful to you. The incidence of the disease varies in different countries, and varies considerably in its severity. There are certain European countries, for instance, which have had a high incidence of syphilis for many generations where families have become practically immune to its effects in their own bodies. But I must emphasise that should a relatively immune person in certain phases of syphilis marry someone free from the disease, and it be transmitted, it becomes very active, and far more destructive to the person to whom it is transferred than it was to the person who originally had it and passed it on. It is perhaps of interest to you to note that in America the disease is far more common amongst negroes than it is amongst white women.

Another point is that the disease may affect men and women differently in its visible signs. It is more obvious in the early stages in a man than in a woman. It is possible for a woman to have syphilis and show no signs whatever to her observation. This is important because you will see that a woman might innocently enter marriage without having the slightest idea that she had any syphilitic infec-

tion. But in the man the early effects of this disease can usually be seen, and it would be most unlikely that he could have contracted the disease without being aware of it.

Now there were two beliefs about syphilis which were held for some time. The first is that a father can have a syphilitic child without the mother having syphilis (Colies Law). This is wrong. The second belief was that a syphilitic woman can have a healthy child (Profetas Law). This belief is equally wrong. The fact that this latter theory was believed for some time, was because on many occasions an infected woman had to all intents and purposes given birth to a healthy child. But in point of fact the signs of this disease always become apparent some time after birth. A word of warning here. This apparently healthy mother can breast-feed her syphilitic child with immunity; but the same child breast-fed by another woman would transmit the disease to that woman. You may ask, what are the chances of anyone who has had this infection transmitting it? Here again, one must adopt a general rule. The "infectivity" or risk of transmission is at its highest from the first to the fifth year of the infection, and from the sixth year onwards the chances of transmission become steadily less. Do not misunderstand this statement. We are only speaking of transmission, but the disease itself in the person affected may become steadily worse. Now it is obvious that a woman may have contracted this disease either before she married, or at the time of conception of her child, or some time after pregnancy has begun. In the first case, it is probable that she will give birth to a dead or macerated child round about the 7th or 8th month, or, less frequently, the child will be born healthy, but will develop signs of the disease afterwards. In the second case, the child will always be born with signs of the disease and is usually premature. In the third case, if at the time of marriage the mother was quite healthy, and did not contract the disease until some five months after pregnancy had started, then she may possibly

give birth to a perfectly normal child. It is to be noted that pregnant women respond more readily to anti-syphilitic treatment than non-pregnant women. Generally it is accepted that if vigorous anti-syphilitic treatment is undertaken in the early months of pregnancy a healthy baby will be born in 90% of cases, and again that the lying-in period after childbirth is fraught with greater risks than in a normal woman, in the untreated cases; lastly that syphilitic women should never nurse a healthy child because through lactation it may be transmitted to the child.

The last question you may ask is, when is it possible or permissible, for married people, one of whom has contracted this disease during married life to renew conjugal relationship? A good guiding principle is that if the infected person has had a full year's treatment, plus a full year's observation, with, as far as is known, all negative blood reactions, at the end of that time, it is reasonably safe to allow resumption of normal sex relationship. This rule is generally sound to follow even though with the advent of the antibiotics (penicillin etc.) early treatment of this disease brings it more quickly under control.

Epilepsy:

This disease may be (a) hereditary or (b) acquired. When it is acquired, it is generally as a result of some injury to the brain, such as concussion, or because of some infectious condition that has affected the brain e.g. meningitis; it may also occur as a result of difficult childbirth. The first question that will arise is what is the risk of transmission to offspring? In general, the risk of transmission in the hereditary type is roughly 10%. The first born is more likely to be affected; females more often than males. Children of epileptics who have reached the age of 25 and are free from fits very seldom develop the condition but it is possible for them to transmit it though the risk is much smaller, than if they were affected themselves. Acquired epilepsy is not transmitted but if it occurs in a

person whose near relatives have a history indicating a family predisposition to the condition, there is a risk though admittedly small, of transmitting the disease to offspring.

Insanity:

This is a very big subject. The history of the affected person and family history has to be studied most thoroughly, and not all specialists on mental diseases agree about the hereditary factor in all types of insanity, but there are some types of insanity in which there is no disagreement. The first is "split mind" or schizophrenia. The child of schizophrenic parents is nearly always mentally affected and even if normal should at all costs avoid marrying a person with even a suspicious mental family history. In mania and melancholia the tendency as in schizophrenia, is for it to reappear in the children, and the percentage of children affected is high. It is essential that where there has been a past history of some form of mania or melancholia in the parents or grandparents, a man or woman should be most careful to avoid marrying into a family where there is even the slightest suspicion of even a minor form of insanity or mental instability. The risk to children of temporarily stable manic or melancholic parents is the same as if the disease in the parents was still active. If you have a type of mental weakness which is believed to have been the result of some acute mental strain or worry, do not take it for granted that that is the only cause or that, having recovered, it is quite safe for you to enter marriage. In this type of case, it is essential that the person concerned should have medical advice. You can be sure that when two people propose getting married, and one has a history of a mental breakdown, it is advisable, no matter what the cause of the breakdown, that he or she should never link up with anyone who has the slightest suspicion of a mental family history behind them.

Mental Deficiency:

In general, you may say that it is inadvisable for near relatives of mental defectives to marry. This statement is made in general terms, as it will naturally depend on the degree, and the cause of the mental deficiency.

Deaf Mutism:

Not all cases are hereditary. Some are the result of such diseases as scarlet fever in children under three years of age. Let us assume that one partner is a deaf mute and the other partner is quite normal. In such a case the chances of a normal child are quite good. There is, however, this reservation, that even if the child is free from deaf mutism it has the tendency to carry the genes of deaf mutism during its life, and it has only got to link up with someone with the same genes for deaf mutism to appear in their children.

Whilst on this subject, I would like to mention "early deafness" or deafness coming on at a very early age in life. This is a family hereditary trait, and if both partners have it, the chances of their child carrying it on are great. But should one of the partners be perfectly normal, the chances of their offspring developing this annoying condition are extremely unlikely.

Haemophilia (Bleeding,

I do not intend to say much about this. Men are the only sufferers, but the woman carries the condition on. It is safe for the unaffected male member of a family to marry.

I will now refer briefly to some of the less serious diseases, that may have to be considered before the decision of marriage is taken.

Heart Diseases:

In general, people with heart disease can marry—heart disease itself is not transmitted, though there may be a predisposition in families for certain types of heart disease

to appear. It may be taken as a working rule that if the heart of the affected woman is compensated, that is to say, not failing before pregnancy, it is reasonably safe advice that the marriage should take place, although, admittedly, compensation sometimes does fail during pregnancy, even if compensated before.

Heart disease accounts for about five to eight per cent, of deaths in childbirth. It is also obvious that if childbirth for other reasons is likely to be difficult, it is not advisable to put extra strain upon an already weakened heart. Moreover it sometimes happens that the mother may go through pregnancy and labour without serious complications; unexpectedly and without warning during the lying-in period, serious symptoms of compensatory failure of the heart may occur.

Tuberculosis:

There is a wide difference of opinion in the medical profession on tubercular disease in relation to pregnancy and childbirth. If tuberculosis is latent, that is to say, not active in the mother when she marries, it is reasonably safe to advise her that she may carry on with the marriage and having children. If by misfortune a miscarriage should take place in a tubercular mother, particularly in the first three months of pregnancy, this is a far more serious event so far as the mother's health is concerned than in the non-tubercular patient.

There is no evidence to show that tuberculosis is conveyed hereditarily from the mother to the child, although admittedly in rare cases we do see tubercular afterbirth. But as a general rule tuberculosis is transmitted to the child by direct contact from the mother, after parturition, and not during pregnancy. You might ask what is the outlook for the child of a tubercular mother; the child who has not contracted contact tuberculosis. It is the general opinion of the profession that a high proportion (approximately 20%) of children born of a tubercular mother do not live longer than 20 years even if free of

the disease. The reason for this is that the child has inherited an unsound constitution, and easily falls victim to the diseases of childhood.

In general it may be said that women with active tuberculosis should not marry both from the point of view of their own health and the risk of transmission to their children. Men with active tuberculosis should not marry because of the danger of transmission to their wives and indirectly to the children; and again even though the wife is not affected, there is still the risk of the child being infected by direct contact with its father.

Diabetes:

This disease has a strong tendency to run through certain families, especially those of Jewish origin. We do not know how it is transmitted, but we do know that a diabetic mother is more likely (50 times more) to have a complicated pregnancy. We also know that if both parents are affected, the risk of transmission is greater. It is unlikely that diabetes will actually be transmitted to children, particularly if the father is not affected. With modern therapy the mother should come through her pregnancy with reasonable safety. Nevertheless even with insulin therapy where the diabetic seems to be controlled, often there is still a risk to both mother and child. One thing is certain, diabetic women should not have many pregnancies. It must also be recognised that there is a greater percentage of abnormal children born of diabetic mothers than of normal mothers, and again the normal child has a tendency to be overweight. The chances of a diabetic mother being able to feed her child are appreciably less; in other words children of diabetic mothers generally have to be artificially fed.

Cancer:

One is often asked the question. "I propose marrying someone many of whose family have died of cancer. What is the chance of it being transmitted to our children?"

We cannot give an answer to this question in our present state of knowledge, but it is true that there seems to be some hereditary tendency that passes through some families which are more than usually affected by this disease. We can only say that we have no evidence that cancer is transmitted, but there is also evidence that certain families seem more likely to be affected.

Summarised, we may say that there appears to be a pre-disposition in this disease in some families, but no evidence that the disease itself is transmitted from parent to child.

Asthma.

There is no doubt whatever that in some families there is some hereditary weakness which may show itself in the form of asthma, and it is also true that this may reappear in their offspring, but one could not say that people affected by this disease should not marry. It is inconvenient, but it can be treated, and it is not a contra-indication to marriage.

General considerations.

I have given you a brief outline of the serious hereditary diseases and the more common predispositions that may affect your children, directly or indirectly. Do not rely on the sparse information that I have given you as medical advice as to whether you should marry or not. Should you think that any of these diseases exist in yourselves or your parents, you should seek further medical advice.

One result of this short summary of hereditary and pre-disposing diseases that will or may affect your children, should be that you may realise the importance of both the man and the woman who propose marriage having a thorough medical examination before making the final decision. This examination is not necessary in all cases, but it is necessary if one or other party suspects that there is any suspicion of serious hereditary disease on either side of the family.

MARRIAGE AND THE COMMUNITY

It is quite obvious that it is in the interest of a nation that marriage should be a success, both because of the effect on its social life and to ensure reproduction. Moreover, it is in the interest of the governing body of the community that the surroundings of family life should be such that health should be on a high level, and that the conditions under which the family live should ensure happiness and prosperity for themselves and particularly their children. This is the basis of what is called the Welfare state. The method by which a Government attempts to secure the above is always open to question. The aim may be good, the method of achieving the aim may be wrong.

Earlier on I mentioned the effects which social conditions may have on the fertility of a race. There is no evidence to show that civilisation with its apparent material advantages has increased potential fertility. In fact there is a good deal of evidence to show that a nation whose existence is threatened, reproduces itself faster than when conditions are stable. In other words, an overdose of civilisation may threaten to exterminate a race; and this has been shown frequently in past history. Equally, of course, certain adverse conditions such as extreme starvation have the same effect on potential fertility as an overdose of civilisation.

The first question which will occur to you is: what are the influences that cause decreased fertility in any community? As a rule there is not one single cause but a combination of many. There may be a major cause but it is only major in comparison with the minor causes. In general, the causes may be medical, social or economic or a combination of all three.

If we study the proportion of men to women in the early years of life, we find that it is roughly 1,063 males to 1,000 females, and this proportion remains more or less the same up to 15 years of age. Thereafter the span of life

of the male is shorter than that of the female, and particularly has this been so in the last fifty years. There are many reasons for this, and consequent upon this fact there is the ever-increasing tendency for personal wealth to be amassed by the older women.

The fertility of a community in terms of reproduction is dependent on:

- (1) The number of women between the fertile ages of 16 and 45,
- (2) the marriage rate between those ages, which to some extent will depend upon the number of eligible men (difficult to estimate) and
- (3) the potential fertility at these times of both men and women.

You will therefore realise that figures giving the population of a country are no guide whatever as to the probable future population of that country. The main considerations are as stated above. It is obvious therefore that if there is an abnormally high percentage of women over the age of 45 in any country, its future is in danger. On the financial side the more old people there are in a country, the more the young people must work to keep them; and automatically it means that taxation must fall heavier on the working section of the community. You will appreciate from these remarks that the question of children, therefore, is not alone one of interest to the particular parents concerned, but is of great interest to the nation as a whole, even if that nation has only got a selfish interest. It is, therefore, paradoxical that the policy of any State should on the one hand encourage large families by giving grants for the upkeep of the children, and on the other hand not only supply means, but encourage mothers to limit their families by contraceptive methods. From the medical point of view one of the problems arising in Britain at present is the ever-falling average size of families. Its present figure is approximately 2.4 per family. An even greater

problem is the alarming number of "one-child" marriages. This had been considered by many to be intentional as a result of financial conditions, housing shortage, as well as the selfishness of the parents concerned. In point of fact, whilst for some parents this may be true, the medical fact remains that a very high percentage of "one child marriages" is unintentional. There is also the fact that 10 marriages in every 100 are unintentionally sterile which is a serious state of affairs.

There is a vast amount of research taking place on the medical, social and economic aspects of childless marriage, one child marriages and indeed the size of the family generally. The trend of opinion is to consider the size of the family primarily the concern of the State rather than the prerogative of the parents. It is argued that if aid is accepted from the State to raise the family, then the State has at least the right to endeavour to influence the size of the family! In other words, more State aid means greater State control!

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