MISTAKES ABOUT HEALTH.

LECTURE TO THE WORKING CLASSES,

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PROFESSOR CORFIELD said: Mr. Mayor, ladies, and gentlemen, I propose in the short time that is allotted to me to speak to you about mistakes made during our lives concerning our health. A pessimist philosopher has said "Youth is a folly, middle age is a mistake, and old age is a regret." Let us hope that that at any rate is not always true, and let us try by seeing how we may best keep our health, that most valuable possession we have—let us try to prevent that saying from being true in our case.

We will then take shortly the different periods of life, and see the mistakes that are either made for us or that we make for ourselves during those periods. First, there is the period of infancy. Now, the first great danger to a young child is from the external cold, but as a rule mothers are too careful of their young children to expose them too much as babies to the external cold, so I pass over that for the present, though it would be a great danger to infants if they were exposed to it, and I will come back to it in the next stage. After that—after exposure to cold—the great danger to infants is from improper feeding. There is only one food which is fitting for the nurture of an infant—the food provided for it by nature, which contains all the substances that are requisite to nourish a young animal mixed in their proper proportions. That food of course is milk. Instead of milk or milk and water all sorts of things are given as you know to young infants. In the first place a large number of mothers give their young infants tea. It has been shown perfectly clearly by investigations which have been made into the lives of young children in the colliery districts, that the growth of infants and young children is stunted to a most remarkable extent by the practice which their mothers have of giving them tea instead of milk. Another thing, as I daresay many of you know, is that all sorts of preparations and

starches are given to infants very often without any milk ; for instance, boiled bread. Boiled bread is a very common thing indeed for mothers to give to young children. Now, until infants begin to cut their teeth, and until—which happens at the same time—until the salivary glands, the glands which secrete saliva, which is the substance in the body that digests starch, begin to act, until that is the case, these young children can no more digest boiled bread than I can digest this pocket-handkerchief. I might mention a great number of other things that are given to young infants instead of their proper food ; but they are well known to you, and it is not necessary.

Well, the results of giving to young infants foods that they cannot digest, the results are disorders of the digestive apparatus, sickness, vomiting, diarrhoea and so on, and death—death in a large number of instances.

The disease which carries off more young infants than any other, more than zymotics or acute fevers, is the summer diarrhoea of infancy, and one of the most important causes of it is unquestionably improper feeding, feeding with articles not containing milk, with articles that are not milk, also, when milk or water is used as food, feeding with unclean feeding appliances. These are the causes of the diseases that cause the deaths of the greatest number of infants. I was going to say there is a still worse result. Perhaps you will say there cannot be any worse result. But there is a disease commonly known on the Continent as the English disease, “a disease which is known to most of our large towns, the disease called rickets.” Now I have the great authority of Sir William Jenner, one of the greatest authorities on children’s diseases that can possibly be quoted, for saying that rickets is almost always caused, that the chief cause is improper feeding, and that the chief cause of improper feeding is ignorance, and that if mothers knew that it was not possible for their infants to digest such things as they gave them there would be no more rickets.

Now, I must not pass over infancy without mentioning one thing. Perhaps you do not all agree about it, though I hope to-night you will all agree about it. There is a certain class of diseases which are especially and peculiarly the diseases of infants, or young children and infants ; those are the majority of communicable fevers which are diseases, and if a person has once he seldom has again during the rest of his life. Now, unquestionably, the most severe, the most fatal, the most horrible of these is small-pox. We have a precaution of preventing people taking small-pox during the rest of their lives, and that precaution is vaccination during infancy : that is a precaution which is compulsory by the law of the land, but

whether it were compulsory or not, I should not be doing my duty if I did not say it, one of the mistakes which some people make is not to have their children vaccinated before they are three months old. Now, we pass on from infancy to childhood. In childhood the great danger to life and health is the danger I mentioned under infancy—the danger from external cold. Now, why is this? Children we know have quick circulations; they breathe very fast, they manufacture a great deal of heat; they are, so to speak, very hot-blooded creatures, and they ought not to suffer, you think, from external cold. Why do they suffer from the external cold? Simply because they are small; because the smaller the body is, the larger is its surface in proportion to its bulk or contents. You can make this out for yourselves. If you calculate the difference between the surface of a cube, the edge of which is an inch, and its contents, and the surface of a cube, the edge of which is ten inches, and its contents, you will find that the surface of the small cube is ten times larger in relation to its contents than the surface of the large cube in relation to its contents. You may prove the same thing with a sphere, and what is true of a cube and a sphere is true of a child.

It is from the external surface of our bodies that we lose heat, and the child having a much larger surface in proportion to its bulk than the adult has, loses heat from its large surface faster than it can replace it, so the great danger to young children is from external cold. What are the mistakes made in connection with this you will see at once. When we go out of doors, whether in summer or winter we go out clothed from head to foot. There is not a particle of our body that is not covered except our faces and a small part of our heads, and a part of our necks, and perhaps our hands. But how do we send these little children out? although their great danger is from the external cold they are sent out with bare neck, bare arms, and bare legs. It is a most monstrous thing, and the health of thousands of children and the lives of thousands also are sacrificed to the fact that they are sent out in all weathers, whether summer or winter, but particularly in winter with bare arms and bare legs to walk about. Children ought to be clothed always from head to foot, whether in summer or winter. In the winter they ought to be well clothed, and in the summer lightly clothed, and the parents who send their children out partially unclothed, would be much more sensible if they went about in the same way themselves instead.

Now children require I need hardly tell you, plenty of food. Hippocrates said “children do not well support a fast,” and though it is a long time since he said it we see no reason to correct it.

Children require to be fed frequently and to have plenty of food. They require plenty of sleep because they have to grow. It is a great mistake to worry children to prevent them having the sleep they want. It is during rest, during sleep, that we adults repair our tissues. During work we waste our tissues, during sleep we repair them. Now a child has not got merely to repair his tissues. His tissues have got to become larger, and so he requires more rest and sleep because this is the time when this work is being done. Then children require plenty of change of employment. They require to be a short time at one thing and then a short time at another. I do not care whether the employment is play or work they ought not to be kept too long at one time at the same thing, because their attention becomes strained and tired until they do not care about anything. Many mistakes are made about this, both about enjoyments and still more as regards work. It is a great mistake in schools to keep children too long together at the same task or too long together at any task.

We come next to the third period of life—youth. Youth, we are told by the pessimist philosopher, is “a folly.” Well, now, we do not expect youths to be wise men; they would be great prigs if they were. But still, though a certain amount of folly may be excusable, we do not want too much of it. Now, in youth most of our habits are formed; of course they are formed to a certain extent in the periods gone by; but habits are formed and become part of our individuality in youth, and so it is of the greatest possible importance that the habits that are formed should be good ones.

Well, now I will mention what I suppose are the most important of all habits first, though on this point we may very likely have differences of opinion. One of our most eminent judges, who thought he should like to find out how to live as long as possible, made a practice of putting a series of questions on habits to every aged witness who came before him, and he found that these aged people differed largely in their habits, except in one particular. Some of them drank spirits, and some of them did not; some smoked tobacco, some of them in excess, and others did not; some drank tea for their breakfast and others coffee, and so on in other habits; but there was one point they all agreed about, *they were all early risers*. Now, early rising means another thing: it means early going to bed. I defy anybody to be an early riser by habit if he does not also go to bed early; and that “early to bed, early to rise,” which it is said “makes a man healthy, wealthy, and wise,” is the best habit shown by the enquiries of that learned judge. I mention the first, and I see from your applause that no words of mine

are needed to recommend it to you. What about other habits that are learned in youth?

Well, the worst of all habits learned in youth is the habit of drinking alcoholic liquors in anything like excess, in anything but in great moderation. That is a habit which once acquired is difficult to break, and it is a habit which is got chiefly in two ways. It is not got by drinking wine or beer at meal-times. It is got in the first place by drinking spirits and water at night. This is what men call having a nightcap. That means that when the stomach is empty or nearly empty you take into it a mixture of alcohol and water, and not merely alcohol and water, but alcohol and water containing a much more powerful substance than alcohol does—namely, the essential oil of the whiskey or other spirits which you take. That is a most diffusible fluid, and when you take it into your stomach empty or nearly empty it has its own action on the stomach first and then passes direct into the blood. First it alters the stomach, so that the stomach of the drinker, when examined by experienced anatomists after death is known perfectly well. It is a different kind of thing to the stomach of a healthy man. It is diseased; again this fluid acts directly upon the liver, and produces in the liver a disease which is perfectly characteristic. The liver of a drunkard is as different from the liver of an ordinary individual as a tumbler is from a tea cup and more different.

That this is the case is perfectly obvious, and you will agree with me, and it is perfectly clear that it is so, when I tell you that the diseased liver so characteristic of the drinker and produced by alcohol is known in various countries by the name of the drink. In England it is called "the gin-drinker's liver," in France the "absinthe drinker's liver," and so on in other countries; so that you see a perfectly well recognised alteration in a most important organ of the body (the largest gland in the body) is produced by drinking spirits, and especially by drinking spirits at night-time.

The other way in which spirit drinking is mischievous is in what is called taking "nips"—that is to say, taking small quantities of raw spirit of any kind at all times in the day, not at meal-times. People do not do it at meal-times when it would not do them so much harm, but they do it halfway between meals, when the stomach is empty or nearly empty. That is the other mischievous way in which spirits are drunk, and the result of that is sometimes a good deal more mischievous—it is always more mischievous than the person who drinks expects, but sometimes the effect is a good deal more sudden than he expects. I have known several instances of persons who have drunk a strong dose of some immature whiskey—I say whiskey

because that is most used, the same result might follow from the use of other kinds of raw spirits—I have known cases where a man after a dose of raw whiskey between meal-times has felt a sudden pain in the pit of his stomach as if he had taken a dose of arsenic or antimony, and has fallen prostrate and died in a few minutes. That is direct poisoning from the alcohol, or whatever is contained in the raw whiskey.

Youths should be taught, if they drink alcoholic liquors at all to drink them in the greatest moderation, and to drink them only at meal times. You know some people sign a pledge that they will not take any alcoholic liquors at all. I will not say a word for or against that plan. There are plenty of people who will not do that. If those persons would take a pledge to themselves—whether they sign anything or not is immaterial—and carry it out, not to drink except at meal times, an enormous deal of good would be done.

A very important habit to acquire is that of eating slowly so as to give time for the efficient mastication of the food; people who expect their stomachs to do the work that ought to be done in their mouths must not be surprised if they suffer from indigestion and from all the consequences of it.

Now with regard to smoking I have very little to say. Whatever good smoking may be, later in life, in middle age and old age, all sanitarians agree that smoking is pernicious to growing youths. I have never heard anyone who has attempted to deny that, so I will pass on, merely saying that smoking is a habit not only quite unnecessary for youths to indulge in, but pernicious to growing youths, and therefore they should be discouraged in every possible way from commencing it.

I must not forget to mention to you that cases of small-pox become more frequent during youth even among persons who have been vaccinated in infancy, the effect of infantile vaccination apparently passing away to a great extent at puberty. It is therefore necessary that youths should be re-vaccinated, an operation which provides a far greater security against small-pox than does a previous attack of the disease itself.

We come next then to manhood. Manhood is, as we all know, the time of marriage. I am told that mistakes are sometimes made at this period of life. I am not referring to the mistakes you are thinking about. The mistakes I refer to are of a very different kind. We know there are certain diseases that are called hereditary diseases—diseases which run in families is another way of saying it. We have all heard of families that are called consumptive families. Unfortunately in this climate of ours, where consumption is one of the most fatal of all diseases, and the most fatal in one

sense, killing more than half as many people as all the zymotic fevers put together, consumptive families are not uncommon. We have heard also of nervous families, and these furnish an unusual number of inmates to our lunatic asylums. When we speak of diseases running in families we mean there are certain diseases the tendency of which is hereditary—diseases which descend from father to son, from grandfather to grandson, from mother to daughter, which in fact somehow or other descend from generation to generation. You may ask what has this to do with marriage? It has this: that hereditary diseases are increased in their virulence, and are spread as it were by the marriage of persons belonging to families in whom the same diseases are hereditary. If a person belonging to a consumptive family marries a person belonging to another consumptive family that person's children will almost to a dead certainty inherit consumption in its worst form. Some of them will die as infants; most of them will probably grow to be eighteen, nineteen, twenty, or twenty-one, and then they will all die as if cut down by a scythe. I have seen it over and over again.

Now, take nervous diseases—the other illustration I have given. If a person belonging to a family in which nervous diseases are prevalent marries a person belonging to another family in which nervous diseases are prevalent, the children of those persons and their grandchildren will suffer from nervous diseases almost to a dead certainty of the worst type, and almost to an equal certainty will furnish inmates to lunatic asylums. I might go on to speak of other hereditary diseases, but those two illustrations are sufficient to show what I mean. It is of the greatest importance, and it is the duty of the sanitarian to insist on it that persons should not marry other persons subject to the same diseases as they are.

Now, at this time of life it is necessary to choose a house or habitation, and I need hardly insist upon it, as I feel that I must get on, that it is necessary a man should take care as far as his means will allow that the house is in a properly sanitary condition, that the drains, if there are any (happy is the man who has a house without drains), are in good order and the rooms well arranged as to ventilation and light. This is a subject too often overlooked. If you want your children to be healthy and strong one of the first things to be done is to give them a house as healthy as possible to live in.

Now, I will pass on at once to middle age. This is what you may call the stationary period of life. Life has been compared to a hill with a gradual slope upwards, a long plateau at the top (which is the latter part of manhood and middle age), and then a steep decline. In middle age the mistake that is gene-

rally made is that people do not take enough exercise. They begin to get stout—that is because they take too much food or take too little exercise, or because they make both mistakes. Now, at this period of life it is important that a sufficient amount of exercise should be taken, and it is also important that too much food should not be taken. One well-known hygienist has said that in youth the most harm is done by taking too little food, and that after forty the most harm is done by taking too much. At this time of life the results of habits begin to show themselves, and the diseases that are caused by bad habits begin to become chronic.

If the habit of cleanliness has not been observed during the earlier periods of life, at this time of life the skin will not do its work properly. At this period of life even in the most healthy persons the action of the skin becomes sluggish, and the less the skin acts the more is this action thrown on the internal organs—the lungs and kidneys. At the same time very likely at this period the lungs and kidneys have become weakened, and so if the skin does not act those organs are still more likely to become diseased; therefore, as cleanliness is important in all periods in middle age, it is exceedingly important not only to encourage exercise, but to encourage the action of the skin by tepid or warm baths, so as to prevent the work which the skin ought to do from being thrown on some of the internal organs.

We pass on to old age. Now, in old age we come again to the danger that we mentioned once before. The great danger in old age as in infancy and childhood is from the external cold, though the reason of course is quite different. The reason why the danger in old age is from the external cold is that old people do not produce heat enough. Their respiration is slow; their circulation is slow. The amount of oxidation by which heat is produced that is going on in their blood is little, and so they do not produce heat fast enough, and cannot afford to lose it, so the great danger is from the external cold. They are chilled, and get generally bronchitis or inflammation of the lining membrane of the air passages of the lungs. That is the great agent of death in old age; so that the most important precaution in old age besides carrying out the precautions of previous periods is to avoid external cold, not to be exposed in cold weather, and to wear warm clothing.

And now we reach “the last scene of all,” as Shakespeare says,—

“That ends this strange eventful history,
In second childishness and mere oblivion;
Sans teeth, sans eyes, sans taste, sans everything.”—

decrepitude. Now, what are the mistakes made in this period

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of life? Who are the people that reach this period of life? They are the people who in the first place I may tell you have chosen their parents well. No people reach this period of life who have not had aged parents. Those who reach this period are those for whom the mistakes of infancy and childhood have not been made by their parents, who have been properly trained in youth and have contracted good habits, who have not committed the excesses of youth or of manhood, who have avoided all the mistakes made in middle age, and who have not exposed themselves to the external cold in old age. The people who have not made the mistakes they see others make around them are those who reach the last stage of life so graphically described by Shakespeare. Why do they die? you may ask. That is not so easy to answer. They die for a reason which is not so simple. During the whole period of life a process of hardening of the tissues goes on. I cannot describe it to you in this lecture. From the earliest condition of the human being the hardening process goes on to the advantage of the individual up to his manhood. After that it goes on apparently neither to his advantage nor to his disadvantage, but really slightly to his disadvantage. Then it goes on until he begins to feel the effects of it. The elasticity of the skin disappears, and it becomes wrinkled. The elasticity of the lungs becomes diminished, and they do not expel the air so well. Later on—a thing which I am feeling already—the eyesight is not so good as it was before, the sense of feeling is dulled, the sense of hearing is not so good, and from the hardening of the nerves, and from this continuous hardening of the tissues, there comes an end of life; for this process which goes on to the advantage of life up to a certain point goes on afterwards until either the lungs become so hard that they no longer force the air out, or the arteries become so hard that they prevent the heart forcing blood through them, and the man either ceases to breathe or his heart ceases to beat. That is why we must die. We cannot live for ever.