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How to Keep Fit

*A Series of Special Lectures
to Young Men*

BY

W. McADAM ECCLES, M.S., M.B., F.R.C.S.

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LONDON

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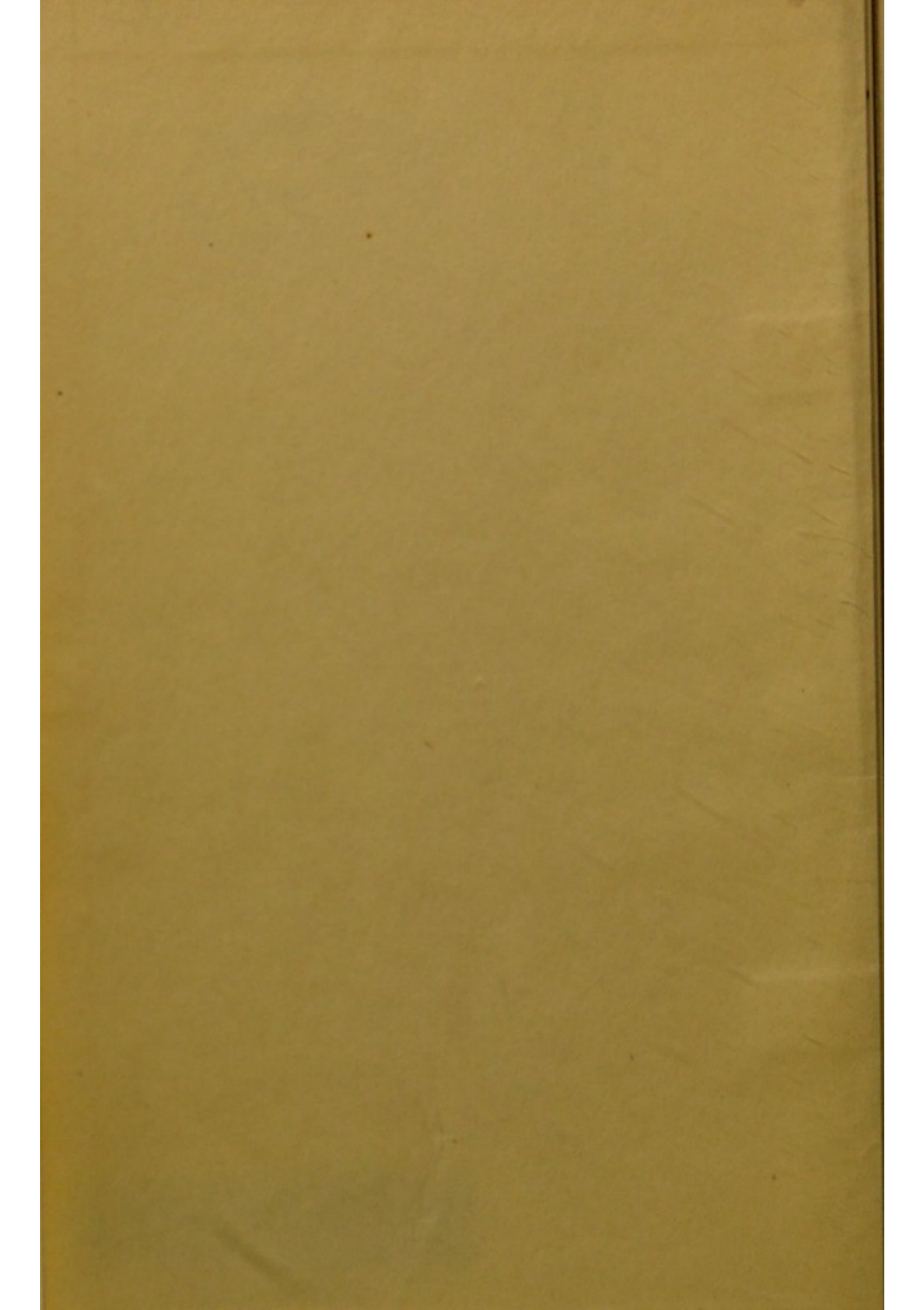
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HOW TO KEEP FIT



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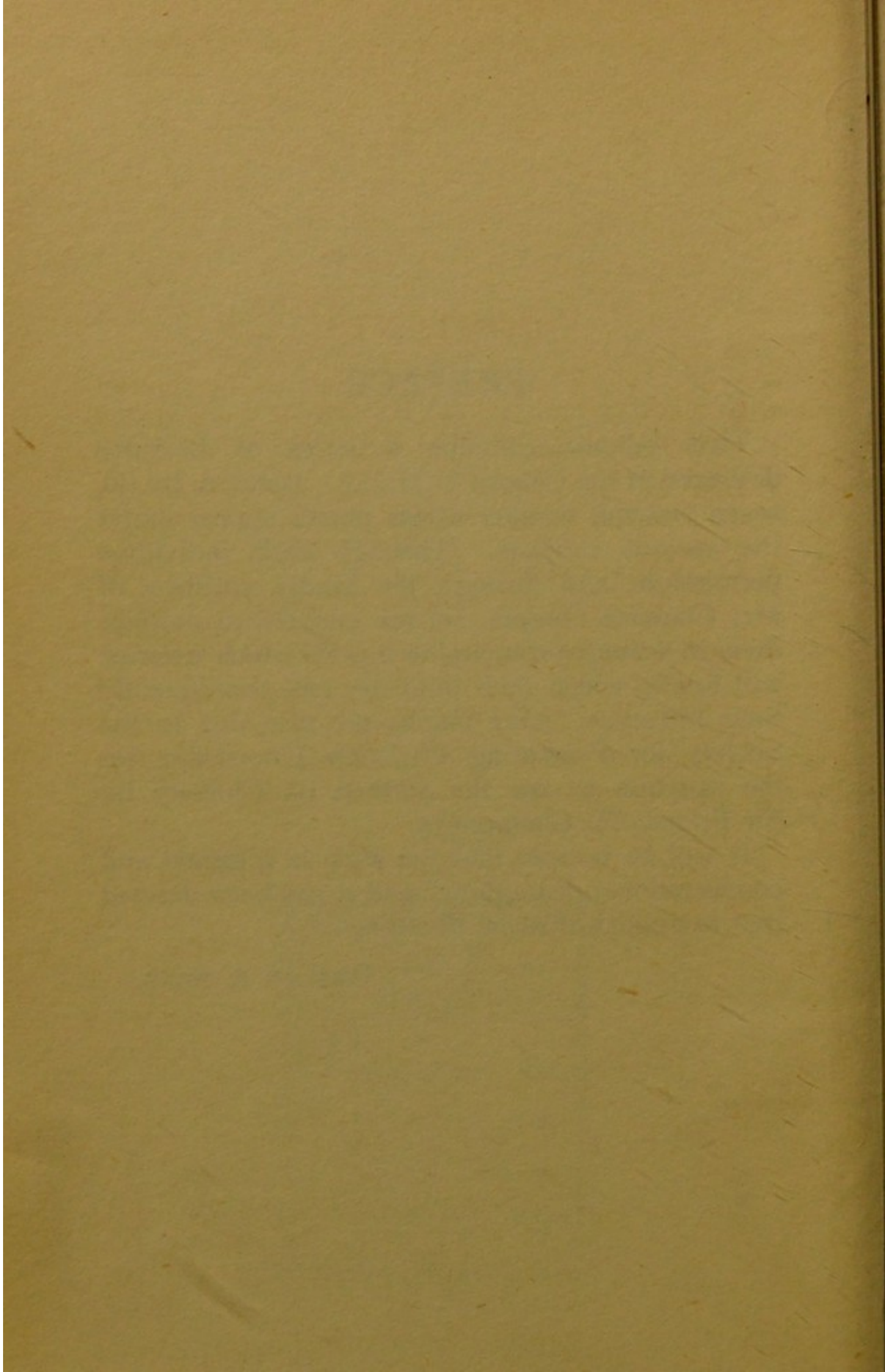
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PREFACE

THIS volume contains a series of Lectures delivered at the Central Y.M.C.A., London, by the seven eminent doctors whose names appear under the various subjects. Through their individual permission, and through the kindly courtesy of Mr. Clarence Hooper, we are enabled to produce them in volume form, and at a price which we trust will finally widen their publicity and consequently their influence. Our thanks are also due to the Society for Promoting Christian Knowledge for the sanction to use the address on Chastity by Sir Francis H. Champneys.

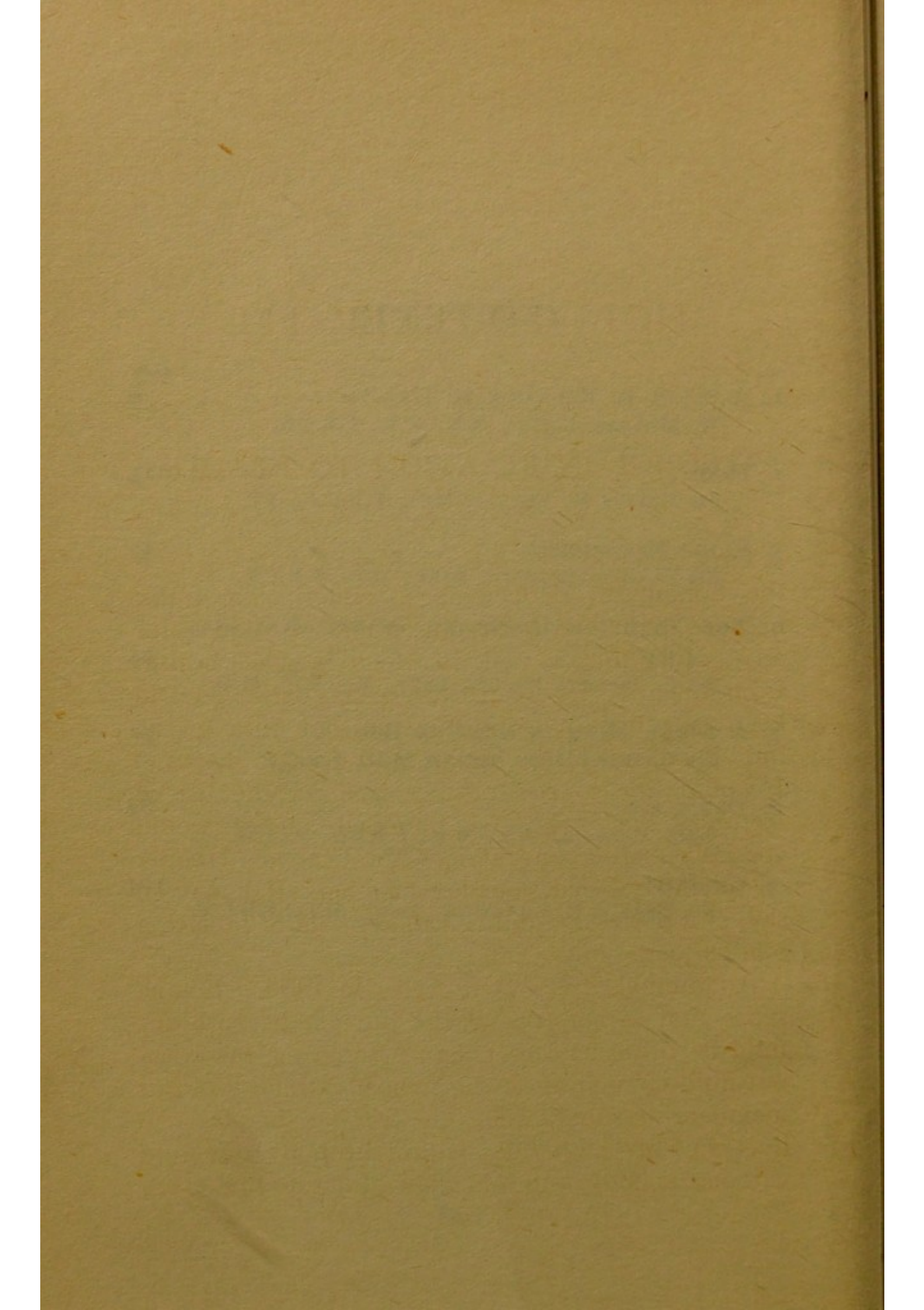
It will be noticed that the style is informal and conversational throughout, and it has been deemed best to publish them in this form.

JARROLD & SONS.



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HOW TO KEEP FIT

I

ALCOHOL IN RELATION TO HEALTH

BY W. McADAM ECCLES, M.S., M.B., F.R.C.S.

THIS series of lectures, the first of which I have the honour to deliver, is extremely important, because if there is one thing which we require for any occupation or walk in life it is good health. Consequently, if we can learn in any way better to keep ourselves fit it is of value, not only to the individual, but to the nation, and even to the race. I would like to congratulate you on the list of lecturers that you have obtained, and I would specially like to congratulate Mr. Clarence Hooper on having secured so many members, if I may so say, of a profession difficult to get hold of in such a number as he has.

All animals live, as it were, in fluid. In one sense that is not true of the human, because our fluid is within us rather than without us, but without fluid circulating to the utmost extremity of our members we should die. The fish has the power to live not only with fluid within its body but fluid without its body, and it is a law of nature that every

living thing must have fluid. And therefore it is of exceeding importance that that fluid should be of the right type, in order that we may be kept fit. It is a very well-known fact in connection with our nourishment that any substance which we take into the body, which is of a poisonous nature, may do us a very considerable amount of harm—first, if the poison is taken in too large a quantity at any one given time, when it may kill us; or, secondly, where the poison is taken in small quantities over a considerable length of time, habitually, when it may cause such a change in our body as to render us unfit.

It is in connection with the second method of poisoning, the taking of small quantities, that I have to deal to-night, and the poison that I have selected is one which is perhaps in more general use than any other in this world—that is, the substance which we call Alcohol. I am going to throw rapidly on the screen a number of slides, because I think it will be more interesting to you to see as well as to hear, and in that way get a fuller idea of what I want to make clear.

Now the term alcohol is used for a considerable number of chemical substances. In fact, the number is increasing with our knowledge of chemistry. There is, however, one type of alcohol known as ethylic alcohol, which is present in every alcoholic beverage. That is the chief constituent, whereby the beverage is known as alcoholic. This is known in chemistry by the formula that is placed on the screen there, C_2H_6O : two atoms of carbon, six atoms of hydrogen, and

one atom of oxygen. These three substances united in that particular way make up ethylic alcohol.

Now alcohol is a poison which tends to produce what we call deterioration, that is to say, unfitness. Here is a definition of "deterioration"—the process of growing or making worse. We are not going to deal, to-night, with the process of making worse, but rather with the process of growing worse. Alcohol acts on the living cell, which is the ultimate particle of which our body is composed in very large numbers. Alcohol acts on the living cell as a poison, and tends to produce deterioration of the cell, and consequently deterioration of the whole individual, and so of the race. Alcohol is one of the causes of our unfitness both in physical, mental, and, in a large number of cases unfortunately, moral health; and to show that it is a cause of unfitness in the physical cell, and consequently its bad effect upon the whole individual, is our object to-night. There is the proposition. I hope to prove it. If I do not prove it, do not believe it. If I do prove it, believe it and act upon the knowledge gained.

In order to determine what is the effect of alcohol upon living cells, we experiment, and it is well when one is starting experiments of this character to begin with the lowly and work up to the highest. You know that the living organisms are divided rather arbitrarily, by ourselves, into two great kingdoms, the vegetable and the animal; but so closely are these two kingdoms linked up together, that it is exceedingly interesting to observe the

effects of various drugs and poisons upon the vegetable kingdom first of all, and then, afterwards, upon the animal. Here is an experiment which any one of you can carry out if you choose—more easily in the spring and summer than winter, but in a warm room you may carry it out all round the year.

Here are five test tubes, with flat bottoms, which can stand, and they are placed in a row for comparison. Each test tube has a given quantity of sand put into it, and on the top of the sand there are placed a certain number of cress seeds. We will say you put twenty cress seeds in each one of these. Then, as I was saying just now, all living material requires fluid. These cress seeds placed on dry sand will remain as cress seeds, but if that sand is damp, and if you add to it a little fluid day by day, just a drop or two, putting the test tubes in a fairly warm room if it is winter time, you will find that before many days are over the seeds are beginning to, what we call, germinate. Now these various test tubes have had the sand moistened with different fluids. The first tube has pure water, or shall I say tap water, which for all intents and purposes in London—and it is a very good thing for London it is so—is pure water.

Secondly, you have here the sand moistened with water containing one drop of pure alcohol to a thousand drops of water—that is, one in 1000. Here, again, you have one in 500. Here you have one in 200, and here you have one in 100. I may say, in passing, that one drop of alcohol in 200 drops of water is equivalent to the amount of

alcohol that there is in ordinary home-brewed ginger-beer, so, you see, it is not a very strong dose of alcohol. Now what is the effect? Where you have tap water only you will find that after four or five days, or a little longer, all the seeds apparently have germinated. You can count every seed if you like, and find out how many have germinated. In the second tube you have got the same thing, but they have not grown to quite the same height. There is not much difference, but there is a slight difference. Now, when you come to the third the difference is very marked, in the next it is extraordinary, and in the last it is almost past belief. In other words, when you have one drop of alcohol to 100 you have got a very few cress seeds germinating at all, and those that have germinated, I think you will see at a glance, are not worth much.

Now let us go a step higher. Cress is a lowly vegetable organism, and we will come to the next slide, which will show us a geranium, and here you have again the same type of thing. This is a cutting which was taken from a strong, healthy stock, placed in the ordinary surroundings that one has for growing a geranium, and watered with ordinary tap water. This second was taken from the same parent stock, put under exactly the same conditions except that it was watered with a diluted solution of alcohol, one part to 1000, and I want you to notice here that there is a very considerable difference. A great many more leaves have developed on the first than on the second. There are at least three flower buds on that as

compared with one on that. And now notice another very interesting fact. Some of these leaves on the second are larger than those on the other side, and I remember very well somebody saying to me on one occasion when I had been showing this, "Ah, look at the good result." But those are unfit leaves, they are the coarse, bloated leaves, which are not doing their work properly. All these leaves on the healthy plant are about the same size, and they are all functional. These big leaves on the unhealthy one are, as it were, running to coarseness, and are not acting in the way in which they ought to for the good of the plant.

Now I am going to pass from mere growth to vitality, and the next slide will show us very plainly, I think, how alcohol interferes with the actual vital processes of a plant. Here are two test tubes, again, and they are completely filled with water. They are placed upside down in a basin of water which you cannot see here. An equal quantity of this water plant is placed in each of these test tubes. Under the influence of light the water plant can decompose the gases in the water and set free what we call oxygen. This illustrates a beautiful circle of nature. The plants produce oxygen, and we animals absorb oxygen. We produce carbonic acid gas, which the plants take up as food, and they give us back again oxygen, which we require for our existence and growth. We mutually help one another. Now here is the plant producing this oxygen. Under the influence of light, in water only, the plant has produced that quantity of oxygen, and by the production of that amount of

gas has forced the water out of the test tube down into the basin containing the two test tubes.

In this other tube you will see there is a smaller quantity of oxygen produced, and the bulk of the plant has given up work and has fallen to the bottom of the test tube. It has, as it were, become dead drunk, and is no longer fit for the processes—the vital processes—of its life. Notice, please, that this is produced by only one per cent. of alcohol; that is one drop of alcohol in a hundred parts of water.

I come now to the animal kingdom. Here is an organism consisting of one cell only; it is one of the most beautiful objects we can have under the microscope. This is a living animal, possessing only, as you see, a single cell. We have millions of similar cells present in our body, particularly in our blood. This cell has what we call a nucleus, and all these small black particles which you see in the cell are the material which the cell has absorbed for its food. The little organism is called the amoeba. It is found in pond water on the under surface of decaying leaves. The little animal is capable of all the functions of which our body is. It has even the function of being able to discriminate, and yet it has no brain. For instance, it is able to determine whether a particle floating in the water in which it lives is good for food or not, and under the microscope it can be seen to project a portion of itself and enclose a piece of grit; but it then "thinks," and realises that the grit is a piece of indigestible food and discards it.

Now what is the action of minute quantities of

alcohol upon these living cells? I am going to show you that by the cells which form the eggs of the frog (frog spawn), and our next slide will show you a mass of frog spawn. Perhaps some of us in younger days experimented on frog spawn, but without alcohol. Here we are going to experiment with alcohol. These are frogs' eggs and tadpoles just beginning to hatch out. If you take an equal number of eggs of frogs' spawn in one watch glass and an equal number in another watch glass, and then experiment with tap water in one case and water containing two per cent. of alcohol in the other, you will soon get your experiment working. Notice two very interesting things. Where you have used tap water only practically every egg has hatched. There are one or two that have not. If you take the other case, on the other hand, you will find there are a very large number of unhatched eggs. In fact, the majority have not yet hatched, they have been delayed. The actual process of hatching has been enormously interfered with by this two per cent. solution of alcohol. In other words, those young living beings are started unfit, and if they start their career unfit it is probable that it will have an effect upon the whole of their life existence.

Now let us go on to the next, and we will see them a little later. Here you have the watch-glasses eight days after the commencement of the experiment. Look at the non-alcoholic glass and you will find not only all the tadpoles hatched out, but all the shells of the eggs have been absorbed. We look at the other, and there are still unhatched

eggs. And I want you particularly to notice this non-alcoholised tadpole, how well it is becoming developed. Here are gills at the side of the head. Yet you will notice that the other—the alcoholised tadpole—shows hardly any evidence of gills.

We now go a stage further, and the next slide will show us these tadpoles after further development—fourteen days. Here is the tap-water tadpole. He has produced quite a big body, and is beginning to grow his little legs. This alcohol-water tadpole, on the other hand, is still small as compared with the others, and you have still got an egg or two in existence.

Next we come to the six weeks' stage. Now at six weeks they are beginning to get very active and exceedingly difficult to photograph, although taken by rapid photography. You will notice with the tap-water tadpole we have actually got three tails—or rather three impressions of the one tail—because he is flapping it about so rapidly! In the alcoholised tadpole there are only two instead of three impressions, showing that the tail is not moving quite so rapidly. In other words, these tadpoles are unfit as compared with the others.

The next slide is of two chickens. These young chickens were hatched from the eggs of the same hen. They were placed in an incubator on the same day. The egg from which that chicken came was painted over with a solution of water containing two per cent. of alcohol. This chicken came from an egg which was not so treated. I know some will say that if you use ordinary tap water you will get the same thing. But you do not, and

that is the interesting point. The alcohol permeates the shell, gets into the tissues that are growing inside the shell, and you will find this curious change taking place. You can carry out this experiment in another way, and after the hatching of the chicken you can feed the chicken with grains (barley grains which have been soaked in water containing two per cent. of alcohol), and although they start when they are hatched equal, they then gradually show the difference compared with other chickens. In other words, the one chicken is unfit for the struggle of life as compared with the other.

With the next slide we pass on to the human. Now here I am throwing on the screen three slides taken quite indiscriminately, but showing the condition that you can get in the human as a result of alcohol, and that not only directly but indirectly. These two children are the offspring of a father and a mother who were constantly soaking in alcohol. Of course, the important point to remember is this: the amount of alcohol that really does harm to the cell is only that alcohol that actually reaches the cell. If a man takes, we will say, a couple of ounces of alcohol (of course diluted—if he took pure alcohol he would very soon vomit it), it does not necessarily follow that all that alcohol is going to reach the actual cell tissue of the body. A good deal of it will be thrown off in other ways. But there is circulating in the blood a certain quantity of alcohol, because it is absorbed from the stomach into the blood; but you never get a higher percentage of alcohol in the blood than two per cent., and that is the reason why we have been experi-

menting so much with a two per cent. solution of alcohol.

Now the alcohol affects the father, and, through the father, it may affect the offspring. Please mark my words—it may. It does not always do so, and there is a little question as to whether really the father has much to do with it. The alcohol affects the mother's blood, and it does often affect the tissues of the unborn child. The actual effect upon these tissues may not be seen at birth, but by no means infrequently it is seen after birth; and, what is really more important, and to my mind the really terrible part of it, it is seen in the unfitness of the growing boy and the growing girl, particularly when they have to face any struggle for life.

Now we pass to the other two slides. Here are four children who were born mentally deficient because of alcoholic parentage. I am quite willing to grant there are other factors. For instance, what is called the "hidden plague" comes in here; and when you get a combination of alcohol and that poison, then the offspring is frequently condemned to be mentally deficient.

Now the last slide was not taken for the purpose of this lecture, but was taken for the Inter-Departmental Committee on Physical Deterioration. You see a group of mentally deficient children, the offspring of alcoholic parents.

We have been speaking up to the present of the tissues of the young, and seeing how extraordinarily small doses of alcohol affect the growth of the cells. Consequently, that is a very important subject, and concerns the welfare of the children of

our nation. But now I want to pass on and show you how small quantities of alcohol taken habitually tend to render unfit the tissues of the adult. Here are figures relating to some insurance societies that have two classes of insured lives—the general section and the abstainers' section. I want you to realise that in these two sections you have got two classes of persons: one who take no alcohol at all—the total abstainers, and in the other those who take a moderate quantity of alcohol. Take this Office, which started with these two sections a good many years ago; it draws its insured persons from what we may call the religious communities; in other words, persons whom you would think would live good lives, and they do, and this is seen by the fact that in the general section—that is, the moderate-drinking section—it was expected that 100 would die in a certain year, but you notice only 79 out of that 100 died. In other words, 21 out of 100 that ought to have died by the ordinary statistical tables did not disappear from the face of the earth. That is very good for them and for the Office and for the shareholders of the Office.

Now if you come to the abstainers' section, just notice what are the facts. Here you will see that only 53 out of 100 died. In other words, 47 out of 100 who ought to have died did not die. This is very remarkable, and the only difference that I know is that in the first section a moderate dose of alcohol is taken habitually, and in the other section no alcohol is taken. The insured persons are drawn in some instances from the same family, which proves that small quantities of alcohol taken

habitually does not necessarily produce drunkards, does not produce any very marked evidence of disease, but does produce just that degree of unfitness which leads to a shortened life. Now if these things are so, then it does mean a very great deal to our nation.

The Inter-Departmental Committee to which I have referred pronounced on the subject of alcohol, and I want to show you some of their conclusions. Take paragraph 173: it reads, "As the result of the evidence laid before them the Committee are convinced that the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration." I have drawn your attention to the fact that deterioration means growing or making worse or unfit, and the above is the deliberate result of the Committee's deliberations. And our next slide will show us even a little more. This is a summary of the principal recommendations which the Committee make in their Report. "The Committee believe that more may be done to check the degeneration resulting from drink by bringing home to men and women the fatal effects of alcohol on physical efficiency"—in other words, the question of unfitness. To this end they advocate the systematic, practical training of teachers. In passing I may say that that is being carried out.

Teachers are being taught the real facts concerning alcohol, so as to enable them to give rational instruction in schools on the laws of health, including the demonstration of physical evils caused by drink. The Report goes on to say: "At the same time, the Committee cannot lose sight of the

enormous improvements made in some countries, and that can be made in this country, by wise legislation."

I want to show you one or two ways in which this can be done, because I want each one of us first of all to be fit ourselves, and then to be our brother's keeper—to see the man who is next door to us is as fit, and perhaps fitter, than we are. Let us educate the fathers and mothers. It is an exceedingly difficult thing to educate the fathers and mothers! First of all they resent it, and, secondly, they have got such fixed ideas that it is very difficult to get them out of their minds. Prohibit the entrance of children into public-houses. Now that has been done. The Children Act has given us that. But—but—but—I see as I go about London, particularly in some streets which are slum streets, that some children are being given alcohol *outside* the public-houses. Then feed the children. That, of course, is exceedingly important. You may abolish all the alcohol in the land, and if you do not feed children you will soon have them unfit. Then teach the children; but you cannot teach unless you learn, therefore you must learn in order to be able to teach.

Further, we must reduce the opportunities for others to obtain liquor, provide healthy recreation, promote research and the advance of science. Here are some of the municipal posters that were put up throughout the length and breadth of our land a few years ago. These are statements made by the Medical Officers of Health of the various boroughs and signed by them, and as a rule also by the

Mayor of the borough, and these were put up as the result of the Physical Deterioration Committee's report on alcoholism. Look at this statement here : "The sins of alcoholic parents are visited on the children. If they survive infancy they are threatened with epilepsy, and many are carried away by tuberculosis." These are facts, and they would not be put on the walls of our boroughs if they were not facts, and they are very serious facts, because they show one of the causes of the unfitness there is about us.

Look carefully at the final sentence in this poster : "The habit of nipping and drinking between meals, and the giving of alcohol except as medicine to children, are the two most pernicious practices which must above all be avoided." It is that small quantity of alcohol taken very often in business between meals that very insidiously tends to sap our fitness. Notice, also, this last sentence in another municipal poster : "The safest and only certain remedy for alcoholism is total abstinence from alcohol." Now, mark you, that is not from a temperance society, but from a Borough Council. It is a very strong statement to put on the walls, but it is an exceedingly true statement. Let me put it in this way. We are all born total abstainers. We remain total abstainers until the time we begin to take alcohol. That, I think, is true. When we first take alcohol we are moderate drinkers. We never become those who take an immoderate dose of alcohol until we have taken a moderate dose first of all. That, I think, is true. And the person who never takes any alcohol at all

—that is, a total abstainer—cannot possibly become a drunkard unless he takes a moderate dose. So that you see the only certain remedy is total abstinence, and I think that is quite a legitimate statement to make. Then this big poster is exceedingly important because it brings out that terrible fact of death among infants.

I believe myself that we are perfectly right to let the public know these facts, let them judge for themselves and see whether they cannot keep themselves fit. Now in closing I want just to say this once again. I do not wish you to carry away the idea from my lecture that alcohol is the only cause of unfitness, but I do want you to carry away the fact that it is one of the causes; and may I venture to say this—that every one of us who desires to keep fit so far as the question of alcohol is concerned, let us make up our minds that we will not touch it.

II

DIET

BY SIR ROBERT WILLIAM BURNET, M.D., F.R.C.P., J.P.

MR. CHAIRMAN AND GENTLEMEN,—When your Secretary asked me to give one lecture of this medical course in relation to the subject of how to keep fit, it occurred to me that some points as practical as possible in connection with the subject of Diet might be useful. In asking me to undertake this, he intimated that a set lecture was not required—in fact, I understand, was not desired—and that it should be informal and conversational. I have taken full advantage of that condition, and I hope, therefore, that you will not expect the subject to be presented in exact, systematic ways, and that you will bear with any repetitions that must necessarily occur under the circumstances.

The subject of this course of lectures, “How to keep fit,” implies good digestion, and, first of all, I will ask you to go back in thought to your physiological studies, and I will enumerate a very few points in regard to foods. We may define food as everything that contributes to the maintenance of the body in life and in health. That must necessarily include water and air. The use of food opens up a very complex subject. The chemistry of the body is very complex, and the processes are

very subtle. Some of these processes are gradually opening up to us year by year, and progress is being made in that direction; but still, many of them, as I say, are complex, some of them elusive. We have to take into consideration much more than the mechanical processes. There is the individuality, the environment, the action of the nervous system, and the influences that the surroundings of a man have upon him. It is very easy in the laboratory to follow some of the processes in a test tube. The test tube has no nervous system; the test tube is not subject to outside influences. But when we come to the individual we have to remember that there are many more things than the mere mechanical processes.

The uses of food may be said to be first of all the formation of tissue. That is chiefly in youth, when building up of the body takes place. Next, there is the renewal of tissue. That, of course, takes place throughout all our lives, but is very active in youth, active in middle age, less active in old age.

Secondly, the food is necessary for the supply of force. All functions of the body, voluntary and involuntary, mean an expenditure of force. Food, certain portions of the food, are necessary for the supply of the energy for these functions. And, thirdly, there is the production of heat. Man, as a warm-blooded animal, has to keep up a certain temperature. It is very remarkable how little that temperature actually varies. We may feel hot, we may feel cold, but if we are well no fever process is going on, and if no depressing influence is at work, the temperature of the body remains practically, as

you know, about $98\frac{1}{2}$ degrees. That means, of course, that there are, in some circumstances, methods of getting rid of the superfluous heat, and all along it means that there is a process of combustion going on in the body; that the oxygen of the air in combination with the tissues of the body is producing this combustion, and that means waste, waste graduated and different under different circumstances—excessive under certain conditions, slow and slight under other conditions. Thus, without going into any deep discussion about foods we may divide them into four classes—first of all, the nitrogenous, or albuminoid foods—meat, chiefly, also found in all cereals and grain; secondly, carbohydrates, or starches and sugars—potatoes, bread, sago, tapioca, all the farinaceous foods we eat; thirdly, the hydrocarbons, as they are called, that is chiefly fats, oils, and so on; and fourthly and lastly, salts, and water. By salts we mean not only minerals that are found separate, but salts found in vegetables, and in many other foods.

Now, what we would call a well-balanced dietary, means that these elements are in proportion, in due and proper proportion, with regard to the age, the circumstances, and the surroundings of the individual. An unbalanced, or expensive, wasteful dietary contains some of these elements in too large proportion, and others in very reduced proportions; but a well-balanced, suitable dietary of health means that the requirements of the system are met by a due proportion of these different elements of food, varying again, we must admit, under the

conditions of life. In active life the waste-repairing food is more needed; in sedentary life less needed, in youth much needed, in old age much less required. Now for the building up of the tissues of the body, chiefly for the repairing of the waste material, the albuminoid foods, that is to say, meat, grains, and all those foods containing a large proportion of nitrogenous matter, are necessary. These albuminoid foods are, as I said before, much more required during the process of growth. It is when growth and activity are at their highest, in the early years of youth, that these foods come in most usefully. In youth it is not only the building up of the body that requires it, but it is the activity, the constant activity, which gradually lessens as life goes on. Life cannot be sustained for any length of time without these nitrogenous or albuminoid elements in the food. A non-nitrogenous diet will not sustain life, but, on the other hand, the non-nitrogenous elements are valuable for the production of force, and for the maintenance of heat.

We will take an extreme instance in relation to the maintenance of heat. Take the food of those who live in very cold climes. In the Arctic regions, we will say, they chiefly live on meat and fats, whereas the natives and the inhabitants altogether of tropical climates require next to no meat, and little fat, but live on grain, chiefly rice and other grain. For the supply of force the combined elements of the food are necessary and desirable, not one food only; and for heat, as I said already, the fats. We have ample evidence from investigations, I think, that a mixed diet is, on the whole, by

far the best for man. A vegetarian diet will support life, but it is an expensive diet in some ways. That is to say, there are large proportions of some kinds of food in it, and too small proportions of others. At the same time, a vegetarian diet admittedly will not only sustain life, but admit of a great deal of energy; and, in passing, I would say that I think we, as a people, probably eat far more meat than is necessary. But meat is a rather inviting dietary. It gives a feeling of well-being, a sustaining feeling, a feeling of exhilaration compared to other foods, and therefore it is a somewhat tempting thing for us, as a nation, to consume a larger quantity of meat than is really necessary for the requirements of the body. I am not speaking now of the conditions of the body when an individual is out of health, or I would point out to you that a dietary consisting largely of meat is often not only unnecessary, but dangerous. That is to say, when the eliminative processes of the body are defective, then waste material comes to choke up many of our organs. But meat is not only a stimulating diet, it is a satisfying diet; the feeling of well-being lasts some time, and the appetite does not return so soon after a meal consisting largely of meat as it does after a meal consisting of farinaceous or other foods.

Then I would offer a few observations on the question of digestion. You cannot keep fit unless your digestion is right. There are many ways in which we may make mistakes about our food. Observations that were able to be taken many years ago in the case of a man who had a gunshot wound, and whose stomach never quite healed up,

led to the discovery of a good many points in relation to the length of time that foods take to digest. The observations were most carefully made by a Canadian doctor and have stood the test of time. They only show, of course, how long it took the stomach to deal with certain foods, but that was an important point, though, at the same time, he could not follow out the secondary processes, namely, what took place after the food left the stomach, and, of course, we could not be told what share the other juices of the body had in the effects.

Four essential points may be mentioned as being necessary for the healthy action of the stomach. First of all, it must be implied that the coating of the stomach, the mucous membrane of the stomach, is healthy; secondly, that there is a due supply of healthy gastric secretion—gastric juice we call it; thirdly, that the nervous system is not overwrought, that there is sufficient nerve power; and fourthly, that there is muscular power of the stomach sufficient to create movements required for the complete digestion of the food. As regards the healthy mucous membrane, that goes without saying in health. I mean that we cannot be fit without the mucous membrane, throughout the body, being healthy. A due supply of gastric juice is also assumed in all healthy individuals of ordinary calibre. If these four conditions are present, the comparative digestibility of food depends largely on mechanical conditions which promote or retard the action of the secretions.

That brings us first to the subject of cooking.

Cooking, bad cooking, is responsible not only for a lot of indigestion, but for a lot of unfitness in many individuals. Cooking alters the meat in some way; bad cooking alters it in a wrong direction. That is to say, it retards the action of the juices of the stomach upon it; whereas, when meat is properly cooked, it is more digestible, and better fitted for the action of the gastric juice.

Next to cooking I should put mastication as an important point in regard to digestibility. Unless the food is thoroughly masticated it takes much longer to digest. Mastication implies the breaking up of the food—not only the breaking up in the mouth, but it implies the mixing of the food with the saliva, which itself has an important action upon all the starchy and sugary portions of the food. The meat portions of the food are also finely divided. Now we know perfectly well if we take a solid piece of meat and put it in a test tube with a certain amount of hydrochloric acid and a certain amount of pepsin, we will get the surface of that piece of meat quickly affected by the acid and the pepsin, but it will take a long time, a very long time to penetrate to the centre of that portion of meat, whereas, if the meat is put into the test tube in finely divided particles, the surface area exposed to the reaction of the acid and of the gastric juice, or pepsin, is immensely increased, and the rate of digestion is thereby very largely improved; it digests very quickly. So it is with the stomach. Unless the food is finely broken up, finely triturated by the teeth, it takes a much longer time; in fact, in some cases it does not digest at all, and that

is why many substances which are wholesome enough in themselves are very slow and difficult of digestion. All substances that tend to clog, to make masses, such as badly baked pastry, tough meat, gristle, all those things take a very long time for the gastric secretions to act upon them.

Next I would put mental conditions. We all know that cheerfulness is an immense help towards good digestion. Solitary meals are bad, and reading at meals is a bad thing, and cheerfulness with meals is an immense help towards good and easy digestion; also regularity of meals. We are not meant to go too long without food, especially those of us who have to work in cities. You must have all noticed—we all, I think, have observed it in ourselves—that in the country on a holiday, or when in the open air continuously, we do not get exhausted soon. You may be hungry. We are hungry, as a rule, because we have got more oxygen, and more ease, and so on, but there is not the same exhaustion that there is in the life in town; and the town life, looking at it as we have to do, requires, if we are going to keep fit, regularity, as far as possible, with meals.

We are very much, in regard to diet, creatures of habit. Some people, however, can go much longer without food than others, without feeling any faintness or sinking; others cannot. But, as a general rule, the old-fashioned plan of three meals a day is not a bad one. That is to say, an interval of four to five hours between meals. That allows for the digestion of most foods. It has been calculated from the observations already mentioned, and

from other observations, that an ordinary meal is digested, liquefied, and passes from the stomach in about three hours and a half. Then there comes a short period of rest, and at the end of four and a half to five hours we are ready, ought to be in health ready, for the next meal.

Now we are apt, as I said, to make mistakes about our diet, more from ignorance and carelessness than from wilfulness, but we do make many mistakes about diet. One common mistake is that whereas in boyhood we were able to consume an almost unlimited amount of plain food, we are apt to carry that on. Appetite remains. We are apt to carry it on, without thinking perhaps, into middle life, whereas our activity is very much lessened, our growth has ceased, and our needs, especially for the same portions of the food, are very much less than they were in youth. I have seen many cases in which bad effects have followed the change from a country life to city life without modifying the diet. I do not mean to say that we do not require very regular meals, and very sufficient food in doing the work we have to do in cities, but we do not require the same amount of the nitrogenous foods that we did. We have not the same activity, the same open-air life, the same opportunity of oxygenation. We are not bodily active as we were then, and many a man suffers from the change—and the young man especially—from the change of a hard, active-exercise life to a more or less sedentary one, unless he is on his guard to somewhat simplify his diet, and to be particularly careful that he does not bolt his food.

I have in my mind instances of men who, having gone through a hard training (say for rowing, or for other sports) did not recognise the fact that they did not require the amount of food, of meat especially, that they had been taking these days of training, did not lessen the quantity, and they did not suffer primarily from indigestion, but suffered from other conditions which led to a comparative failure of health for a time at least. There is always a margin. Nature is long-suffering, but she is implacable, and in the end we pay for carelessness by disorganised health. So I would say here to you—how to keep fit is to pay careful attention to diet, to regularity of meals, to simple food, to slow eating, to full mastication of food, and other points that I will come to presently. We make mistakes very often, too, in the selection of our food. If we would bear this in mind—I am speaking again to myself and to all of you who have to lead a life in the city, and not in the country: if we selected the simple foods, the well-nourishing foods, the plainly cooked foods without sauces, without condiments, without things that create an artificial appetite, but kept to the plain, simple, wholesome foods, and ate them slowly, we should keep our digestions in much better condition.

That implies also that the hurrying of meals is very bad. For two reasons. First of all that it means imperfect mastication of food—swallowing the food in, more or less, large pieces—and that the mental attitude is wrong. Then, as far as possible, we should endeavour to always ease off a little before meals. A very few minutes may make all

the difference, but a man sometimes rushes straight from his work and sits down and expects to digest a full meal. Without the slightest pause or rest he will come down in a hurry and attack his food. And standing up lunches are very bad. Another thing that I have found in experience in my work is that people make a great mistake in taking too much liquid with meals. We require in the twenty-four hours a certain amount of liquid to keep in solution the waste material, and to aid in the excretion of the waste material, constantly accumulating in the body, but we do not want much of that liquid at meal-times. If you will think for one moment what it means, the common sense of it is this. We have got a certain amount of gastric juice at each meal. It varies in individuals, and varies in the same individual at different times, in different circumstances; but, take it as a whole, we have a certain amount of gastric juice secreted that is capable of acting upon our food fairly well, but if you dilute that gastric juice, say a hundred times by copious draughts of water, or of any fluid, tea, coffee, any thing you like, dilute it too much, and you immediately get very slow digestion, imperfect digestion, fermentation of the food, acidity, and all the troubles of flatulence and discomfort, constipation and other evils.

So that with many people who are leading, more or less, a sedentary life it is a very useful protection to drop soup at the beginning of a meal, especially those who want to keep hard and fit. Soup is an ideal beginning to a meal, theoretically, because it presupposes an active condition of the stomach—

that is, the mucous membrane is like a sponge, ready to absorb any wholesome liquid food that is given to it—and that thus, by taking a small quantity of soup, you stimulate the stomach to more active secretion of gastric juice. That is very well in theory, and it is well enough in practice in many people, but those who are not ideally strong in digestion, and who are not leading an active, open-air life, very often find that they are infinitely more comfortable by what I call dry meals. That is to say, very little liquid, and the liquid taken only towards the close of the meal; and for any who are, more or less, in training, or wanting to keep very hard and fit, dry meals, comparatively dry meals—I do not mean necessarily exclusive altogether of liquid—are of very great help. I was met by an answer once when I advised that to a man. He looked at me, and he said, “I never was a dry feeder,” and I am afraid he had not been, but his liquids were not quite always of the most simple kind.

Of course, in coming to the question of, more or less, keeping fit, of training, of getting into training, we must presuppose the four essential conditions of digestion that I have already mentioned, and in addition to that I think the avoidance of much fluid with meals, and not attempting to do too much, or much at all, before breakfast in the morning will be a very great help in training. Men often make a very great mistake by beginning the day with hard exercise before having food. Very few people can stand that. There are a few who seem to be better for it, can do a hard run, or

a long walk, or a row, or something strenuous, with no food in the morning, but, as a general rule, taking the average man, a good English breakfast before hard work is not at all a bad thing; in fact, it is a necessary thing.

I think another mistake that we make is that we have very much dropped two simple articles of diet—I mean wholemeal bread and porridge. I know quite well that many people cannot, or think they cannot, eat oatmeal porridge; but for growing youths and for young men well-boiled oatmeal porridge is an excellent article of breakfast diet. The custom has been lately to have nearly all very refined flour made into bread. That is a mistake. To get the very finest colour, the flour is not always free from adulteration, and, on the other hand, the less-refined flours contain a great many elements that are extremely useful, both stimulating to the stomach and to the mucous membrane of the bowels, that tend to obviate constipation, that tend to increase the nourishment of the food, and that altogether act in a helpful way in the processes of digestion.

Another thing, I think, that we make a mistake in very often is having next to no lunch. Many men make a mistake in that way. It is quite true that men who are busy cannot well digest a heavy meal in the middle of the day, but there ought to be something substantial—especially for young men. A bun and a cup of coffee is hardly sufficient for the young man to go on from breakfast till evening. At the same time, I think many would be better to confine that meal to one course. Let it be fish, or

meat and vegetables, without attempting to add a second course, or a third course to that, but let it be something substantial, and let it not be hurried, let it not be bolted, let it be masticated carefully, and let there be a small interval before the meal, and, if possible, after the meal, before active, mental, and bodily exertion are resumed.

Another caution I give in regard to keeping fit, is to avoid meat teas. That is to say, tea with the evening meal. It is against all reason. It is rather a popular meal in some quarters, but it is against all principles of dietetics. The tea with meat delays the digestion. I am not going into the question of the action of tannin on meat, but we know that there is in all tea, however good, a certain proportion of tannin, and we know that tannin is useful in the making of leather.

Another point, I think, that we are very apt to make a mistake about is the want of sufficient fruit and vegetables in our diet. Variety tends not only to the improvement of appetite, but by the use of fruit and vegetables a great many elements are introduced, that cannot otherwise be had in our diet, and, I think, on the whole, we are, as a people, apt rather to neglect the use of fruit, especially cooked fruits, and also vegetables.

Another point is that, of course, it is absolutely fatal to take any stimulant between meals. That is the most fatal mistake that anybody can make. I am saying nothing on the temperance question. But I would only say one thing—that the man who begins taking stimulants between his meals, or American drinks before his meals, is in a very bad

way, and is certain to suffer badly from the habit. I said before, and I will say again, I think our faults are not so much due to the condition really of our digestive organs, as to our want of thought. It is not that the stomach suggests to us unwholesome foods, but we do not think about them, perhaps rather like them, and we take them, whereas we have to consider carefully what we are going to get most nourishment out of, with least trouble, always provided in keeping ourselves fit that we are having plenty of air, and a sufficiency of exercise.

With these precautions, and with a simple diet, without hurrying meals, without drinking much at meals, all ordinary men ought to keep themselves fit. And I would only say, in conclusion, that it is not so much the kind of food, so long as it is wholesome and simple, as the way the food is taken, the circumstances under which it is taken, the extraordinary combinations made, that upset the digestion, and keep the individual from being "fit."

III

CLEAN-MINDEDNESS

BY SIR DYCE DUCKWORTH, BART., M.D., F.R.C.P.

I REGARD it as a privilege to be asked to address you this evening. I know something of the value of this Association, although this is the first occasion on which I have had anything to do with it.

My life-work has lain in several other lines of duty for the benefit both of the bodies and souls of my fellow-countrymen, and I know that it has been a very full life, the events of which few are aware. My standpoint in such duties as I am engaged in here have been conducted from that of an Anglican Churchman, aloof from all parties, and with such a measure of comprehensiveness as is natural to members of my calling which leads us to deal with all sorts and conditions of men. If I had to choose a title for this address I should best find it in St. Paul's words—"To the pure, all things are pure." Here, surely, we are on ground that all good men and all Christians may stand securely wherever they may be. For those who now listen to me, it may be declared that you have already stepped out into the world and are facing everything that is around you.

In this wilderness of London you see every phase

of life amidst the rush and pressure of strenuous lives. Very interesting and engaging, seductive and tempting. It is hard to face it, and for any young man to find his proper place and lead a wholesome, unstained life in it, especially for those who come from smaller and quieter environments. You come here to varying spheres of occupation, and many of you leave happy and innocent homes behind you, and find yourselves much alone, a mere unit in the hurrying crowd of millions of your fellow-creatures. I know by experience what this means. If you have joined this Association, you have certainly done well, and must have been relieved of much of this depressing loneliness. Yes, we have all at one time of our lives to go right out into the busy world, and much depends upon the start we make. A wrong start may at last spell ruin for us. It is hard, and sometimes impossible, to begin afresh after once being involved in going wrong, and there are many ways, alas! of going wrong.

This evening I am to speak more particularly of one very common way of falling away from the high moral line of conduct which is imperative for every young man in every line of duty which he may take up wherever he is placed. The clean mind is, we shall find, the great safeguard against the evils we are to discuss. Now it is largely the duty of doctors to come to the help of young men who are starting on their life career. It is so because we know more of the real inwardness of matters which tend to render the mind unclean than most people. I am speaking of impurity, and of

no other sins (of which there are many, that are both degrading and soul-staining), a sin which is sadly frequent, and one that is, apparently, in the sight of man of much less consequence than other more flagrant sins, such as lying, stealing and other breaches of God's laws, which are open and more readily recognised than impurity. Sins of impurity appear to go undiscovered, and are often not found out. Men tend often to commit them in secret, and keep them from the knowledge of all whom they love. If there is a hardened conscience, little or nothing of this evil seems to trouble the evil doer. If there is still a sensitive conscience—and thank God if there is—there will remain a sense of shame and disgrace which will eat at the heart of the impure man and embitter his life till he at last mends his way.

Now let us see what are the beginnings of unclean-mindedness. Those with which I am now particularly concerned have to do with the sexual system and natural instincts in man. These are, as a rule, more vigorous and urgent in the male than in the female. The first appeals to these organs in our bodies are noted sometimes as early as in the twelfth year, but generally after the age of fourteen, becoming more marked as time goes on. It is at this period that boys are too often led to practise the mischievous habit of self-abuse, too often initiated in this sinful course by companions who may yet be, at first, innocent of the danger that they are incurring and promoting. This habit is a secret one of which the lad is really ashamed in many cases, but it tends to be more and more

indulged in, till at last the victim loses so much vitality that he falls behind his fellows in energy and powers of keeping pace with them both in his work and his play. This is a matter well known to all good schoolmasters and school doctors, and well is it if such practices can be discovered and rooted out. This is one of the reasons that active and athletic games form so large and necessary a part of boys' education, which too few of their parents realise the absolute necessity for. No boy can practise self-abuse and be an active cricketer, or play up well at football or any other pastime. He becomes a "slacker" and a "shirker," timid and listless, however good his ability may be. His older brothers and enlightened parents should always suspect this evil in such cases and take prompt measures to inquire into it. This is a delicate matter for them, and it is a much easier one for a wise and careful doctor to deal with, less easy for the clergyman. The best combination here is the associated duty of "the priest of the body" with "the priest of the soul." This is, or should be, irresistible in instituting a clean life in any well-nurtured youth. No time should be lost.

Next, we have to deal with sinful habits which come on in later life when youths go out into the world, and so face its allurements and seductive temptations. These beset young men in both city and country life. They are to be expected, and they are to be met, and met only in one way—by the rule of absolute chastity. Happily these temptations are now less obvious than they were some

years ago in our streets, but even now they are not far to seek. I am speaking now of carnal intercourse between young men and young women, a matter still too lightly regarded, not recognised as a grave sin, and a breach of God's eternal law for man, as it plainly is. The inward passion and desire for such intercourse is very strong in healthy men, and hard to check and stifle. But it must be done, and it can be done. The appeal to stifle these implanted desires can be checked by a high-mindedness and honour that is surely given to those who will stop to consider what they are tempted to do. Let me mention some of these effective safeguards when the man is moved to lust and carnality. First, he has to remember that he is a man, stronger in body and will than woman; that God expects him to play the man on all occasions, to protect woman in her weakness and save her from herself. This is chivalry, which can never die out as long as there are the weak to be protected. Next, there is the solemn reflection that, on the verge of some temptation, you have, or have had, a loving, devoted mother who bore you, and ever longed for your best welfare in this and in the next world. Again, you perhaps have sisters who love you, and you could, when in possession of yourself, never imagine any one of them being in relation with any man after the manner you are tempted to do.

If such memories do not rise up at times of burning temptation in your minds I am sorry for you, and I must then come to urge the greatest of all safeguards, which should indeed come first into

your minds, and that is the solemn remembrance—
“Thou God seest me, and Thou hast promised to keep me by Thy power and love from falling into temptation and grievous wrong-doing, if only I will try hard, by Thy Divine Holy Spirit’s aid, to resist this urgent desire.” If such thoughts, and such a prayer, came into any young man’s mind, had he been righteously brought up in the simple fear and love of God in his earlier days, think you that he would not receive power and grace to hold himself in check, and turn away from such dangerous impurity and sin? Ah! it is hard to say “No” sometimes to such inborn longings and desires. Why, say some thoughtless and self-indulgent men—why are such desires allowed to enter our minds if we are not to indulge them? It is only natural after all. If we restrain these desires, they say that we shall lose our health, and be but half men. It *must* be right to allow all the functions of our bodies to be exercised. Many men do it: why may not I? Let us reason together on these points, for it is not quite an easy matter for the ordinary man to reply to such declarations. First, I could say, Who knows most about this matter? God or man? Think you that our loving Father in heaven would have enjoined chastity upon the human race if He had intended it to be impossible for men to be chaste?

Next, I pass on to declare to you as a fact in human physiology that, although it is a fact that every organ in our bodies is designed for functional action, it is discovered that *the sexual organs alone are capable of maintaining their full functions*

without putting them into active use, even throughout a long life. That, I think, at once disposes of the teaching of the careless and ignorant man who is too often the guide of youth in this serious matter. Yes, chastity does no harm, but, on the contrary, better enables the man who practises it to become the father of robust children in due time. *Marriage can always safely be waited for,* as Sir James Paget said.

The evils of promiscuous intercourse are, as many of you must know, very great. Dangerous diseases may result from it which may ruin the health for life and pass on from the infected man or woman to their children, and this danger is sometimes the consequence of a single act of carnality. It is surely noteworthy that this heavy penalty should attach to this particular sin, resulting from an insidious infection which is sometimes present without being recognised by the unfortunate women who are the subjects of it.

I shall next speak of the vanities of temptation which assail so many young men, especially in large towns. There is, first, idleness, or want of interest in their particular duties. Loneliness amidst multitudes of people who have no interest in them. Freedom from home life and supervision by relatives. Careless and ill-living companions who have been too rapidly taken into friendship. Temptation to take strong liquors in excess at odd times. Pleasure-seeking, unwholesome amusements. These are yielded to in the absence of any interest in literature, art or music, or if there be no kind of hobby or varying occupation as a relief

from the office or the special work of the day. Surely in these days we find too many inducements to discard Sunday as a day of rest or cultivation of the soul, and as a day of which some part is designed for worship in God's House. There is now little excuse for a Sunday altogether of pleasure and relaxation as it is so commonly spent. We think we know better than our fathers did in this matter, and that we may now do what we like, and follow easy-going, thoughtless persons in this bad conduct, for this is what Sunday desecration means, and it is a sure sign of decay in any man's character when he ceases to regard Sunday as the Lord's Day. He becomes a less fine and less manly man, certainly a very imperfect Christian, even if he keeps other parts of the moral law. Nothing will make up for this lapse.

Then I note the mischief to a naturally clean mind of many of the so-called amusements. Consider the silly nonsense displayed in many of the music-halls, so largely frequented by young men and women to-day, and the unseemly cinematograph exhibitions, some of which tend to demoralise young people. Again, must we not reprobate a large amount of nasty impure literature, often quite indecent and sanctioning sexual sin, and certainly exciting the passions to evil in those who read it? Many of these vicious books and indecent pictures set young men on a course of lust and uncleanness, and it is not easy to have these bad books and pictures seized and impounded, as I well know. To be aware of these unseemly sources of temptation is to put you on your guard if you are in

earnest about maintaining a clean mind. If you are not warned, you will be left to buy a bitter experience for yourselves. Indulgence in such attractions spells moral uncleanness, and, indeed, most of these temptations are always ready to beset you. Can you say them no?

How are they to be counteracted and resisted? I have spoken of worthy companionships. One turns to the tone and influence of such an Association as this, which must firmly discourage the silliness and unmanliness of such allurements, for they are harmful to soul, to mind and to body. Be sure that I am not condemning honest and refreshing amusements which are necessary for young people. Happily there are plenty of these ready to meet the need of clean-minded persons. I do not condemn the stage when it displays its powers in honest and wholesome scenes, but I do condemn adaptations of dirty and debasing French plays which lead people to regard sinfulness and sensual nastiness as of no consequence, and are tolerated as fitting for professing Christians to witness and enjoy.

I therefore ask: Are we a Christian nation or are we not? Are such matters to be patronised and tolerated? It would really seem that they are accepted by a large section of the public.

Nothing appears to matter much in these days. Some one must rebuke evils, and with boldness; but, alas! we find much timidity both in Governments, and even in Christ's Church on earth, in this twentieth century.

As has been said lately by a great pathologist

and physician: "Clean living makes the great nation, and if the parents eat sour grapes, the children's teeth—aye, and much more than their teeth—are liable to be set on edge. Evil living must tell upon the race even unto the third and fourth generations" (Professor Adami, M.D., F.R.S.). Modern pathology thus supports the biblical statement.

To resist evil influences requires a bold stand sometimes. Be thankful if you have a tender conscience and any misgivings as to a line of conduct or indulgence. Ask yourself: Will it do me good, or will it offend my ideal of purity? Could I tell those dearest to me of conduct which would shock or pain them? Is it consistent with the behaviour of a baptised Christian to take part in, or look on at, certain so-called amusements and distractions? The tender conscience may be acquired if we do not possess it. How? you may ask me, and I answer: By prayer for a rightly guided conscience. Here we come to the bed-rock of the matter of resisting temptation to impurity of all kinds and degrees, a source of power ever ready to be imparted to all who use the means of securing it. Prayer is this source. It is hardly conceivable that a prayerful man shall deliberately go wrong, and do what he professes to be ashamed of telling his parents or his sisters.

You may think that I have been touching many grievous and unsavoury matters this evening. That is indeed true. If we seek to clean anything, we begin by removing the dirt from it. We are very careful about cleanliness in many matters in

these days. We attend to our drains, sweep our chimneys, make sure of having pure water, pure food and pure milk. We are very keen on getting pure air when we have a holiday. Perhaps some of us are not quite so keenly set upon the advantage of securing a clean mind.

In this association you have the great advantage of cultivating some work or occupation of interest which can relieve the monotony of your daily duties. This is a source of refreshment. Idleness is very exhausting. Do not be afraid of plenty of work, if there is some variety in it. Everything is open to diligent workers, and they are the least likely to have unclean minds. Hard work hurts no healthy young man. I feel sure that few young men work so hard as their fathers did in their day. I think there is too much play to-day, too much idle gazing at other people's play, as we find in the debasing and demoralising football matches now on too large a scale, and therefore unprofitable. I am strongly in favour of universal service for the defence of our country, and regard it as a simple patriotic duty for every young man to be disciplined for a short period in his life, and to learn his duty for the defence of his fatherland. I have no patience to find a few earnest, good fellows joining a territorial corps from some place of business, and a larger number of their fellows declining to follow their example. I am ashamed of the "shirkers" and "slackers" in this imperative matter. They are, indeed, little, contemptible Englanders.

In these days of discontent and socialistic follies it is impossible to have the sympathy and feeling

of Christian brotherhood which is so desirable for our so-called working men—so-called, I say, because so many of them are, alas! incorrigibly idle, demoralised by the principles which are now associated with trade unionism, a system which at its best has not enough Christianity in it to please me. I firmly believe that nothing short of universal military service will cure these evils, and let me remind you that I have been in touch with our less well-placed brothers, and had to do with them for forty years. They have no better friend than I, and I have learned much from the best of them. They tell us much that they would withhold from others in respect of the bondage of strikes and trade unionism. We need a little more clean-mindedness here, but it does not appear to come with compulsory education or doles, nor will it ever come by secular education without distinct religious teaching, which can alone help to implant the fear and love of God in the heart of the young. Convinced Christian teachers must have free access to all our schools, or we shall continue to produce many men ill-fitted to lead lives of honesty and faithfulness.

The clean-minded man, mark me, is a brave, loyal and patriotic man. He alone is best fitted to rise in the world, to lead others, and to do the best work in the best way. He is a man of trust. He is amongst the brightest, happiest and most robust-minded of men, for there is no gloom in the mind of one who pursues things that are honest and of good report. His tone is good, and his cheerful example is a power for good to all around him.

He succeeds in his business. God never forsakes the righteous. The clean-minded man is ever chivalrous, ready to shield and protect women. His influence amongst his fellows makes for true manliness amongst them. His unstained mind repels all foul and degrading talk, and none can charge him with insincerity, weakness, or poverty of spirit. His influence, no less, tends to promote and develop true womanliness in women, for, in my opinion, we find in these days much less of this than we need. We are suffering from too many displaced women and some displaced men, and we witness to our sorrow some sad developments of fiendish wickedness in women which a mawkish and imbecile sentimentality permit to run riot amongst us. We note just now a grievous decay of manners and propriety in the dress of young women which clean-minded men and women should rebuke and render impossible.

As I close I may remark that perhaps you think I have been uttering some severe judgments and condemnations on persons of both sexes. If you do, I have only to state that I have come here to say what I believe, and not to please anybody in particular. In support of my convictions, gathered in the course of a long and varied life, in many parts of the world, I claim a full experience of men and manners which I venture to ask you to consider carefully for yourselves. I venture to believe that this Association is a great power in the midst of this vast and seething centre of the British Empire for enforcing and illustrating the features of many clean and right-minded young men. We greatly

need your examples and influence; never more, perhaps, than in this twentieth century. Go out, each of you, to the work you have selected to do in the world, as prophets and apostles of purity and clean-mindedness. Fear no man. Fear God!

IV

ON THE VALUE OF DISCIPLINE IN THE NATIONAL LIFE

BY SIR R. DOUGLAS POWELL, BART., K.C.V.O., M.D.

I HAVE been asked to come and say a few words to you because, I presume, it is thought that one who has for so many years been in intimate touch with the lives, characters and ailments of men and women in hospital and private practice may find something useful and helpful to say to you in the way of encouragement and warning. I understand that I am addressing many who are, or have been, or are intending to be, in the Territorial Service of their country, some who are or have been Scouts, and some who, being neither of these things, are yet on the threshold of life and doing their best to become fit and worthy citizens, full of the zeal of high endeavour and determined to attain and to maintain a physical and moral robustness that shall give them a fearless outlook in the troublous times that may be coming for us all. One of the greatest statesmen and most profound men of the world of the last century observed that a sound mind in a sound body was the primary need in every member of a progressive civilisation. The undisciplined mind does not long remain sound, and the untrained body soon becomes weak and flabby. I

am venturing, therefore, to take to-day as the peg on which to hang my discourse—"The Value of Discipline in the National Life."

Now, what is discipline? what do we mean by it? *The Century Dictionary* defines discipline as "a mental and moral training either under one's own guidance or that of another: the cultivation of the mind and formation of the manners." Another—perhaps more clear—definition is "development of the faculties by instruction and exercise." There are other meanings of the word, such as "correction," and especially "self-correction" and "punishment." But I think the first definition I have quoted brings into view better than the others the double aspect of discipline that I want to impress upon you, viz. that it must be learned from within as well as accepted from without.

There is, you will say, a discipline of the body as well as of the mental and moral nature, and we shall find practically that the one governs and even includes the other.

The word "discipline" has its root in the word *discere*, to learn, and signifies "training." In the sense of being a learner a disciple is also a follower, and may in time become a teacher and promulgator of the teachings and doings of his master. Thus Plato, the great Athenian philosopher four hundred years before Christ, had his disciples, whom he taught and with whom he conversed on subjects relating to life and death, statesmanship and citizenship, "love for truth and zeal for human improvement" being the keynotes of his teaching.

The disciples of Christ learned from Him the divine laws and wisdom which they dispensed to others.

“Disciple” is the learner, “discipline” is the mental and moral training and restraint acquired by learning, not the learning from books so much as from teaching and example. You will not have failed to note in our definition that discipline is the mental and moral training acquired either *under one's own guidance* or that of another. You are all free-willed men, and if you would learn you must appreciate and mentally digest what is taught you or what is placed before you for your consideration. You must turn things over in your own mind and consider them in their bearings upon other things before you can thoroughly become disciplined on principle. But let me entreat you to take things from trusted teachers on faith until you have had time to study them critically: and, without professing any competence to speak to you on religious matters, let me urge you to preserve and cling to, with all the tenacity you can command, the faith that is in you, that you acquired as a child and have been taught or confirmed or reaffirmed in at a later age. Don't allow yourselves to be persuaded from the discipline of religious belief by the glamour or mirage of science or the sneers of evil or foolish companions. You are justified by the wisdom of the centuries and of the present day. I have lived through the times of the most gross materialism which was rampant in the last century, and now witness a return to a spiritualism which threatens to become equally

fantastic. Let me say again, then, hold to your simple faith, in which you will find a sure support and an ideal for the highest and best-disciplined life.

Let me take an example or two of discipline, and I will take them from military life. It is a regulation that on the march men must not break away from the ranks under any circumstances without permission. This would seem a simple rule enough and not difficult to remember and follow. But let us transport ourselves to the plains and hills of South Africa on a long march under a burning sun, passing a tempting pool or rivulet, and it might seem a severe deprivation, requiring all the stern self-command of a fine discipline to obey. I need not tell you that it is based on medical observation resulting in strict rules for the preservation of life and health. Here is a story from an officer in the late Boer war.

“A column was marching from Dronfield to Fourteen Streams, Cape Colony. It was very hot. The troops had had but a very small quantity of water in the last twenty-four hours, had marched very far and fought an action. In one company the officer, looking back, noticed that six of the younger men had left the ranks to get water from a pool which even horses would not drink. He rushed back and ordered them to fall in. They, of course, obeyed, but it was too late, and four of them died within a few weeks at Potchefstroom of enteric fever.” Again—

“A regular brigade was camped two years ago in Wales. Elaborate water arrangements, with ample

stand-pipes, had been supplied from an unimpeachable source. But there happened to be a stream running close to the camp. About thirty men went down with enteric, and several died. On investigation it was found that these men, sooner than take the water provided, had filled their bottles from the stream, which was found to be polluted. The men could not know that the pool and the stream were infected with the bacillus of typhoid fever, but they lacked the discipline to obey orders which were based upon knowledge. They lost their lives, which were their own, and they threw away their services for their country and diminished the fighting strength of the army."

Discipline is really the repression of self for the benefit of the community. The noble epitaph left on the ice-field of the Antarctic desert to the memory of Captain Oates—"He was a most gallant gentleman"—is an immortal tribute to self-discipline. Captain Oates deliberately walked out to his death rather than further hamper the movements of his exhausted comrades.

It is discipline that impels the soldier to keep his tent clean, sanitary and well ventilated, not to soil the ground about it by spitting or any other befoulement; to walk, when perhaps fatigued by his day's doings, a hundred yards to the latrines; to keep awake when on sentry watch after a fatiguing march or a severe engagement. Discipline is in all these particulars a strict obedience to orders and regulations which—if you think of it—is based upon a complete subjection of self to what is for the safety and welfare of all. It has its primary

factor in the virtue of obedience, but it must be fortified and engrained in us all by much inward searchings and thought. Discipline is rooted in obedience, it grows with a growing sense of the duty of man to his neighbour. The great Chinese philosopher, Confucius, of the sixth century before Christ, said "the superior man may have to endure want, but he is still the superior man. The small man in the same circumstances loses his self-command." Again: "What you do not like when done to yourself do not do to others." And this rule of conduct was repeated more positively in the Sermon on the Mount: "Do unto [towards or for] others what you would they should do unto you." We shall find, if we think of it, that this precept underlies much of the virtue of discipline.

I have spoken of military discipline especially because the first and most clear examples are found in military life, and I am aware that I am addressing many who are proud to subject themselves to it. But in civil life—the life of the civilised world—discipline in conduct is equally important and is observed by all the best men. The habit of spitting anywhere, and especially in public places, is undisciplined, selfish, and wanting in control as well as dirty. The selfish seeking of one's own safety in preference to and at the expense of others is a want of self-discipline which is at the root of all panic. It is, happily, rarely to be witnessed in Englishmen.

In the endeavour to become fit the exercise of self-discipline is very necessary, especially with regard to two classes of stimulant which, in excess

and at improper periods of life, are poisons—I mean tobacco and alcohol.

If I as a physician were to prescribe in the form of medicine the amount of nicotine absorbed daily by many smokers, I might justly be called to account by my medical *confrères*, if not by the law, for harmfully treating my patients. The profession has long since condemned the medical administration—except in special cases and under strict supervision—of doses of alcohol far within those taken daily for years together by many men who think themselves moderate.

Let me speak first of the less harmful habit of smoking. I have never smoked myself—unless possibly a little brown paper when I was a naughty boy at school: it has been one want less in my life, and has incidentally saved me some hundreds of pounds and lessened the foulness of the London atmosphere! But there is no harm in smoking for grown men; indeed, I think it is valuable to some of them. It is at least an enjoyment that is quite innocent, and in which, in some form or another, solace is found throughout the world. But for young and growing lads smoking even in moderation is distinctly bad, and no youth under eighteen or twenty should ever use tobacco. It diminishes muscular tone and development, tends to stunt growth, spoils the “wind,” mainly by impairing heart power, mainly by weakening the nervous mechanism of the heart. It also causes languor, diminished power and inclination for work. Excessive smoking does all these things at all ages, and I have known cases of convulsions and

severe attacks of heart failure through great excess in the use of the drug. But apart from such very serious symptoms, much disturbance, especially of the heart, and a disposition to early degeneration of the vessels ensues upon excessive smoking. If, then, you young people would keep fit, don't smoke until you are older, and then only with strict control not to make a vice out of an enjoyment.

There is one other point in connection with smoking that I would like to put, and that is that it specially calls for the exercise of the discipline of courtesy to others. I was once in a railway carriage returning rather tired from a long journey to the North. I had a dinner-basket handed into my carriage, which was a non-smoking compartment, and just as I was about to commence on my humble chop a well-dressed gentleman came in with a big cigar, and, having struck a match, leaning over towards me, politely asked me if I objected to smoking. Well, my look of speechless surprise was enough, and he was about to get out of the carriage when I said, "Not at all, sir, if you will only wait until I have eaten my dinner, when I will propose the health of the King!" He put his cigar down with rather a twisted and shamefaced smile.

Again, a young gentleman once got into a compartment in which, besides myself, there were two or three ladies. He had a lighted cigar, but looked round unabashed, with the formal inquiry, "Did the ladies object to smoking?" Well, I leant over to him and said, "Really, sir, we are only twenty minutes from Victoria; don't you think you could

hold in for that time?" He accepted the rebuke quite nicely and threw his cigar away.

The intemperate use of alcohol is so obviously bad that I need say but little about it. Alcohol is entirely unnecessary, and, generally speaking, harmful to any one up to eighteen or twenty, except in a few cases in which it is especially prescribed for illness. Indeed, children and, as a rule, young people dislike it, and its use by them is generally traceable to bad example or direct encouragement. But there is no harm in the moderate use of alcohol with meals by fully grown people. The essence of temperance is, in the first instance, to take no alcohol of any kind—wine, beer or spirit—between meal times. I never knew a drunkard who did not really get intoxicated with alcohol taken between meals, and I never knew a really temperate man—*i. e.* a man who did not exceed the reasonable limits of discretion in alcohol—who took drinks between meal times. Of drunkenness I need not speak: it is an insanity which is often past praying for, and does not really come into any question of fitness. But we may, warned of its commencement, sometimes be able to say to ourselves or to a friend, "That way madness lies." "Oh! that men should put an enemy into their mouths to steal away their brains." It is the lesser degrees of alcoholism, enough to steal away or weaken *discretion*, that cause many men to yield to temptations to vice which they could otherwise easily resist. The practice of nipping is the worst form of alcoholism, from a health point of view. It is often indulged in on excuse of transacting business or from a false

sense of hospitality. It weakens the discretionary powers of the mind, hardens and spoils the elasticity of the vessels, and causes chronic diseases of the liver and kidneys, besides weakening resistance to many other diseases. Needless to say that, far short of any of these disastrous consequences, it blunts the sensibilities and impairs general fitness.

Courtesy, respect, good manners are the outward marks of self-discipline, and a man is often described according to his age and in whatever social position he may be as a "cub," a "hooligan" or a "bounder," who is wanting in these marks of self-discipline.

It is the misfortune rather than the fault of many young people that they are thus wanting in discipline. With the best of intentions, the discipline of self-control cannot be adequately taught in the primary schools of this country, and children but rarely learn it in their homes. Their intelligence is cultivated, but their characters are starved.

The London County Council school teachers are doing their very best in recent years to form the characters of the children, but they have the disadvantage of all day schools in respect of discipline, in that the boys are only under control in school time and not in their leisure time. And a special danger to the development and growth of the character which shall make them men in mind and physique comes in the interval between the end of their school time and the beginning of regular work. Let them be placed under conditions that develop a manly and disciplined character,

with thought for others and greater respect for themselves, and their high spirits and restless craving for adventure are tempered to fine courage, greater physical capacity, a sense of good fellowship and a well-bred pride that keeps them from all meanness. Church schools and the influences of various denominations help in building up character to higher ideals.

The London Juvenile Advisory Committee of the Board of Trade is doing good work in connection with the juvenile side of the Labour Exchanges, and in co-operation with various associations, in finding employment for youths and in directing them to such useful, practical objects from the time of their leaving school.¹

There are the Children's Care Committees (let it be noted that every one is technically an infant under twenty-one years of age), which, since 1909, have been appointed in connection with each public elementary school, one of the chief duties of which is "to advise and help parents in connection with the employment of children, referring suitable cases to the Local Advisory Committee, Local Apprenticeship Committee or other agency, and generally to befriend children leaving school with useful guidance and advice."

The Church Lads' Brigade, Boys' Life Brigade, Boys' Naval Brigade, Boy Scouts, the Salvation Army (Band of Love Branch), the Boys' Brigade, the Sunday Institute, National Brotherhood Council, the London Diocesan Church Lads'

¹ Handbook for the use of the Local Advisory Committees for Juvenile Employment in London, 1913.

Brigade, Catholic Boys' Brigade, Jewish Lads' Brigade, the Band of Hope,¹ the Church Army, the Church of England Men's Society, furnish good ideals and the discipline which ideals bring to at least half a million boys. And there are corresponding institutions, fewer in number, for girls.

The admirable Association of Boy Scouts is calculated to develop the healthy, adventurous and manly and chivalrous instincts of boys from an early age until they are old enough to think out things for themselves and to appreciate how sound the foundation is of the discipline they have learned, what a help it has given them in character and self-control, how much better it has equipped them for the work of their lives in whatever circumstances they may be placed, and how easy it comes to them, having command of themselves, to work with and to influence and help other people. There is no greater or more far-reaching institution in the country, and it is the wish of all good men that it may flourish and extend. I am particularly glad to hear that the Scout Association has been affiliated with the Y.M.C.A. We want much more of this linking up of kindred institutions with certain broad objects in view, leaving each institution free to foster its special beneficent aims.²

¹ The Band of Hope alone includes 3,700,000 children, but the majority are perhaps quite young, and I have reckoned youths at 50,000.

² The Mansion House Advisory Committee of Associations for Boys is also doing good work in this respect. It consists of (1) representatives from most of the prominent organisations for the welfare of boys; (2) representatives from several Government Offices; and (3) co-opted members. Its functions are

Another institution, on similar lines, has recently been started by the generosity of Sir Lucas Tooth, which will, I hope, dovetail in with the other schemes.

Thus there are many institutions *which are not charities* doing very valuable work for the purpose of helping youths at the most critical time of their lives—after leaving school and before and during the apprenticeship to the business of their lives. Such institutions might well be affiliated in some way for this common purpose, whilst, of course, remaining perfectly independent and autonomous in the special objects of their beneficence. I have often thought that our great City Trade Guilds might, for London, give a lead in this matter by way of partly resuming—in accordance with modern times—the great purpose for which they were originally founded.

Our National Territorial Service is a further step. The Territorials—whatever further development they may assume for the home defence of this country—should be largely recruited from the Scout Association, and much more generously supported by the public at large. It is a service which, like the old Volunteers, should meet with every possible encouragement, and those who belong to it may rightly feel that they are doing something for their

advisory, and the internal economy of the separate organisations is not interfered with. Its objects are (*a*) to secure co-operation between these organisations; (*b*) to take steps to get all boys enrolled in one or other of them, and (*c*) to collect information about employment, educational and mental capacity, physical development, etc., and to supply the Government Departments concerned with the well-being of boys with such data.

country and helping to maintain that security for their homes which has been won for them in the past by the glorious efforts of their forefathers.

The time will certainly come when our manhood will be put to the test; it may be very near, and upon our readiness and home equipment to defend the country, whilst our regular Naval and Military forces may be dispersed to meet the fight in other parts, will depend whether we are to sink into servility and degradation or remain free to work out our own destinies.

This is a little aside from my subject, but the object of all fitness is security for peaceful civilisation, and if the male cannot defend himself and his home, by all the laws of nature he must and should be thrust aside and make room for sounder men and a more virile generation. This is the law of the wild and the fundamental principle upon which all corporate life is based. No loafers or degenerates can exist in wild life.

I confess I should like to see those thousands of able-bodied young men whom one may observe looking on at football matches themselves engaged in some more strenuous sports, and I would also wish the game of golf—the futile pursuit of a silly little ball—excellent as it is as a recreation for brain-fagged men who are becoming short-winded and podgy with approaching middle age, forsaken by young men for something more strenuous, and which might prove useful to the needs of their country, such as rifle contentions, motor scouting, Yeomanry service, and Territorial duties. I think

the women of England should see to it that their favours are to be won by those who not only can amuse them but can also defend them.

And now, gentlemen, I am going to speak on another aspect of self-discipline which is more difficult and delicate to handle, but which I shall endeavour to lift out from the rather low standard of mere sensuality by which it has usually been estimated. For the sexual function is the main-spring of organic life and God's gift to the universe, and with a due recognition of this you will see the *rationale* and need for self-discipline in this important relation of life.

Now the keynote running through much that I have to say is this. It has been increasingly recognised of late years by physiologists that every organ which we possess has not only its obvious function—be it cerebral action, liver, kidney or other gland functions—but that, in addition to the exercise of its primary duty, each organ supplies an internal secretion to the being in which it dwells which reacts in various important ways upon the whole organism, and which also conveys messages or impulses to the consciousness: all our appetites, for instance, may in this regard be looked upon as impulses suggested by the organs themselves.

The generative organs—in addition to their special function—thus supply a larger range of impulses than any other to the consciousness, and it is from a deficiency in scope of outlook that we regard them mainly from the point of view of their grosser purpose, and fail to perceive their larger relations in the divine scheme of nature. In their

promptings the most noble thoughts and aspirations and impulses to duty and conduct have their origin, and this is so even before and after the period of efficiency of their special function. In truth, the germinal bioplasm, the product of generative maturity, is the fundamental factor of nature. It is the Alpha and the Omega of organic life. It is endowed with the spirit of increase, the inspiration of sex to which all the beauty of the world and many, if not most, of the great virtues of animal and human life are mainly attributable. The fragrance and the beauteous colouring of flowers, the gay plumage of birds, the brilliant hues and sometimes luminous scintillations of insects, and the graceful lines of beasts, are mainly sexual features inspired by the spirit of increase for a divine purpose—the continuation of life, each form in its kind. The germinal bioplasm in which the spirit of increase—I use the term for want of a better one—dwells is the only part of organic nature which can be regarded as immortal: it is in all higher vegetation and animal life bi-sexual, consisting of the sperm and the germ whose union is essential for the perpetuation of the type.

Human beings are animals in all these respects, but they are also endowed with the divine gifts of reason and free-will and the responsibilities and restraints which they entail. The sexual instincts of the beasts of the field and the fowls of the air are in cold storage except at certain proper seasons of the year adapted to the best prospects of rearing the prospective progeny. They are *given* their discipline. Human beings, with their

freedom of will and greater powers of reasoning, have to *learn* theirs.

The impulses of beasts and birds to love, jealousy, anger, combativeness, especially manifest at the breeding seasons, are for the benefit of the race, the perpetuation of the most fit. Their secondary virtues of courage for defence, maternal instincts, provision and care of the young, are similarly inspired. Man had in primitive times, and has still, precisely the same impulses prompted from the same source and designed for the same purpose, which, by his intellect and divine gifts, have become softened to the usages of civilisation.

It is in its mature beauty that the plant flowers and produces the seed of increase: it is at due seasons of greatest perfection that animals produce their young. In each case the tiny seed, by virtue of the creative power that is within it, runs the whole gamut of the evolutionary stages appropriate to its kind, to produce the giant oak, the delicate lily, the comely leopard, the human being: we cannot initiate life, we do not even understand what its essence is, we can only perpetuate it; and the same divine power—the spirit of increase—that gives the fragrance and seductive beauty to the flower and the savage virtues to the beast, gives to mankind the intellectual power to clothe with beauty and sanctify with due restraint the perfectly natural impulses with which he also is endowed.

Let it not be forgotten, however, that the passions are elemental, and are only controlled by the discipline that each man is taught or learns for

himself. And, believe me, I know well how much greater the struggle is for some than for others in subduing to discipline and control the passions of anger, hate, jealousy, sensuality and greed, with one or other of which each man is more especially beset.

Let me conclude by advising you to have your spare hours occupied. Idleness is one of the worst illnesses of mankind. Read good literature, especially history, books of adventure and wholesome fiction. Belong to some athletic club or association involving open air exercise and leading to good and cheerful comradeship and wholesome competition.

By no means shun society and social enjoyments; the solitary man is most apt to fall. And finally, believe me, you have my good wishes that you may in good time find your reward in the union with the other pure and happy life that is, I trust, waiting for each of you.¹

¹ Sir Douglas Powell spoke more specifically to the young men than he thinks it necessary here to report.

V

A SOUND MIND IN A SOUND BODY

BY SIR GEORGE HENRY SAVAGE, M.D., F.R.C.P.

THOUGH a very old lecturer, this is my first attempt at addressing your Association, and I feel diffident in talking to a non-medical audience. I presume, I have been asked to give this address on account of my life-long study of mind and its disorders. A sound mind in a sound body is a great principle, and that is the text upon which I am going to speak to-night.

One has to recognise that the body may upset the mind, or the mind may be the cause of great bodily disorder. A simple cold will affect your temper or your business capacity, and worry will upset your digestion.

Now, I hardly know where to begin. I want you, first of all, to recognise that you are what you are by inheritance; but that is no reason for you to believe that you cannot help yourselves. There is truly some tyranny in your organisation and in the inherited qualities you possess, but you are greatly responsible for your future, and particularly for the future of your children.

I must enlarge a bit here on heredity. You have all heard a great deal recently about eugenics, that is, the science for improving the race. Well, Darwin

pointed out the importance of selection in modifying animals; and doubtless human selection may be of service, but we, after all, are not merely breathing machines. Our selection depends, in fact, more upon feeling than upon reason. Yet, I warn you, that reason and experience ought to influence your selection of a mate. There is no doubt that some forms of mental disorder are transmitted, or rather a tendency is transmitted: no disease is passed on as such. It is well to recognise that there is no entity insanity. Mental disorder may depend on such different conditions, that while in one case it is an accident, and is no more likely to be transmitted than is a broken leg, in other cases it is as likely to reappear as a black strain in one's ancestry.

I have sometimes compared the hereditary tendency to the mycelium of a mushroom. Underground there are innumerable, almost invisible, silken threads, that really represent the plant, the mushroom. But what we call this is the fruit, or flower, that appears on the surface. So with heredity, there is constantly an unseen and unrecognised strain, and it is only special conditions which produce the full result, or plant. And though insanity may occur in a family, the majority of that family, probably, is sane, and not unlikely one member may be much above the average. Do not suppose that I am advocating all those belonging to nervous families to marry, but I wish to remove unreasonable dread.

Insanity has always had the misfortune to be looked upon as differing from all other diseases. The spiritual element has always dominated, and

priestly treatment and the visiting of shrines has been a usual treatment. You have fully to recognise that some forms of mental disorder are malignant, and, as it were, saturate the family. And the members of such families ought certainly to refrain from marriage. Let me take an example. A millionaire makes and leaves millions of money. He has four children, whose mother died of brain disease. One of the children was alcoholic, another epileptic, and two were subject to recurring fits of insanity. They have not married, and I trust they never will.

There is one thing worth knowing, which is, that insanity, if it is inherited, generally shows itself, or at least gives nervous warnings, before children have reached twenty-five years of age; so that I often encourage marriage in the offspring of the neurotic, or insane, even, who have reached that age without any nervous breakdown. I may say here that mere cousinship is not a bar to healthy offspring if the families are free from nerve disorder; but if there is nervous weakness on either side, marriage certainly should be avoided.

Next, as to yourselves and your responsibilities. Some philosophers will not allow that we can transmit any qualities which we ourselves have acquired, and point to the fact that the lopping of dogs' ears and tails does not lead to tailless or earless puppies. - But I am quite certain that habits started and established in adult life may, in one form or another, appear in the next generation. To have a sound mind in a sound body; your earliest years are all-important, and for those we depend

on our parents, but we have to regard them for our children. My belief is that, as members of a fully organised society, we have to recognise that no one can live unto himself; he has to learn to fit in, so that obedience and discipline have to be learned. True freedom is the power of moving in any direction without friction, and this must mean that we regard others as much, at least, as we consider ourselves. The child only recognises everything near it as part of itself, and it is only in time that it learns that it is a small part of a whole. Duty and discipline have to be learned, and here I may, for a moment, turn aside to consider habit and instinct.

The law of the harvest is to reap more than we sow: sow the act and you reap the habit: sow a habit and you reap a character: you sow a character and you reap a destiny. The lower animals—and the lower the better the examples—provide the most marvellous cases of instinctive actions. I will take the example of solitary wasps. These wasps make tunnels several inches deep, then they place an egg at the bottom, and proceed to provide for their offspring which, in due course, appears as a grub; for this purpose they seek some insect or a caterpillar, which they sting into insensibility, this they place near their egg, which, in due course, being hatched, finds living, but insensible, food near them. Mind you, the wasp stings always over the nerve centres, thus producing permanent paralysis, but does not cause death. Here, then, we have an instinct which never fails, yet how was it transmitted? The egg has to become a caterpillar, the caterpillar a chrysalis, and this, in turn, to

become the wasp, yet through these various changes a power of perfect reaction is passed on. They, apparently, cannot help following definite lines of action. With us there is choice. The exercise of a will and the performing of an action at once opens, as it were, a fresh path, and the next movement along that path is easier than was the first; and at last the first could be traversed, as it were, in the dark. It is thus with our general actions, and we soon are able to do many things without any consciousness of doing them. Take the example of the skater or a musician. Thus a habit is established, and habits make up character, and character, as I say, shapes our destiny. It is all-important, then, to be careful in establishing a habit, for a habit, once formed, is very difficult to break. And the process of breaking a habit has been compared to the rolling-up of a ball of string, which is rather a slow process; but let the ball fall from your hands and the unrolling is rapid. So a breach in a reformation is a very serious matter.

I might spend the rest of my time in going over good and bad habits, but I am here rather as a physician than a moralist. Yet a few strike me at once. I presume, all of us are working men, working for our livelihood. Well, truth and honesty are essential, and one form of honesty, which I miss in some of my friends, is exact punctuality. The habit of being punctual is not confined to your business duties. For good health, the regular performance of your bodily functions is necessary. Punctuality at meals and other functions will avoid much physic-taking and doctors' bills.

I know some of you will want to know my views about alcohol and tobacco. Well, to begin with, I am neither a teetotaller nor an anti-tobacco man, but I am very moderate in both. I believe young men are best without any alcohol, but that in many light beer is not harmful if only taken with food. I would, however, say very strongly, that for anyone whose inheritance is alcoholic, no alcohol at all should ever be taken. And, again, I believe that no one belonging to a nervous stock ought to take alcoholic stimulants.

As to tobacco, I am an old-fashioned pipe-smoker, and I rather look with a kind of contempt on the cigarette-smoker, though I must admit I have met many cigarette-smokers who are among the most strenuous of the world's workers. It is said that cigarettes are less harmful as far as nicotine is concerned, but the practice of inhaling, and the frequency of the indulgence are the dangers. "Better is he that ruleth himself than he that taketh a city."

I have said that obedience is of great importance. And one learns, or should learn, early to direct one's course, first from the experience of others, and, later, from one's trials and failures. I know some parents who think the child should not be corrected, but should learn from its own experience. I have found such children are a source of endless experience to others, and are anything but agreeable companions. Children differ greatly in self-control, and it is my duty to see children who have grown up without control. In some, ungovernable temper is the curse, in others selfish self-indulgence is the

result. As we grow older, we have to learn to accommodate ourselves; and there are many traits of character which, not controlled, lead to mental disorder. We take it for granted that we men, alone of animals, have the power of looking forward as well as backward. No animal is supposed to be capable of contemplating the future, or death. In our consciousness we have a boon, but also a responsibility. All we have learned has been done consciously, but when well learned we ought to act unconsciously. Whether in work or play, the highest actions may be done unconsciously. This is eminently true of bodily functions. If healthy, we do not recognise the working of stomach, heart, or lungs; but very little derangement brings out consciousness. If you dwell on any function, you alter it; and we know that intense thought may modify the body, as seen in the stigmata of the Saints. Without being a Christian Scientist, I can say that our pains increase by recognition and contemplation. The functions which attract most personal attention are digestion and reproduction.

My advice about the first is, avoid drugs as much as possible. Englishmen seem to dwell more on the action of their bowels than ought to be the case, hence the great pill-makers compile huge fortunes. One left millions and endowed a college, and another endowed operas. Try to regulate the bowels by diet—brown bread, etc., and get into a regular habit to assist you. I see patients whose lives are wrecked by their inability to consider anything outside their bodily symptoms.

A much more delicate and difficult problem arises

in references to the reproductive organs. With adolescence a fresh series of feelings develops, and then it is no good denying their power and their influence, for good or ill. I meet patients, particularly women, who are so disgusted at the occurrence of these feelings that they become sleepless and unhealthy, and even melancholy. They are haunted by the dread that they must be radically low-minded to have sexual feelings or sensual dreams, and I have even known such disgust lead to suicide. Every normal healthy being passes through this stage, and it depends as much on the accident of temptation as on the character of the individual how he passes through it. Men differ greatly in the strength of the passion and in their power of control; and, like Bunyan, one feels grateful rather than proud if one has not fallen as low as some. Granted desire, and granted the common failure of self-control to some extent, the great thing is to make a fresh start, not to be disheartened. Doubtless indulgence leads to further indulgence, which, in early youth particularly, may lead to serious loss of nerve power; but checked and forgotten, there is every reason to believe in perfect restoration. Self-consciousness in this relationship is most dangerous. The youth thinks that all his manhood is ruined, and that an asylum will be his end. This has to be overcome, and when consulted by those who, in many cases, have been frightened by quacks or quack literature I say, "Let the dead past bury its dead." That one should feel a certain amount of disgust at sexual dreams is natural, but such dreams are perfectly

normal, and the less considered the better; the dreams do not represent oneself. In sexual matters complete continence is best, though I recognise that with some men under certain temptations this is almost impossible. But this does not remove the responsibility. A common idea is that to obviate these sexual temptations exercise and temperance are beneficial. Most certainly alcoholic temperance is imperative, and moderate exercise also is good; but exhausting exercises may not only reduce power, but also diminish the power of self-control.

I will not enlarge further on this topic, as men mixing with other men know what their special dangers are. But have high ideals, and live up to them.

I might, perhaps, say a word about reading. Nowadays I think we all read too much. It may be that reading may make the more complete man, but I see ever so many young men who do damage to themselves by too wide and general reading. I fear I must plead guilty myself to seeing too many newspapers. After all, the reading of the papers is a kind of dissipation. You must dissipate to some extent; but just as we see children who are always asking questions, but who never seem to mind what the answers are, so I find many men who spend hours over newspapers and learn nothing.

I may say I have met mental breakdowns associated—mind, I do not say, caused by—over-reading. In some it is a kind of restless mental itch. The persons are not happy unless reading, not learning. Though study in the evenings after work is good, it

should be moderate, and in relation to the day's work should differ, thus producing the change which is often rest.

This naturally leads me to consider bodily exercises. I may at once say I have been devoted to nearly every sport, and still follow some. In cities, gymnastics and drilling are both useful, and, as a rule, are not allowed by the instructors to be overdone. I am a believer in boxing, as I am in football, as leading to a high order of self-control. Walking is almost out of fashion, but I shall always look back to the tramps near London with Leslie Stephen, and botanical and geological strolls over a great part of England, with pleasure. Probably the majority of you cycle. This is excellent for taking you out of town into the country, and certainly for keeping ideas of business and other matters out of your mind. But I have seen a good deal of harm follow "scorching." In cycling and in walking, there should be a distinct interest; not merely the twenty or thirty miles, but names of places passed through, and anything which is of interest in their history. Observe, so that you might be a Scout, or be able to give exact directions as to where you have been. There is the old saying of "Eyes, and no eyes."

And now what comes of all this? First, that you are masters of your own destiny; that habits can be formed which involve the destiny of the race, that self-control grows, and that failure is not fatal. Your body is neither a master nor a servant, and your mind can be influenced by your surroundings. Moderation and self-control are the ends I aim at.

VI

DRESS, ETC.¹

BY JAMES CANTLIE, M.A., M.B., F.R.C.S., D.P.H.

I AM about to take you over a subject to-night, which, if you agree with me on the various points, I want each one of you to become a missionary, and to start off and tell others the things I tell you. I am going to talk about very common-place things, I assure you.

HATS.

First about our HATS. What a terrible thing a hat is! I am bald on the scalp. What from? Wearing a hat? Some of you are as old as I am, and some have kept your hair, and I will explain why you have done so, and why I have not. It depends solely on the shape of your head, or rather how your hat fits your head. Some people have round heads like mine, and some have long heads, and the man with a long head is not bald, whilst the man with the round, "bullet" head is bald. I will show you why. Here I have got a hat which, when I place it upon my head, fits me,

¹ The lecture was illustrated by lantern slides, and frequent reference is made in the text to the pictures.

all the way round, closely. Every hat I put on fits me thus. What is the consequence? I compress the blood-vessels. I compress my temporal arteries, and the arteries at the back of my head as well as on the sides of my skull, and there is no possibility of any artery or blood-vessel passing beneath the brim of the hat. I see, in the audience, men whose heads are so shaped that if they had this hat on a calling-card could readily pass between the hat and the side of their temples. It will not go up at the side of my head because the hat is fitting so tightly round. Whereas, in the case of the man with a long skull his temple falls in, and there is space where the artery can get to the top of the head, and can supply his scalp with nourishment. He is the man who will not get bald. It is wearing hats makes round heads bald.

As regards going about without hats, it is neither becoming, hygienic, nor wise. Those who do so look very awkward. They do not seem at ease out of doors without a hat. I traced as many as I could of the Bluecoat School boys, who are brought up without wearing hats, and I cannot find very much difference really, because in after days they take to hats, and going without hats in the early days does not seem to make very much difference as to the preservation of the hair.

The whole question of baldness and not getting bald is a question of getting proper nourishment to the hair. If you tied a cord round your head above your ears you would soon become bald; or take the case of children in our hospitals. Look at the child who has been lying there for

three, four, five or six months, it becomes perfectly bald at the back of its head. That occurs to every child who lies long on its back, the pressure of the head on the pillow stops the flow of the blood. Well, how are you going to cure it? Go without hats? I hardly think so. One does seem so silly, and one is exposed to the rain and sun. Every section of the human race wears a hat, whether it is exposed to the arctic cold or to tropical heat. We were never intended to go without hats.

Now, look at the band round your hat. What is the good of having a band round the hat? Because it looks well? No, it was first put there for use, like other features of our dress. It originated because the first hat was a piece of cloth or a leaf tied round the head by a cord to keep it on. But we still keep that string round our heads although our hats are hard. The cord remains although the necessity for it has gone.

What kind of hat should you use? Well, theoretically, I have made a hat which has been worn by a few men I know. If you put a corrugated band inside your hat, you have room for the blood-vessels to get up between the corrugations, and you will keep your hair. It is not a question of a lack of air. You can bore as many holes as you like in the top of your hat, but you will not save your hair. You may keep your head cool, but that won't preserve your hair, and the only way is to allow a free supply of blood to your scalp; and if you put inside your hat a corrugated band, all round, you will keep your hair.

FEET.

Now we will go from the head down to our FEET. Their state is more important, because a man can be perfectly fit, physically, with a bald head, but cannot if his feet are out of condition. The feet are, perhaps, the most important organs whereby to keep physically fit; you cannot walk if they are mis-shapen, and so you cannot keep your health. You find, nowadays, that a foot and a boot are at variance to what they were in your father's or your grandfather's time. We buy ready-made boots, and are forced to put our feet into what the shoemaker makes for us. Your father and your grandfather went to the shoemaker and made him make a boot to fit their feet. We have to make our feet fit the boot, a totally different thing. No two human beings have ever exactly the same shaped foot, and you cannot do with a ready-made shoe so much as you can with one made to fit your foot. The foot-gear is therefore a most important thing. You cannot get into the army or the navy unless your feet are in good condition. We may not want to get into these services, perhaps, but we do want to keep ourselves fit.

For to keep your feet in good condition is one essential to keeping yourself physically fit. You cannot do without walking and taking exercise in the open air; the gymnasium won't give you that. Now where is your big toe? The big toe is on the inner side of the foot. Where is the point of the boot? "In the middle of the boot," you say. Do you think that is right? The natural

tendency of your big toe is to break away from your second toe and to point inwards. It is rather like the thumb. But in our boots our feet are all huddled up, with the big toe pushed towards the second. There is a gap between your thumb and finger, so there naturally is between your first and second toe, and the moment you interfere with that gap you interfere with the strength of your foot; if the big toe be pushed to the middle of the foot you are not physically fit. You get corns, or a hammer toe. "That is a family toe," you say. There is no such thing as a family toe. If you have a second toe bent or "hammer" it is because your boots have distorted it. Perhaps twenty per cent. of people get their second toe thus distorted. Is the first or second toe the longer? In all the old Greek statues the first toe is shorter than the second. If your boot is made to fit your big toe, then you find it does not fit your second and consequently it is made crooked. It is the shape of your boots that distorts your foot. You were not born with a distorted foot. Corns are a disgrace to the shoemaker—or to you, for putting up with that shoemaker, and allowing him to supply you with what he thinks right instead of what you want; the consequence is you have many corns, your toes are cramped, overlap each other, and the little toe is rendered wholly useless by compression.

Whose fault is it? Primarily yours. "But," says the shoemaker, "if I made boots as you want me to I would not sell a single pair. If I made them shaped as you suggest people would not buy

them; I would lose my custom." I have been to scores of bootmakers and argued the point, and the invariable answer I get is disappointing. They say: "If we were to put ladies' shoes in the windows with toes like that not a soul would come near; consequently we have to make shoes that they will buy."

Well, then, the question is, are you going to wear shoes for the purpose of pleasing the shoemaker, or wear shoes to fit your feet? Lately we have got them to make square toes, but the fold in front of the outer toes, which develops in square-toed shoes, shows that there is an unoccupied portion, which is of no use whatever. This will bring corns, because you have too much room there. It is the rub of your shoes that brings you corns; not because the shoes are too small. They may actually fit you, but as long as you have got an extra bit where play can take place you are liable to corns, and that is one cause of physical inefficiency.

But the man who gets his toes doubled up is not fit; he cannot walk properly. So, then, if you want to get a shoe to fit you, avoid "store" shoes, and get a pair of shoes made. They will last three times as long as the bought ones. It will be a good investment for you and a saving in the long run, and in addition it will give you the possibility of keeping yourself physically fit, which a bought shoe will not do.

Few of us are proud of our feet. We do not care to show them. Let me ask you: Are you proud of your toes? When the doctors ask people

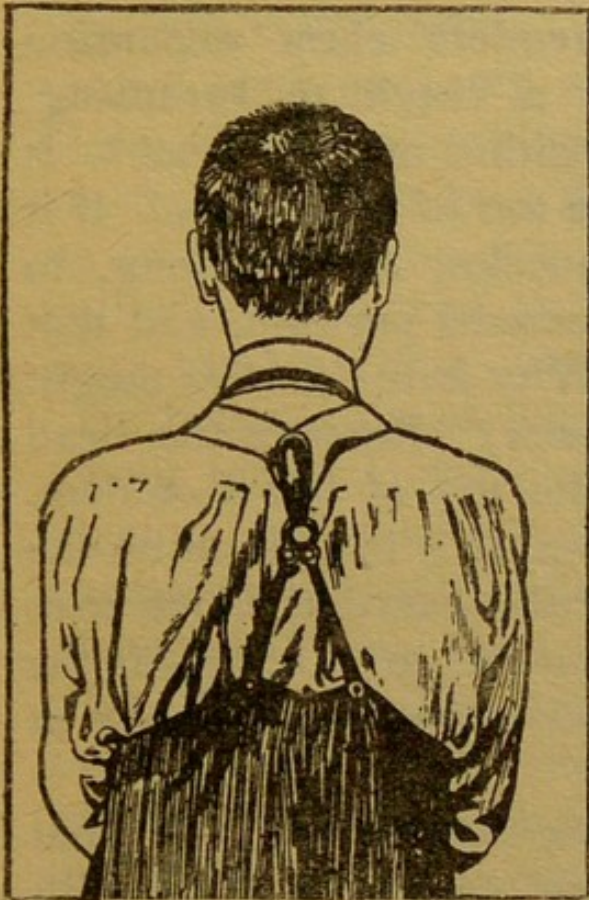
to take off their shoes and stockings, they will take off the stockings so far, but they won't take them off the toes, unless specially asked to do so. They apologize for the condition of their feet. Boots and shoes have perhaps more to do with our physical efficiency than any other article of clothing. We should be as proud of the appearance of our feet as of our hands. By distorting our feet we are offending Nature, and as usual must pay the penalty.

BRACES.

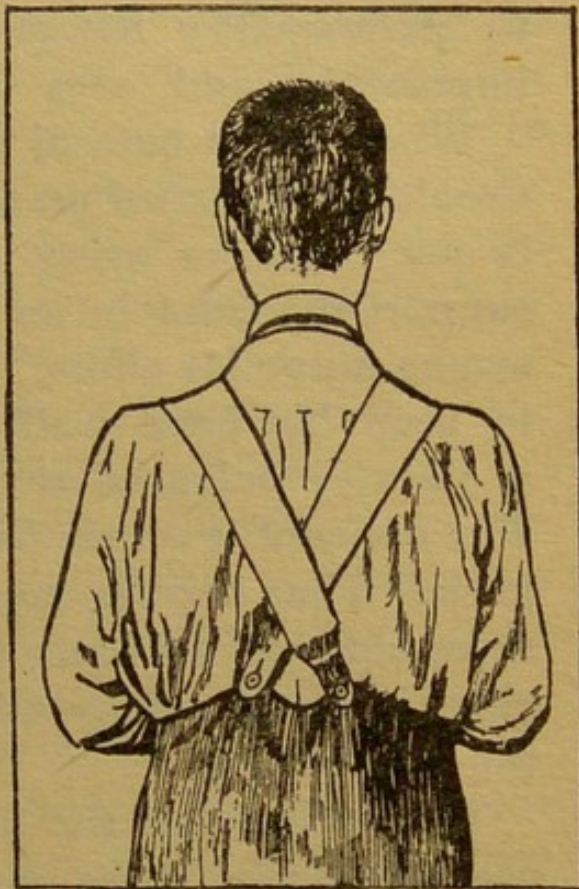
What kind of BRACES do you wear? "Oh, I get them in the shops," you say. Well, I do not allow any man to supply my braces. Those supplied in the shops are not the kind of braces your father and grandfather wore. They were not widely worn by the human race till the other day, and yet you walk about perfectly content to wear this unhygienic brace. What is the matter with it? It is joined behind. Your father never had his braces joined behind. You can't stand straight up with a brace that comes up to the back of your neck. If you are very tall, say six feet, it does not matter; but if you are of average height you find it does matter a great deal, with the brace joined behind to between the shoulders, and coming straight down from hence over the chest. For growing boys it is a most important thing. The parting of the braces at the back of the neck drags, not on the braces where they are attached to the

trousers behind, but upon the back of the neck, causing the wearer to stoop and to poke the head forward.

Here is a back view of a boy wearing the "joined" brace, and the evils consequent upon its use are patent at a glance. The braces are so



The unhygienic or joined brace.



The hygienic or separate brace.

tightly pulled up that there is even a kink on the right side brace, and the parting of the braces presses on the neck, causing the boy to stoop and to poke his head forward.

The relief experienced by the youth, whose back is here photographed, when I substituted the separate brace for the "joined" brace, was sufficient to cause him to forswear the latter for the future.

It is impossible for any one wearing a brace of the kind to stand erect with the shoulders "squared." Youths bending over desks all day at lessons, or in commercial houses, are notoriously apt to be round-shouldered; and when across their shoulders are straps, completely preventing them straightening their backs, the result causes them to permanently stoop, renders chest expansion impossible, and acts as a check to breathing.

What is the natural position of your head? It should be balanced on the top of your spine. If it is not, you are using muscles, all day long, to support the head in its forward position, and that means muscular effort. Why is the soldier taught to keep his head well back? Because his head is thereby balanced on the top of his shoulders. The moment it comes forwards it is a strain on the neck. That implies muscular exertion which tires them out, and the brace that has come in now is the chief cause of our round-shouldered young men at the present day.

The tailors and the haberdashers said: "What can we do with these young men going about with their heads poked forward, their chests hollowed? What can we do to keep their heads up? We will give them a high collar." They walked about then like animated monkeys. It is very comical, but you know quite well what I am saying is true. All dress comes by evolution, and the joined brace was the origin of the necessity for the high collar. That brace is quite recent. It was some enemy of the British race produced the one you wear.

As a further development of the joined brace and

high collar I got a man wearing these braces to stand up against a door, a position that showed well the curvature of his back and neck. "Keep your chin back," I said, but he could not because of the high collar. So I took off that collar, and put on a low collar, and made him stand perfectly straight. Then he presented a different-shaped appearance altogether. The high collar coming up to the chin does not remove the difficulty; the high collar was introduced for the purpose; it was an excellent idea, in a way, but it did not achieve its purpose. You get a pair of separate braces knitted for you, and put them on, and you will be twice the man you were before.

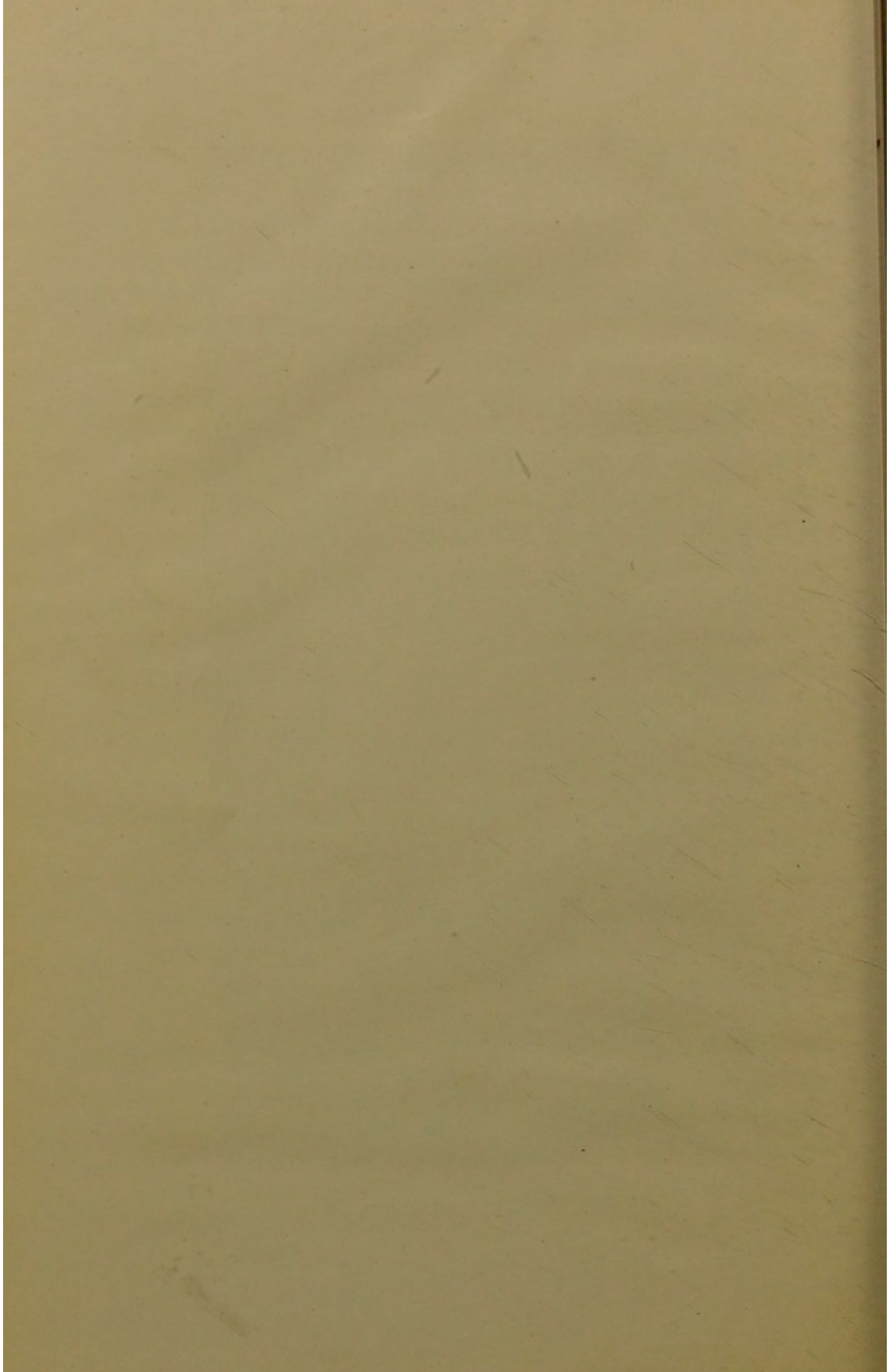
It is to be hoped that this condemnation of the joined brace, and the difficulty of obtaining the separate brace in the shops, will not drive our young men to adopt the elastic belt to supply its place. The brace may be bad, but an elastic band round the waist is infinitely worse. During athletic exercises there is a proper place to wear the belt, namely, round the body *below* the level of the top of the haunch bones; but, as in ordinary attire this would bring the belt to show below the waistcoat in front, it is impossible to wear it with everyday clothes. A belt worn between the last rib and the top of the haunch bone—that is, round the waist—presses upon the abdomen in a hurtful fashion, and in a short time causes an alarming and serious train of evils.

CLOTHING.

You know the death rate amongst boys is much higher than amongst girls. There are more boys born in the world than girls, but you find very shortly afterwards fewer boys than girls, because many of the boys have died. I think I will be able to explain why—because the boy is not properly clothed. When a mother brings her weedy son to me, I ask, "Have you got a daughter?" "Yes." Then I add, "Would you come back and bring her with you?" I take the girl's clothing and weigh it before the mother. I put the clothes on the scale and ask, "Now read off what is the weight of the girl's clothing?" Suppose the girl is three stone, probably the weight is three pounds. "Now take the boy's clothing. What is the weight?" "A pound and a half" to a pound and three-quarters. The boy is not thriving, but the girl is. Both at home get the same food, and live in the same circumstances exactly, except one thing. The boy is dressed in a light sailor suit, and underneath he has got on a combination "to keep him warm." The combination was once very warm. But we know what wool is. It shrinks, doesn't it? and consists of mere cords round his shoulder and round his groins, but his limbs it does not cover. It is a miserable garment. And so, consequently, the boys' clothes only weigh one and a half or one and three-quarter pounds to the sister's three pounds. But the girls are thriving, and the boys are not.



A BOY PROPERLY CLOTHED.



Many mothers when they have seen these weighings, have been convinced. It is not a question of theory; it is a question of absolute pounds' weight. Put on the extra clothing—1 lb. weight clothing to each stone weight of the body—and the boy will in three months be as well as his sister.

That is the case with scores of children at the present moment, and the mothers are telling me of the improvement. It is not a question of food. He has the same food as his sister. It is not the question of anything except that the boy is starved because he has not proper clothing. Now the boy I show in the picture is properly clothed. He has got this kilt all round his waist, and as that is the important part to keep warm, he is a fine, healthy-looking lad. The kilt is practically a perfect dress, because of its thickness round the waist, for boys or men.

I remember being once struck very forcibly about the fact of the kilt being healthy. I went to Buffalo Bill's show just after the South African War. Two men—old soldiers—were showing us into seats, and I said to one of the men, "Oh, you have been to South Africa?" "Yes." "What regiment were you in?" "I was in the Forty-second, the Black Watch." "What part of Scotland do you come from?" "Oh, I am not a Scotchman myself; I come from East Ham." And so I thought: "Now, here is unprejudiced evidence." "How do you like the kilt?" "Oh, first-rate; never been comfortable since I left it off." He said, "You know, a lot of regiments in South Africa had dysentery, and typhoid, and so on; our men seldom

had. We had got one and a half inches thickness of clothing round our stomachs to keep us warm; consequently we did not get chills. On one



A family group of to-day. The average-sized mother, the taller and larger-framed daughter, and the insufficiently clad boy of poor physique.

occasion it was never off my back for nine months, and I am sorry it ever came off."

Here was good "non-Scotch," and therefore unprejudiced, testimony in favour of the kilt, which keeps the loin warm, that is the spot where the

strength of man resides. Here is a picture of a British family of to-day we see in our streets. The ordinary sized British mother; here is her daughter, differently shaped altogether, taller than her mother, quite straight, square-shouldered and so on, and quite different. "They are getting more exercise than they used to have," you say. "Oh, it is the exercise developing the girls," people say; but what about the boys? Look at the picture; what warmth is there in his boots and cotton socks? The knickers (open knickerbockers) of serge, through which the wind blows as through a sieve on a cold day. Note the spectacle; but especially observe the serge blouse which barely meets the top of the knickers, so that around the waist there is no warmth. Beneath he has shrunken combinations, and the weight of the whole is one and a half pounds, and he weighs three stone, just half the "official" quantity, which is one pound weight of clothing to every stone weight of the body. The poor lad is a weakling because of the desire of the parents to "harden" their boy. Put a sufficient quantity (three pounds) of clothing on the boy, and he will be as good a specimen as his sufficiently clothed sister within three months.

In many schools boys are condemned to wear that hygienic abomination the Eton jacket. If it is true that warmth, especially around the loins and abdomen, is imperative for physical growth and development, then does the Eton jacket fail to afford this.

The strongest man alive in this country, D. Dinnie, is a very old man now, but he was

the strongest *natural* athlete in his day. He was not gymnasium trained, but naturally endowed with a gigantic development in the region of the loins and thighs. His arms, forearms, and legs below the knees presented nothing striking; in fact, they seemed rather meagre. He wore a kilt, a dress which maintained the warmth of the body in the region wherein the strength lay, but the Eton jacket affords no protection to the delicate organs in the region of the thighs and the lower part of the abdomen. The kidneys, the intestines, and many important organs in the abdomen are unprotected from cold, being insufficiently covered by clothing, and suffer in consequence. Of all apologies for a boy's jacket the "Eton" is the most deplorable. A Norfolk jacket is an excellent dress for a lad, and many schools, knowing now the importance of its use, for I have preached this doctrine for many a day, mention in their circular that a Norfolk jacket is the "uniform" of their pupils. This jacket keeps the loins warm; the pleat down the back protects the spine and the spinal cord from cold in winter and heat in summer; the warmth afforded by this fold, or pleat, fulfils a marked physiological function, for in the spine, just about the level of the spot where you have the collar-stud at the back of your neck, lies the heat centre, the nerve centre in the spinal cord whereby the heat of the body is regulated according to circumstances.

When women feel cold they involuntarily put a wrap around the neck and shoulders. Why? Because they cover the heat centre, and by keeping that part covered the heat of the body is regulated.

A man has a collar to his coat for the same purpose, and adds a scarf or puts up the collar of his great-coat when the cold is severe. It is for the same reason, namely, the presence of the heat centre, about the junction of the neck and the spine, that in cases of bleeding from the nose a key is pushed down the back of the neck beneath the collar. The cold key helps to contract the vessels and arrest the bleeding, and the bigger the key the more efficacious it is likely to prove; hence the preference for the church key simply because it is usually (or was) the largest in the parish. The Norfolk jacket has another advantage: a belt is usually added which, by surrounding the waist and puckering the jacket when fastened, the "vital" parts are kept warm.

A child never complains of cold; it will starve and die but never complain. The father goes on top of the car with his great-coat to smoke his pipe. The child who is taken up with him has not got on a great-coat, but he never complains of the cold. The father is sitting there in his great-coat and with his pipe; still, the child never complains.

The present day fashion with regard to clothing is this. You take the young university student. How is he dressed? He has got on no under-vest, no drawers; he has got on no hat; he does not wear an overcoat; he does not use an umbrella. He only wears a shirt, a pair of trousers and a jacket. He sets the example, and the young men in town think it is the proper thing to do, and we have the same thing almost everywhere.

Every day of my life I examine men going

abroad to see if they are physically fit. A man comes without vest or drawers. Of, I think, twenty-eight men who had neither vest nor drawers in the past year only three passed, the majority of those who wear no underclothing are not physically fit. What was the matter with them? You won't believe it, but this is the fact. The temperature of almost all these lads was above the normal.

At twelve o'clock in the day I was examining a strong, healthy-looking lad. "Don't you wear a vest or pants?" "No." "Does your mother approve of that?" "Oh no, no; mother is silly about it." "And your father?" "Oh, he's an old grandmother altogether." I took that lad's temperature—it was 102 at twelve o'clock in the day, and the lad said he was well, and did not know what it was to feel ill. He thought a temperature of 102 a natural temperature. Well, I could not pass him. If it was 102 at twelve o'clock in the day, what would it be before evening? And there was he in tears when I had done. "Look here," I said, "if a man has not sense to keep clothes on his back, he is not fit for much either physically or mentally; his proper place is a lunatic asylum. Do you think I could recommend you to a firm to send abroad? I will send you off for a month. Go and wear proper clothing; come back in a month, and you will be improved in weight and have a normal temperature." When he came back his temperature was normal; he looked perfectly fit. I passed him, and he went out. It was a question of an important appointment.

I could give you many instances of men losing

appointments from such causes. Another one has got congestion of the kidneys, albumen in the urine, which is the first sign of Bright's Disease; this is a common effect of insufficient clothing. When a lad goes without drawers and without an under-shirt his parents never agree with it; but you know what a young man thinks of his parents. Sometimes the circulation is upset, with the pulse going twice as rapidly as normal. One lad said he was perfectly well; it was excitement that quickened his pulse; not so, it was because he was insufficiently clad.

It is a curious thing to observe that on the open 'buses in our streets the delicate looking people, men and women, go outside without any extra coat or covering, whilst big and strong-looking people are sitting inside with great-coats on. "How did you come here?" I asked a young man, a stranger to underclothing. "On the top of the car." "No coat?" "No." You say, "It is a fad of yours." I am so particular that in these cases I call in another doctor and lose my fee of a guinea, otherwise I could not talk about this with surety if I did not. I ask this doctor, "Come along and examine this man. Is he physically fit?" "No, he is not." I lose my guinea, but I get the satisfaction of having my opinion confirmed, and of knowing that that man is not losing his berth because of my fad.

It is not a question of opinions but a question of fact. Maybe some of you young lads here are neglecting the advice of father and mother, and you have not put on drawers or vests. There are many things fathers and mothers used to do we

now despise and laugh at. We used to see mothers use the warming-pan for her bed. You laugh at it. Comical, isn't it? Do you think your mother used it for fun, to warm her bed? She mollycoddled herself, you say. It is not a question of your bed being warm, but a question of its being damp. "Oh, the clothes are always aired before they are put on the bed." They want to be done every night. Your grandmother used to dry her sheets every night. What was the object of the warming-pan? not for the purpose of warming them, but to dry them. Why? To prevent rheumatism. Rheumatism is the disease of this country. If you want to avoid it, have all your clothing and sheets dry. Your grandmother always did, and kept her sheets dry for the purpose of preventing rheumatism. You take that warming-pan down every night, and do not forget to use it, and in its place hang up your teapot.

THE "COMFORTER."

All of you are but too well acquainted with the solid rubber teat you see in babies' mouths. This is a deadly instrument, causing immediate evils and permanent deformity of the mouth, jaws, and nose and chest. Moreover, I hope I can show you that the introduction of the "comforter" is the direct cause of adenoids, so prevalent at the present day. Adenoids were known before the "comforter" was in evidence. Every child allowed to suck its thumb, or to have the teat of the feeding-bottle in

its mouth at other times than whilst feeding, is liable to get adenoids; but with the common use of the "comforter" the ailment increased to such an extent that but few children of to-day, other than breast fed, are quite free from the complaint.

To understand what the "comforter" does, let any adult try the experiment of keeping one in the mouth and sucking at it for, say, two or three minutes. After even a few minutes it is found that the roof of the mouth becomes painful and the mucous membrane covering the hard palate becomes swollen and irritable. The roof of the child's mouth, however, does not consist of bone as in the adult, but of cartilage (gristle), which yields to the continued pressure of the teat and is pushed upwards, causing a high arch (Gothic arch) to the palate. When the roof of the mouth is pushed upwards, the floor of the nasal cavity is encroached upon, and the passage of the air through the nose impeded. The child finds breathing by way of the nose difficult, and mouth-breathing with all its attendant evil effects is set up. The natural channel by which the air enters the lungs is through the nose, where the air is moistened and warmed before it reaches the wind-pipe and lungs. When the air enters directly by the mouth the throat and tonsils are subjected to direct irritation, and resulting enlargement of the tonsils still further impedes respiration. Breathing becomes laboured and noisy, the exertions of the respiratory muscles are increased, but after a time exhaustion ensues, and the air is inhaled in lessened and insufficient quantity, leading to

diminished expansion of the lungs, narrowing or flattening of the chest, and imperfect oxidation of the blood.

The effect upon the *upper jaw* consequent upon a high arch to the palate, is that the sides of the jaw are drawn inwards towards the mouth cavity; the whole upper jaw, which is normally horseshoe-shaped, becomes pointed in front, causing the jaw to assume a V-shape. The front teeth of the upper jaw protrude and project beyond the front teeth of the lower jaw, and the back teeth of the upper jaw fall within the back teeth of the lower jaw, so that biting and grinding are interfered with, and perfect mastication of the food is impossible. The effect of mouth-breathing upon the *lower jaw* is that the bone itself is altered in shape. Instead of the sharp angle natural to the lower jaw just below and in front of the ear, the angle is rounded, and the chin consequently becomes pointed, giving rise to the stupid and listless aspect common to all persons who breathe through their mouths.

The effect of preventing the natural current of air passing through the nasal passage and the upper part of the pharynx is to induce an abnormal condition of the lining mucous membrane. The tissues of the membrane become sodden and swollen, and the glands (lymphatic) in the upper part of the pharynx enlarge and protrude from the surface as out-growths or adenoids.

The effect upon hearing by blocking the Eustachian tube passing from the back of the throat to the ear, causing thereby ear disease and deafness, and the evil consequences to the lungs and chest,

it is impossible to discuss in a short lecture, but enough has surely been said to prove that it is time strong measures were adopted to stop the sale of the "comforter," and that even an Act of Parliament is not too much to ask for if in no other way can the use of this pernicious evil be arrested.

VII

CHASTITY ¹

BY SIR FRANCIS H. CHAMPNEYS, BART., M.D., F.R.C.P.

GENTLEMEN,—I have been asked to address you on the subject of "Purity," that is, "Chastity." Believe me when I say that nothing but a sense of duty brings me here. The subject is of the utmost difficulty, and, if handled at all, must be handled plainly. To speak plainly on such topics to a strange audience is very unpleasant—to me, at least, it is even somewhat trying to discuss them fully with only one other person in one's own room.

Then again, there is the feeling that by speaking on the subject a man lays claim to superiority. Please believe that I do not come to speak to this assembly because I think myself "as good as a parson"; far otherwise.

But I have reached the latter years of a life spent in a profession which has given me exceptional opportunities of studying the subject, and I feel that I should be a coward to refuse to do anything in my power to help others.

The problem is one of great difficulty. I have no bypath to tell you of; the only safe road is a hard and a stony one. Yet it *has* been trodden, and is being trodden.

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The best plan will be to begin at the beginning and see what our materials are, what facts we have to deal with.

First, the appetites—all, with one exception—are a sort of bribe to secure the well-being of the individual. For instance, hunger and thirst first present themselves as a discomfort of a definite kind pleading for satisfaction, in this case by food or drink, the end being the maintenance of the nourishment and health of the individual. The want arises at the proper time, and should be satisfied as soon as convenient. But in the case of the sexual appetite this is not so. In the first place its object is not the welfare of the individual, but the maintenance of the race.

It is also paradoxical in another way. The individual can live quite well (in a sense) without it. The race, without it, becomes extinct.

Also, although the individual's welfare in no way depends on it, it is probably the most difficult of all appetites to control.

Again, childhood ends and manhood or womanhood begins many years before the sexual functions ought, from any point of view, to be exercised. If puberty occurs, roughly, about fourteen years of age, what sort of results would follow the marriage of boys or girls at or near this age? Such results may be seen in the East. In the case of a potentate who succeeds to his position at an early age, premature sexual indulgence not only saps his general bodily forces, but results in offspring, few in number, poor in physique, the early prey of illness or untoward surroundings, and prone to die out.

Incidentally, such men rarely have a male heir. In the case of the girl, premature sexual excitement similarly impairs her bodily forces, maternity imperils her life, and the results are disastrous.

An interesting fact may here be mentioned. Mr. Darwin points out that in the animal kingdom males generally outnumber females. The obvious result of this is competition among the males for the possession of the females, and the propagation of the species by the stronger males. It would also seem from this that there is something in the common idea that, for purposes of breeding fine stock, the male is the more important parent.

We are reminded of competition of this kind in the laws of the Zulus, by which only those males were allowed to propagate their species who, having reached general bodily maturity, had distinguished themselves in war. This, no doubt, acted beneficially in the way intended.

But, if we set up such a theory as this to account for the attainment of sexual powers before it is desirable that they should be exercised, we must remember that this premature sexual ripeness occurs among females as well as among males; and it is hard to think of a kind of competition applicable to females, which should occupy their attention and stimulate their ambition during the years intervening between sexual potentiality and complete maturity.

We are obliged to fall back on theories of a bygone state of existence in which real maturity occurred at an earlier age than it does at present, as it does among many of the lower animals.

There seems to be a pretty constant ratio between the age of sexual ripeness and the duration of life (Sir S. Wilks).

The fact remains that young people of both sexes arrive at sexual maturity long before it is advisable, from the lowest physical considerations, that sexual relations should exist between them; nor can it be considered any solution to suggest that the difficulty might be surmounted by mating mature men to immature girls, still less by mating mature women to immature boys. Nature cries out against such ingenuity.

So far we have considered the problem from the purely animal point of view. But we have arrived at the important position that, from the purely animal point of view, premature sexual indulgence is detrimental; in other words, that sexual passion must necessarily be repressed.

Another consideration comes in with civilisation. To found a family costs something, and only those who have succeeded in acquiring the necessary competence can contemplate such a step.

It follows that, in civilisation, the age of marriage is often necessarily postponed for many years. During this time the sexual passions are generally clamorous, especially in the male population. What is the solution?

The solution, in nearly all known civilisations, has been prostitution, an institution of almost prehistoric antiquity. This is essentially a form of polyandry; and although polyandry (the association of many men with one woman) exists among some savage tribes, we need not spend time on it,

since it is repugnant to the feelings and ideas of modern civilisation.

If any one desires to know how an ancient civilisation dealt with the sexual problem, he can study it in the history of the decline and fall of the Roman Empire. He will find that unbridled licence led to profound disgust with life. The Emperor Tiberius is described by Pliny as "the most gloomy of mankind," and wrote to his senate, "What to write to you, or how to write, or what not to write, may all the gods and goddesses destroy me worse than I feel that they are daily destroying me, if I know."

Apart from all these considerations, there is another which has played a great part in the problem since the sixteenth century. I mean syphilis.

We have nearly arrived at a position in which we can sum up the factors.

We are brought into the world; at all too early an age we are tormented by sexual desires, obviously intended to be satisfied by way of preserving the race. But for many years this is quite impossible by any desirable means. Are we to separate the satisfaction of the appetite from the end for which it is intended? Is it satisfactory, from a purely detached view, that the earliest (and therefore the most powerful) memories of sexual intercourse should be divorced from all ideas of permanent union, of mutual love, and of a family?

My hearers will have noticed that, so far, not a word has been said by me which might not have

been uttered by any moderately well-informed atheist.

My object has been to present the problem in its simplest and most uncomplicated form.

The great historical religions of the world have endeavoured to deal with this problem in every conceivable way, and have failed.

Some have tried to solve it by claiming to elevate the soul by regarding the body as a bad thing. Such attempts have not succeeded in curbing the body which is regarded with such abhorrence, and have failed. This professed abhorrence of bodily functions is also answerable for a good deal of what we must regard as erroneous teaching which has affected the Church at different times, and of which some marks are still visible. But such a view is wholly unnatural. As a great writer has said, "No man ever yet hated his own flesh," and also the ideal which nature intends is so beautiful that it puts such a theory to shame, as the sun disperses the shadows of night.

We are probably all agreed that the ideal which nature intends is that of the family, in which one man lives permanently with one woman, and they bring up a family together which not only experiences the tender care and unselfish devotion of the parents towards each member, but also teaches a lesson of mutual love between the parents to each of the children to act as an example in its turn.

This ideal should be kept in mind. The first essential of purity is purity in the family.

Marriage, however, is not usually possible of attainment (as has already been said) until after

many years of repression. What is to become of those who are too old not to feel passion, and yet too young to marry?

Now, this is the problem. Gentlemen, the only religion which has ever propounded a solution which does not do violence to nature is the religion of our Lord and Saviour Jesus Christ; and nothing short of the help of Almighty God given supernaturally will solve this difficulty—the greatest social difficulty of civilisation.

How difficult the problem of purity is may be gathered from the published medical records of our great services of defence.

Now, it would be quite a mistake to suppose that soldiers and sailors are essentially less moral than civilians; they are just young men. And yet it seems to be taken for granted by those who have to take physical care of them that few, if any, are chaste.

The appalling amount of venereal disease which has impaired the efficiency of our forces is a national loss of a very serious kind; but, more than this, it is terribly sad. To think of the suffering of so many fine young men, and of the disease and misery which will be not only their lot, but the lot of many innocent lives through them, is depressing to the last degree.

The probability is that ignorance is answerable for a great deal. The sight of the wards of a Lock Hospital might give many young men food for reflection, and might also dispel some of the glamour which, as a fact, is so dangerous an element in sexual matters.

The sight of young children, blind, or afflicted with loathsome disease through no fault of their own; the sight of young men and young women hopelessly wrecked for life; the sight of elder persons suffering from the effects of syphilis long after all thought of such a possibility had passed from their minds, would at least give room for the question, "Is it worth while?"

And yet it is a fact that young people in full possession of the facts are such incurable optimists that they put aside all thought that such a horrible fate may happen to *them*.

It must be remembered that, without this element of optimism, some of the noblest deeds (as for instance in warfare) would never be even attempted. So complex are our natures that our finest qualities are apt to be turned to our own destruction. On this most difficult and tangled question Christianity is quite plain.

Our Lord says very little directly on the subject, but the whole atmosphere of the Gospel is "purified seven times in the fire." The teaching of the rest of the New Testament is in harmony with this.

It is quite plain that Christianity absolutely forbids all sexual relations outside marriage, and enjoins marriage with one wife.

The Epistles—especially those of St. Paul—are full of warnings against unchastity; indeed, fornication is denounced oftener and more explicitly than any other sin. Doubtless this is for two reasons at least: first, because contemporary life reeked with it; secondly, because, of all sins, it probably destroys the soul worst.

It is not necessary to go into details, but what would any of us think of a street in London consisting of private brothels, openly kept by gentlemen in society, each garnished by an obscene sign to make mistake impossible, to which its owner could bring any prostitute at his convenience? If hypocrisy is "the tribute paid by vice to virtue," there was at least no concealment here, as may be seen to-day in Pompeii. It must also be remembered that this filthy state of morals flourished with all that was most cultured and refined in literature and art. Does not this give us food for thought in considering the problem of education without Christianity?

If Christianity thus limits sexual relations, the question arises—and has arisen again and again from long before the Christian era to the present time—whether they are not essentially bad, and whether they should not be universally repressed.

Our Lord was asked this question by His disciples on the occasion mentioned in St. Matthew xix. 3-12, when He had been asked by the Pharisees as to the lawfulness of divorce, and had answered that marriage was intended to be permanent; the disciples replied, "If the case of the man be so with his wife, it is not good to marry."

He answered, "All men cannot receive this saying, save they to whom it is given. For there are some eunuchs, which were so born from their mother's womb; and there are some eunuchs, which were made eunuchs of men; and there be eunuchs, which have made themselves eunuchs for the Kingdom of Heaven's sake. He that is able to

receive it, let him receive it." This, obviously, is speaking in a mystery; the first and the last words in the speech show this beyond doubt. Although it has been taken literally, and acted on, the constant Christian tradition is that it refers to restraint, and not to mutilation.

Moreover, the immediately following verses (13-15) describe our Lord's well-known blessing of little children.

Again, we know that He blessed a wedding by His presence and by His first miracle, and we must remember that He rather shocked the religious Jews by His want of the asceticism on which they prided themselves ("Behold a gluttonous man and a wine-bibber").

Carried to its logical consequences the abolition of sexual relations would plainly lead to the extinction of the race. This is, of course, a *reductio ad absurdum*.

But the next step is to set forth a single life as the object to be aimed at, and to permit sexual relations only to those who are so inferior as to be unable to lead a continent life.

This appears to be the view of those who compiled the address in the Marriage Office of the Church of England, and I confess that it seems to me to be both ignoble and at variance with the high ideal of marriage elsewhere maintained in the same office; it is probably a survival of the Oriental taint which has cropped up in the Church in relation to this subject from very early times.

There is, moreover, the following practical objection to any such view, namely, that breeding from

none but the inferior members is sure to deteriorate the race; and this applies to moral and mental as well as to physical qualities.

The question of a single life for special objects is quite another matter, and it is certain that the advantages of such a life under several conditions is gaining increased recognition.

Personally, I strongly object to the exaltation of celibacy as such for many reasons.

In the first place, the ideal for the mass of citizens should be the family. Without this no nation can long maintain itself.

The more married life is exalted, the better and purer it will become. It must also be remembered that if the father of the family has, or may have, his joys, he has his increased responsibilities and anxieties, from which the celibate is free; and that celibacy may become (as it has become before now in the history of the world) a mere excuse for laziness and self-indulgence.

In my opinion the most generally admirable citizen is a man who brings up a family well; he, more than any one, contributes to the multiplication of good, noble, and religious members of the state.

One has also to bear in mind that sexless men are not very uncommon. Such men, according to the view criticised above, would be the "salt of the earth," whereas they really—like salt among vegetation—simply sterilise life.

A man who, for sufficient reasons, embraces a celibate life, will do so best if he is a complete and not a neuter animal; his passions not absent, but

under control, and adding, not detracting from his forces; like a rider, not upon a worn-out screw, but upon a spirited horse. This seems to me to be the ideal of a single life; and it is hard to attain to it.

But we have to remember that the sexual relations are a mystery.

In nature the process of the beginning of life is more marvellous the more we know of it, and it seems as if it must always elude us. Whether we watch this under the microscope in the vegetable or in the animal world, its method is the same for all the higher forms, and is equally miraculous.

In the passage from St. Matthew's Gospel, already quoted (xix. 5), our Lord endorses the saying (Gen. ii. 24) "they shall be one flesh," as applied to the sexual relations, and St. Paul (1 Cor. vi. 16-17) even applies it to sexual relations in fornication: "What? know ye not that he which is joined to an harlot is one body? For two, saith he, shall be one flesh."

Sexual intercourse, therefore, in human beings at least, has a sacramental nature, and, as the body of the Christian is "a temple of the Holy Ghost," fornication is the profanation of a sacrament. This is the meaning of the passage.

Thank God, there is "a fountain open for sin and for uncleanness."

In the mystery of sexual relations between human beings something more is implied than the pairing of animals.

That something is *love*.

As far as we can see, this does not exist among the lower animals; the wonderful devotion of the

parents to their children is strictly subordinated to their care while they need it, and ceases as soon as they can dispense with it; and the association of the parents with each other seems similarly limited to this end.

In the Greek, maternal love has its own name.

Now, my point is that between human beings sexual intercourse should never take place without *love*, which is a very different thing to the emotion often masquerading under that name. It is the divorce of the act from love which is one of the most horrible and debasing parts of fornication. (It is equally degrading so far in a loveless marriage.)

An habitual libertine, on the other hand, takes care that as little sentiment as possible shall enter into his relations with women; they are used, paid, and may go—to their own place.

A libertine thinks he is acting honourably if he pays a prostitute money. In one sense he is, but in another sense he is degrading her and himself.

How can a man pay a woman for *love*? The idea is grotesque.

What libertine would dare to offer money to a girl whom he was endeavouring to deceive?

It is this cold-blooded buying and selling of "Love" (Heaven save the mark!) which is one of the most degrading sides of prostitution, degrading both parties.

A man who falls in love—say, with a married woman—and elopes with her, commits a grievous sin, but at any rate he does not commit this crime against his higher nature. His love should be

curbed and restrained, but it may all the same be real love, whereas the cold-blooded man of pleasure degrades the very name of Love.

There is another aspect of fornication which must be obvious to all.

It implies the maintenance of a class of outcasts.

I am not ignorant of the great variety of causes which have led women to become prostitutes. Starting in life with the idea that a prostitute was a woman who has generally been seduced under promise of marriage, and then abandoned, it was a great shock to me to find that she was often a woman too lazy to work, and willing to sell her chastity for idleness and excitement, very often without any great temptation either from outside or from inside.

Still more horrible has been the repeated experience of cases in which a young man, just on the threshold of life, has been deliberately stalked, seduced, sucked dry, and left, by a woman (generally a married woman) older than himself.

Still, after all said and done, no one can contemplate the great army of prostitutes without asking himself: "Am I guilty of adding to or encouraging this hopeless herd?"

Sexual sins take two to commit them. You can rob or murder a person without injuring his soul, but you cannot commit fornication without doing so. Our sins go on like waves in water—for ever. Again, thank God, there is a remedy.

But my point is that no man can deal with a prostitute without helping her one step downwards.

There are degrees in immorality. It is, no doubt, in a sense, a specially heinous crime to add another recruit to the army, but is it not equally bad to destroy the intentions of reformation in one, hoping, perhaps, to escape from it?

Many men draw the line at seduction who are pitiless to any woman who has sullied her chastity. Is this quite logical? It certainly is most unchivalrous.

This word leads me to speak of the proper aspect of all men to all women. It should be one of chivalry.

What man could contemplate without horror the idea of unchastity in his sister or in his mother? Every prostitute is, probably, some one's sister. But every woman should be every man's sister.

To a Christian, the Blessed Virgin Mary should always be the ideal woman; and those who put her out of their thoughts rob themselves not only of an object of chivalry, but of practical help.

The great articles of the Incarnation and of the Virgin Birth are citadels of chastity which ought to be jealously guarded.

The society of Christians is the Body of Christ; it is more than unnatural that one member of Christ's Body should compass the destruction of another member.

It may save many a young man to remember to ask himself at the critical moment—

“What shall I think of it to-morrow morning?”

To come to practical points.

1. It is of the utmost practical importance that

young people should be introduced to the facts concerning the origin of life in a manner which is not only clean, but interesting.

A boy who gains his first knowledge of the subject from a dirty schoolfellow starts with a severe handicap.

An elder brother is a very good tutor if he is the right kind of brother. A father may be a good instructor, but there is apt to be more shyness between father and son than between brother and brother.

The elementary knowledge should be combined with caution as to the dangers. I am sure that great, and often irreparable, harm is done early in life by loose talk in the presence of the young. A father who alludes to his own escapades in the presence of his son has given him not only (most probably) a severe shock, but also a pattern which the son, in most cases, proceeds to copy without delay.

It is not always a man. I have known a lady say to her nephew, on the balance as it were, and needing all the help he could get, that of course he was, or would be, wild: all his family were. The boy at once proceeded to verify his aunt's pious wishes.

It will take more than a generation to get more wholesome ideas generally current. It helps a son more than a little to know that his father passed unscathed through the same perils; it helps him the wrong way to know the reverse.

Of course, the life of Christ is the one great pattern; and yet it seems so impossible to copy

that one might well despair, were it not that one sees parts of it lived by individual Christians.

Here is the help of the Saints; they are men like ourselves, with faults, but with great virtues; each, as it were, represents one of the colours of the rainbow, while the complete white light is found only in Him.

There are many Saints who are not in the Calendar, and some of us may perhaps know one or more.

In dealing with the subject of Purity, either to those who are still pure, or who have failed, it is of great importance to avoid any approach to *sentimentality*.

This is a real snare, and is apt to lead to a fall. Sympathy, as much as is necessary, but no sentimentality.

This, in my opinion, is the great fault of many books on the subject, especially from the Western Hemisphere. Many such books, written, I doubt not, with good objects, are, to me, positively indecent, not from plain speaking, but from the opposite.

2. It is of the utmost importance that boys and young men should clearly understand that chastity entails no detriment to their health. These functions, as has already been said, are not primarily for the benefit of the individual, but of the race. They can be put aside indefinitely without any injury, and will be found available when wanted.¹ This, however, is easier said than done.

¹ Indeed, a man who has dealings with prostitutes is very apt to become *sterile* from the effects of gonorrhœa, while a chaste man may remain fertile to an indefinite age.

The contrary is often stated, and one finds many women who are modest and chaste themselves, but who believe that chastity among men is not only impossible but undesirable from the point of view of health. They have been told so themselves by some man whom they trust—a husband, or perhaps a brother, and are foolish enough to accept the statement. If they happen to be or to become mothers, how can they be anything but a stumbling-block to their sons? There is even a worse notion current among some men, namely, that men who do not associate with women are addicted to unnatural crimes. In some quarters compulsion has even been used to force a young man to have dealings with prostitutes against his will.

Such compulsion is exercised, of course, by men who make no attempt at chastity themselves.

I wish to say with all the authority which belongs to a long experience that both these notions are absolutely false, and that the last is nothing short of damnable.

3. If a man desires to be chaste, it is absolutely necessary that he should take care *betimes*.

It is no good thinking either that it is easy to stop short of action, or that nothing but this is commanded.

Our thoughts are to be pure ("Blessed are the pure in heart: for they shall see God," Matt. v. 8), and so are our words ("O generation of vipers, how can ye, being evil, speak good things? for out of the abundance of the heart the mouth speaketh. A good man out of the good treasure of his heart bringeth forth good things; and an evil man out

of the evil treasure bringeth forth evil things. But I say unto you, That every idle word that men shall speak, they shall give account thereof in the day of judgment. For by thy words thou shalt be justified, and by thy words thou shalt be condemned," Matt. xii. 34-37).

Also, St. Paul says, "Fornication, and all uncleanness, or covetousness, let it not be once named among you, as becometh saints; neither filthiness, nor foolish talking, nor jesting, which are not convenient. . . . For this ye know, that no whoremonger, nor unclean person, nor covetous man . . . hath any inheritance in the Kingdom of Christ and of God. Let no man deceive you with vain words: for because of these things cometh the wrath of God upon the children of disobedience" (Eph. v. 3-6).

If the question is one of voluntarily exciting one's passions even without the intention of gratifying them, we have to remember the following passage from the Sermon on the Mount—

"Ye have heard that it was said to (by) them of old time, Thou shalt not commit adultery. But I say unto you, That whosoever looketh on a woman (in order) to lust after her hath committed adultery with her already in his heart. And if thy right eye offend thee, pluck it out and cast it from thee: for it is profitable for thee that one of thy members should perish, and not that thy whole body should be cast into hell" (Matt. v. 27-29).

These are terribly strong words, but we cannot explain them away.

We must all apply them to the books we read,

the pictures we see, the conversation that we indulge in or listen to, the plays we frequent, and even the thoughts we think.

In the Book of Job, which is at least of great antiquity, we read: "I made a covenant with mine eyes; why, then, should I think upon a maid?" Here is the germ of the same idea as our Lord's, just referred to (Job xxi. 1).

For practical purposes we must recognise the fact that, if we want our sons to lead pure lives, we must impress on them that, above all things, thought must be carefully restrained, and words must be carefully restrained, or a fire is pretty sure to be lit which is extremely difficult to quench, and which is apt, even if not further encouraged, to smoulder indefinitely, and to blaze up unexpectedly. Suggestive plays, suggestive books, suggestive pictures, suggestive conversation, are all dangerous.

The sexual appetite is probably the only one with which people trifle in this way. What hungry man ever excites his appetite for food, or what thirsty man for drink, except with the object of satisfying his hunger or his thirst?

A vast amount of injury appears to be inflicted on the young by suggestive, cheap literature, and by suggestive pictures in biographs.

The necessity of checking passion at its very start was recognised by one of the least moral of heathen poets, when, in his book on *The Remedies of Love*, he says, "Stop at the very onset."

What is harmful for one is not necessarily even suggestive for another. But in such cases one had

better, in doubt, be on the safe side, and also remember one's weaker or more excitable brother (to whom great harm may unwittingly be done), lest he should be "made to offend," that is, lest he should find something in his way likely to trip him up (1 Cor. viii.).

The great test is the effect.

St. Paul speaks plainly enough, but his language has the taste of cleanliness. This is the case with every mention of vice in Scripture.

So it is with some of the great satirists. But principles are hard to lay down, and the test is the taste left in one's mouth.

Again, we must remember that we are not all bound to explore cesspools. To some it may come in the way of duty, as, for instance, to the clergy, or lawyers, or doctors; but to them it is trying work, and need not be "enterprised or taken in hand unadvisedly, lightly, or wantonly."

A great snare undoubtedly is *curiosity*. It will not be forgotten that in the Story of the Forbidden Fruit the temptation came in the way of a new experience.

This is profoundly true of human nature. Curiosity, in my experience, has led men astray who had no strong passions, and little excuse on this account. This must be guarded against.

Many people no longer young would be thankful if they could rid their memories of garbage which they have devoured earlier in life either in the way of books which they have read, or stories which they have heard, or sights which they have seen.

As a matter of experience, it is easier to succeed

in exercising *general* than *special* self-control. A man who does not restrain himself in language, and habitually swears, is less likely to be able to restrain himself in other matters.

The self-restrained man rides his whole nature like a mettlesome horse, and it becomes a habit with him. Such a man gets up in the morning, and goes to bed at night when he thinks right, he eats and drinks what agrees best with him, he uses language which he approves; he does not let his "brother ass," as St. Francis called it, master him, but keeps him in order.

Of course, he corrects special faults, but his general self-control makes this easier. Again, it is not sufficient to avoid pernicious literature; to empty our minds of all literature is to leave them unguarded, and, as in the parable, seven devils more wicked than the first may occupy the mind from which one devil has been expelled.

It is, of course, the duty of all Christians to read the Holy Scriptures—that subject I leave on the present occasion—but besides this we ought all to read, and to read really good books. Our tastes will differ. Some can appreciate poetry. We should bear in mind that England has produced more good poets (many times over) than any country since Greece and Rome. Others have more taste for travel or biography, or even the great classics of fiction. There is no difficulty in reading great works of any kind in these days of free libraries and cheap editions.

I was much struck by the books which I saw in a very poor cottage on an island off the west coast

of Scotland. I was cruising, and one of my Scottish sailors asked me to land on an island called Muick to see a sick child. I did so, and came into a poor but very clean cottage. In it, on a table, I found some twelve books, every one a classic. I have never forgotten it.

One ought to have some books which are one's real companions, and which one likes to read over and over again. Good books create a healthy atmosphere to breathe, and occupy the mind with good and noble thoughts.

I feel sure that the devil does not approve of such books, but vastly prefers us to read problem novels and trashy serials—that is, if he cannot get us to read something really bad.

Another very important help is some interest apart from our work, especially if combined with exercise.

For a young man there are many to choose from. There are games such as football and cricket; there is the Territorial Army; there are gymnasiums, boxing clubs, and what not.

Many of the volunteer corps included gymnasiums, and I doubt not that the different divisions of the Territorial Army are, or will be, similarly equipped. I cannot imagine a more excellent occupation than this—to learn to defend one's country and to keep one's self fit with a variety of exercises interesting in themselves. A man who aims at this will have an additional motive for keeping his body in temperance, soberness, and chastity.

I warn every one against thinking that they are

taking exercise when they are only doing so by proxy. This is a very common delusion. Ladies think they have taken exercise when their horses or their motors have pulled them about the country. I have been amused to watch an assembly of spectators at a boxing match, obviously taking most of the credit to themselves, and getting quite red in the face and short of breath in the process. The same spectacle may be seen at any great football match.

Now, in such an assembly I doubt not that some would be capable of taking part in the game; but a large number take no exercise except by proxy, and their bulk and their unhealthy faces show that their habits are not consistent with any form of exercise. With such people the chief form of exercise is being carried to the place of amusement, seeing others contend, being carried to a place of refreshment (which they have not earned), and there discussing again the games in which they have taken no part.

It is, no doubt, a good thing for a young man to see a game played by experts now and again; but this ought only to be with the object of improving his own play; and the habit of "exercise by proxy" seems to me to be a very likely danger with regard to the subject which we are considering.

Our distinguished writer, Mr. Rudyard Kipling, some time ago denounced the "flannelled fools" and the "muddied oafs" who played games instead of defending their country. I have always thought that his wrath was really directed not against those who played cricket or football, but against those

who were content to look on, and never get further. With this I entirely agree.

No better institutions exist than the institutes for soldiers and sailors, and also (I doubt not) for the volunteer branches of the services, which forward the defence of the country, provide exercises and games for the body, literature for the mind, and a spirit of good fellowship among all who belong to them.

I doubt not that such institutions help greatly to promote the cause of "Temperance, Soberness, and Chastity."

I know no more inspiring figure at this present time than that of the man who has done so much in this direction; who, having reached a time of life when he might well consider that he had earned the leisure of retirement, willingly undertook the dangers and fatigues of the South African campaign; whom the loss of his only son did not even cause to falter in his stride; who turned the tide of war; who contentedly retired when it seemed that his services were no longer required; and who spends his green old age in doing everything possible for the soldiers whom he loves, caring for their souls as well as their bodies, by making it easier for them to spend their leisure in a civilised, intelligent, and self-respecting fashion.

I need hardly say that I refer to our great soldier, Lord Roberts.

A word may be said on the subject of diet. I am not here to lecture on this much-debated question.

There is, however, an old heathen adage that

“without Ceres and Bacchus Venus is cold”; that is, “Love is cold without food and stimulants.”

Living too high is certainly not a good preparation for chastity.

Drunkenness certainly leads to immorality in both sexes.

But, apart from this, stimulants certainly help to excite the passions in some individuals. I leave this question to each of my hearers, “Is this so in your case?” The danger particularly arises in the use of spirits which are now so freely used.

After all this, have I solved the problem? I said at the beginning that the path is rough and stony; I also said that nothing short of the help of Almighty God given supernaturally will solve the difficulty.

The solution is altogether beyond nature. But the Christian is *ex hypothesi* living beyond nature; a man can only rise to the higher level by living on the higher plane, by doing what St. Paul calls “walking in the Spirit.”

The power to do so comes from Almighty God, and is given to those who ask for it. The great channel for this power is the Holy Communion, by which the Divine Life is constantly renewed in us.

Gentlemen, I have finished.

Please let me remind you that I started with disclaiming any intention of talking at you, or assuming any superiority. We are all here because we all want to do something to make the surroundings in which we live cleaner and sweeter. The idea of purity is so high that it seems almost

unattainable. Absolute purity, not only in deed, but in word, and even in thought! Which of us has kept such an ideal? But at any rate let us keep it *as* our ideal, and get as near to it as we can.

I may express my own opinion that failures in this respect, especially when habitual, may well be occasions in which our conscience may not be quieted without resort to that ministry of penance (as it used to be called), which is referred to in the Book of Common Prayer, and that such a practice may not only quiet our conscience but defend us on future occasions, and get rid of a feeling of hypocrisy which is apt to stifle the respiration of our soul.

We are told that it is the pure in heart who shall see God. This is not only a promise for the future, but it is also a fact in experience. Who does not know the extraordinarily correct instinct of simple goodness, exemplified, perhaps, in a person of by no means brilliant intellect? Most of us are aware that wrong-doing obscures the judgment, just as dirt on a window obscures a view. ("If thine eye be single, thy whole body shall be full of light, but if thine eye be evil [literally 'stingy'] thy whole body shall be full of darkness.") Probably no dirt obscures the judgment so much as sexual dirt.

It has to be remembered, on the other hand, that at least one conspicuous saint managed to get his windows cleaned, and that a very impure young man afterwards developed into one of the greatest Fathers of the Church—I mean the great St. Augustine of Hippo.

I cannot hope that you will agree with all that I have said. I have felt bound to state what I think freely. You will think it over, and will accept it so far as it commends itself to your judgment. You may take my facts as worth something, my inferences and conclusions you will weigh in your own scales.



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