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QUESTION BOX LECTURE

On the Sanitarium Driveway, Battle Creek, Mich., August 17, 1908, at 8 P. M., Monday.

by

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Question: Is cane sugar a healthful food?

Answer: Yes, it is splendid food for cows, but it is not natural food for human beings, at least in the form in which we get it. Cane sugar as it appears upon our tables was not known commercially in Europe until about 200 years ago. It was not known to the ancients. It originated probably in India, and in the early part of the Christian Era was known to the Arabs, and about 400 years ago it was first sent to England, and it was only 200 years ago that it began to be very freely used, when tea and coffee were introduced into England; so it came along with tea and coffee--two other mischief-makers. Cane sugar is not found in natural human food except in very small quantities. For example, cane sugar is found in from one half of one per cent to one or two percent in some cereals. Cane sugar is found in very small quantity in most fruits, a very small fraction of one per cent--very little. It is found in dates, however, in certain varieties of dates in larger amount. It is a curious fact that cane sugar is found in the grasses, in corn, in sorghum, in sugar cane, in roots, as the beet root, the parsnip and the turnip. It is found in the sap of certain trees, as the maple tree and the date palm, or certain other palms. But it is not found in fruits or in cereals to any extent only with the exception of the date. There are ~~xxx~~ ~~xxxx~~ many different kinds of sugars. There are sugars, and sugars. There are particularly two great classes,--cane sugar and fruit sugar. Then there are two other prominent

nent sugars, malt sugar and milk sugar. Milk sugar, malt sugar and cane sugar are very much alike, exactly alike in chemical form, in chemical composition, but they are very different in other particulars. Malt sugar and milk sugar are not as sweet as cane sugar, but malt sugar is much more easily digestible. Sugar is a substance that must be digested in the body just as are starch and other food substances. It requires digestion just the same as any other food element does. There must be a ferment to change the cane sugar, but this is not true of fruit sugars. Fruit sugar is sugar which has already been digested. Some very interesting facts have been recently discovered in reference to fruit sugar and cane sugar. Cane sugar injected into the blood is not utilized; it is expelled from the body as an excretion, sent off through the kidneys. Cane sugar taken into the body can not be used at all unless it is digested. On the other hand, fruit sugar, sugar which is found in all fruits, and which is found in honey,--honey is entirely made up of fruit sugar, almost entirely,--fruit sugar may be injected directly into the blood and may be used, because it is already digested. Cane sugar or the sap of the tree, a cherry tree, for example, is carried into the fruit of the green cherry, and there it is digested and converted into fruit sugar. You can find cane sugar in the stem of the cherry, but there is no cane sugar in the cherry itself. As it goes into the cherry, it is immediately digested, and the same process is going on in all other fruits, and the process of ripening the material, the cane sugar which is brought into the fruit is digested at once, and converted into fruit sugar just exactly as cane sugar taken into the body is there digested and converted into fruit sugar before it is absorbed. In the date, there are certain varieties of dates in which this digestive ferment, invertin, as it is called, does not exist, and consequently the cane sugar is deposited in the date, and so in certain dates we find cane sugar, whereas the ordinary date, most dates, like other fruits, contain only fruit sugar.

So you see that cane sugar is not a natural food for human beings, and consequently we would naturally recognize a difference between the effects of cane sugar and those of fruit sugar. Fruit sugar may be taken in any quantity. The sugar you find in raisins and in figs and in sweet fruits generally never does anybody harm. Nobody ever gets sour stomach from eating sweet fruits, with the exception of dates. Dates are an exception because the date sometimes contains cane sugar. The favorite date of commerce, the principal one that is used in commerce contains a large amount of cane sugar. When I was in Egypt some years ago, I found a date there which had no cane sugar in it, and I did not like it very well; it was not very sweet; it was not nearly so sweet as the ordinary date with cane sugar; and that is true of nearly all the dates. There are only very few that contain the cane sugar, but there is another sugar I have not spoken much about yet, and that is maltose or malt sugar. Malt sugar is more common to the body and more native to the body than any other. Certain grains, all the cereal grains during the process of sprouting, develop a digestive substance known as diastase, and this diastase converts starch into sugar which is called malt sugar. It is a little different from cane sugar; it is not quite so sweet, but it is produced in very great abundance ~~by~~ ^{not} in what is called the malting process. The malting process is a process which produces alcohol; ~~and~~ it is a process that produces sugar. The grains are simply moistened, kept warm, and they begin to sprout, and when the sprout is about as long as the joint of your thumb, then it is dried, and the sprouting is stopped, and there is found to be a large amount of maltose or malt sugar in the ~~grain~~. grain. This is then dissolved out, macerated, the grain is macerated, soaked in water, and the water is afterwards fermented; the wort is fermented with yeast, and that is the way alcohol is produced, but the malting process is not an alcohol producing process; it is a sugar making process. A similar process takes place in the body. The saliva in the mouth contains diastase

which is similar to that found in barley and wheat and corn, and all the grains; and in the process of chewing, this diastase converts cooked starch into malt sugar, exactly the same kind of sugar as that which is found in malt grain. Now, also, after the starch reaches the small intestine, there it finds another diastase in the pancreatic juice. The pancreatic juice and the saliva are both capable of digesting starch. The saliva digests only cooked starch, whereas the pancreatic juice digests both cooked starch and raw starch; however, it does not digest raw starch with very great facility, consequently it is impossible for a person to live well on raw grain, or raw potatoes, or on any other uncooked cereal food. The natural diet of man is fruits and nuts. In fruits and nuts the starch has been already changed, it has been already digested by this inverting substance which I have told you about, which converts the cane sugar. The starch is first converted into cane sugar by the plant, then the cane sugar is converted into fruit sugar in the fruit itself. The same process takes place in the body. Now, the malt sugar which is produced by the action of saliva upon the starch, after that maltose reaches the intestine, it is there converted also into fruit sugar, but it is supposed that some parts of the malt sugar are absorbed. After being absorbed into the blood, the maltose may be converted into fruit sugar there, and it is the only sugar which can undergo this change in the blood. Malt sugar is the only sugar of the three sugars, cane sugar, malt sugar and milk sugar, which can be ~~digested~~ utilized before it has been digested, which may be converted into fruit sugar; the other sugars have to be digested and converted into fruit sugar before they can be utilized, but malt sugar is the only one that can be digested in the blood. Of malt sugar we use a large amount. About 16 ounces of starch are eaten daily. This sixteen ounces of starch is all converted into sugar. It is all converted into maltose, and the maltose is all converted into fruit sugar in the body. So you see there must be great facility for digesting

malt sugar. On the other hand, cane sugar is sometimes digested and sometimes not digested. People are like fruits. There are some ~~peeps~~ fruits which have not the power to digest cane sugar, so the cane sugar is left undigested. There are some people in the same condition--they haven't the power to digest cane sugar. When such people eat cane sugar, they have serious trouble. The cane sugar is not digested, and it undergoes fermentations and other changes. It is not absorbed because it can not be utilized without being digested, so of course it makes troubles of various sorts. This is particularly true of babies. Babies suffer very much because of the use of cane sugar. Mothers who do not know that often do their babies a great deal of harm in feeding them condensed milk which contains a large amount of cane sugar; or sweetening the cow's milk for the baby with cane sugar. But babies very often have no power to digest cane sugar. They are in just the situation of the date. Babies are very sweet like dates, you know, but they can not always digest cane sugar, they have not the invertin, so they become cross, crabbit^{ed}, and not quite so sweet, because some hing sours when they are fed cane sugar. Malt sugar, as I said, is converted into fruit sugar in the body by the process of digestion, and the body has great facility for this. Babies can digest malt sugar from the very beginning of their lives. They can always digest malt sugar, and that is the reason why babies can be brought up on some of these infant foods; that is, with a great deal of care. The difficulty with the infant foods, however, is that they are cooked, and babies must have some raw food. That is a very important thing. You can not raise a baby on a cooked diet. A baby raised on a cooked diet exclusively, will get scurvy, ricketts, and be likely to die. Certainly it can not thrive on a cooked diet, for babies are adapted to an uncooked diet; and what is true of babies is just as true of adults, only adults become more or less accustomed to cooked fare. Babies can get along very well on a partially cooked diet. All of these infant foods which

are sweet contain malt sugar. By a process of malting the sugar is formed. That is, the malt sugar is formed by the digestion of starcy, so is ready for use. These are highly important and interesting facts, because they have a very practical bearing upon the every day lives of a great number of people. Cane sugar has come to be used so extensively, that it is one of the most important articles of commerce, and enters very largely into the bill of fare and also into the bill of expenses of the ordinary family. The consumption of cane sugar at the present time is more than 75 lbs. per capita per annum in the United States, and in England the consumption is a little larger still, probably because there is no duty on sugar and it is cheaper, so people eat more of it; but 75 pounds per year for every man, woman and child in the United States is a very large amount. That is the average consumption of sugar in this country. It amounts to a very considerable quantity, you see. The human body can not appropriate that amount of sugar without damage, so we are getting a great deal of damage as a result of it. Prof. Sherman of Columbia University, says that the American People are suffering greatly from lime starvation because of their large use of meat and of cane sugar. We suffer from lime starvation if we use meat, because when the hog eats corn, he eats the lime right along with the corn, in the corn, and most of the lime goes to the bones, and very little of it goes into the muscles. Now, when a man eats pig, he eats his corn second-hand, you see, and he does not get all the corn because he does not eat the whole pig. He eats only the lean part of the pig, or the fat part, but the lime part that went into the bones, he does not get. So if you are going to eat corn at second-hand and are going to get the lime that was in the corn, you must eat the whole hog, bones and all. If you do not do that, you do not get the whole of the corn, so you suffer from lime starvation; and what is true of pigs is just as true of other meat; when living on a meat diet we must suffer from lime starvation, because we do not eat the bones. While the

animal ate the whole food, we only get a part of it. Now the same thing is true of sugar. When we take sugar, or carbohydrates in the form of cereals, we take the lime right along with the starch; but if we take the sugar by itself, the lime has been left out. In the process of manufacturing sugar, the lime salts were separated out, and we get nothing but the pure, crystalline sugar; so when we take our carbohydrates in the form of sugar, and take our protein in the form of meat, we are bound to suffer from lime starvation because we do not get the salts which naturally go along with ~~it~~ a whole and complete food. If we are going to take the animal diet, we must eat the whole animal just as the lion does. The lion eats an animal bones and all. He has jaws strong enough to crush the bones. Some time ago they found out in the zoological garden in London that the carnivorous animals were dying off, and the cubs all died of ricketts; they had strange bone deformities, and they sent for a doctor, Dr. Treves, the great surgeon, and he came and looked into the matter, and he said, "The trouble is your lions are not getting any lime. You are feeding them on lean meat; they are not getting any lime. That is the reason why they have scurvy and deformities, and why the cubs die; so the thing to do is to feed them bones." So they ground up bones in a mill, made meal of the bones, and fed the lions bone meal along with their beef; and since that time they have been getting along very well. So if you are going to eat meat when you go home, you must have some bone dust to put on your beefsteak in order to complete the diet. The bill of fare is not complete, and you will not get any lime without it, and your babies will have the ricketts, and you will grow prematurely old yourselves. That is one reason why the teeth are rotting so generally, so universally almost, because they are not getting lime food on account of the large use of cane sugar and the large use of meat as an article of diet. I think this simple fact is so plain everybody ought to see it as soon as their attention is called to it. For forty years I have been studying this,

and I am ashamed that I never had fully appreciated that fact until it was pointed out by Prof. Sherman, of Columbia university a year ago in an extremely interesting paper that he read before a congress of teachers, of professors, of economists, that was held at Lake Placid last year. I was invited to go over there and give a lecture, and I found Prof. Sherman there, and I listened to an address that Prof. Sherman gave there, with very great interest. He has been making a very extended series of experiments upon animals, also observations upon human beings, and he finds that animals fed upon ~~xxx~~ a meat diet for some months,-- their bones are so soft they can be almost crushed with the hand. If young animals instead of being fed upon their natural food are fed upon a meat diet, their bones become very soft. If an animal is fed upon a diet with no lime at all, the lime is taken out of the bones, and the bones become softer, softer and softer, until by and by they lose their rigidity. So that is the situation the mother is in who is rearing a baby and has not enough lime in her food, who is trying to live upon a meat diet, and eating a great deal of sugar. That mother is being robbed by her child continually, being robbed of her bone substance, of the lime in her bones; so it not infrequently happens that mothers suffer from maladies which result from this particular cause. Another word about cane sugar. It has been observed recently by an eminent German physiologist that during the process of digestion, four or five hours, sometimes as long as seven hours after eating a meal, cane sugar is not digested at all; there is no digestion of cane sugar ~~xxx~~ during the first hours after an ordinary meal, and that accounts for the trouble many people have in eating cane sugar. They have sour stomach. The reason is cane sugar remains in the stomach when absorbed; it creates irritation, for it is an irritating substance when it remains too long in the stomach. Now, what shall we eat, then? We do not need to eat sugar at all. It is a luxury. Our ancestors 600 or 700 years ago did not have any cane sugar on their tables. Our

ancestors 300 years ago only saw cane sugar as a medicine or a great luxury. Sugar in England 200 years ago, sold at 45 cents a pound. How much of it would you eat if you had to pay 45 cents a pound for it? Probably you might eat considerable in these days of luxury; but probably you would not eat so much of it as you do when you get it for four or five cents a pound. We use so much because we get it cheap. As a matter of fact, it is a very expensive food after all, because, though we pay so little for it in cash, we pay a great deal for it in mischief, in pain and the great mischief that it does. Experiments made by Ogata showed that a solution of one part of sugar in nine parts of water injected ~~un~~ into a vein in a dog always created an inflamed appearance in the dog's stomach. So when a person eats candy, or when he eats griddlecakes covered over ~~it~~ with molasses, which is about half or three quarters cane sugar; when a person eats preserves or any kind of very sweet substance, he is introducing into the stomach a source of irritation; and that is one reason why so many people nowadays have hyperacidity, hyperhydrochloria--an excess of gastric acid,--gastric catarrh and other similar diseases; they are unquestionably due to this large use of cane sugar. The large use of cane sugar is a habit so nearly universal that I think it worth while to dwell upon it a little. We found this out more than thirty years ago, soon after I began my work in this institution, I found a great number of people saying, "I can not eat cane sugar; I can not eat anything sweet." I said they might eat sweet apples, baked sweet apples, and other sweet fruits, and I soon discovered that anybody could eat sweet apples no matter how much they suffered when they ate sugar; they could always eat sweet apples. I found people who had discovered for themselves that they could not eat fruit that had the least little bit of cane sugar in it to sweeten the fruit. When you sweeten fruit with sugar, the sugar does not neutralize the acidity; it only covers it up; for sugar itself is of the nature of an acid. Although it is sweet, its chemical nature is that of

acid. It combines with lime, ~~as~~ for instance, so it behaves in that way as an acid rather than as an alkali. So it is a matter of considerable gravity, and I ^{to} recommend all of you the disuse of cane sugar. What shall we use, then? Make sweet sauces from figs, raisins and other sweet fruits. Here at the Sanitarium as the result of some years' experimentation, we have malt sugar prepared in a form which is usable. We call it Meltose, or Malt Honey. It is in the form of syrup. We haven't succeeded in getting it into crystalline form. I hope sometime to get it into crystalline form. So far we have not been able to do it, but I hope we shall succeed after while in getting it into crystalline form, and when we do we shall have something we can recommend entirely as a substitute for cane sugar. Malt sugar is not so sweet as cane sugar, but it is not at all irritating, so in Meltose we have a sugar which is a native sugar of the body, the same sugar as that which is produced by saliva and the pancreatic juice acting upon the starch, sugar which can be utilized by the body without any difficulty because it can be absorbed just as it is and will nourish the body, being converted into fruit sugar in the alimentary canal. So I recommend you all, every one of you, to use Meltose as much as you can in place of cane sugar. If you want something to use upon cereals, use the malt honey; it may be used without difficulty; you can take it just as freely as you like, because one can eat half a pound of it a day if he wants to; it can not do him any harm, for the body naturally, habitually manufactures about a pound of malt sugar a day. Then, Meltose is different from ordinary sugar in that it contains the lime; the lime is all there; the salts are all there. The soluble salts of the grains have not been removed.

Q. What about raised bread?

A. Now, raised bread is an article of food which has come down to us from the most ancient times; but it is not by any means a wholesome article of food, especially the large loaves that are made by our modern bakers. The ancient

bakers made bread in small loaves, in little flat cakes which were baked upon a hot tin over a few coals, and bread made in that way has a very thick crust and is thoroughly baked all through, but the bread which the baker gives us is baked only on the outside. The inside is not thoroughly cooked. The inside of the ordinary baker's loaf has been barely warmed; it has never reached a temperature of 212° . The highest temperature reached is about 160° to 180° , and this is not sufficient to thoroughly cook starch. The consequence is that such bread contains germs. There is a multitude of germs which are always found in flour. Next to milk and meat, flour and raised bread are the dirtiest things that come upon our tables, because they are not well cooked; they are not sterilized. Meat is always swarming with germs. Every morsel of meat contains somewhere about ten to 15 or 20 millions of germs, and every drop of commercial milk contains one or two million of germs; so you can see what you are getting in a glassful. Every drop of ordinary, commercial milk in hot weather has a million germs in it, and sometimes a great many more than that. It may be four or five million germs, because commercial milk is a very dirty thing. The milk as it comes from the cow may have no germs at all in it, but the dairy maid or the dairyman always takes a great deal of pains to put a whole lot of stable litter into it before he gets through. He rubs it off the cow with his arms while milking; he shakes it off his coat and his garments as he carries the milk about; he stirs up the dust in the hay as he feeds the cows and horses at the same time as the cow is being milked, or just before milking, so the air is full of these germs, which settle in the pail; and then he turns the milk from the pail into the big can which is standing there open so the dust settles into it. So in various ways the milk is rendered very impure. Over in India the method they have of purifying the floor, and the only thing they do to purify the floor, is to cover it over with a saturate solution of the excreta of the cow. They make a saturate solution of it, and mop the floors

with it. That is the way they purify their dwellings in India, so of course when it is dried, ground up by walking about over it, the air is full of manure germs. Now, that is exactly the situation in the barn and in the stable. The air is continually swarming full of these manure germs which settle into the milk. Meat is in this situation. When an animal dies, decomposition begins at once, and it is hung up in the butcher shop somewhere to get ripe, to get prime, to become tender, and that is simply a process of advancing decomposition. Putrefaction begins right away after an animal dies, because the body must make a fight all the while to keep the germs out. The skin is covered with germs, the tissues are full of germs all the while, and within twenty-four hours after an animal dies, its body is swarming full of germs. Within forty-eight hours, the number of germs is simply enormous; so every morsel of meat you take, has anywhere from five to ten, to fifteen to twenty millions of germs in it. We have made a careful study of this matter in our laboratory, and we know it to be true. Others have studied it very carefully and know it to be true. Our Bacteriologist, Dr. Nelson, went down to a hotel in the city some time ago, to the chef and arranged with him to get from him some of the meat that they prepare for the table, and some of the cooked meat all ready for the table; so he got steaks, chops, and roasts just as they were prepared to be put onto the table. And he made analyses, and found millions and millions of germs in that meat. The cooking of meat does not reach a temperature high enough to kill germs. The inside of the meat is not raised to a temperature sufficiently high to kill these germs; it is only the outside that is thoroughly cooked. The same thing is true of bakers' bread. The inside of the loaf is swarming with bacteria. Of course, if you have got good, strong gastric juice, strong enough to kill all the germs that come along--and that is the condition of the stomach when it is thoroughly healthy and has gastric juice in it,--it can kill any germ that comes along. Man was never made to be subject to germs. Man was made superior to germs, and able to cope with any germ that might

come along; but when the body is reduced in vigor by wrong habits, when auto-intoxication has spoiled the blood and the tissues, lowered the vital resistance, then germs grow in it just as mould grows on the wall. They become parasites on the body so that it becomes filled with these noxious organisms. Now, flour always contains a great number of germs. The germs are collected by the wheat as it is standing in the field, and every passing team raises a cloud of dust which settles into the heads of the grain. Then it came through the threshing machine, and some of the dust came out, very much to the damage of the threshers, and to their inconvenience, but a large amount of dust clings to the wheat, and goes on in the flour, because there is a little crease in the kernel, the grain where the dust clings, and while in the milling process the most of it is brushed off, the dust in this little crease ~~xxxxxx~~ is not all brushed out; they can not get the dust all out of that crease, and it goes right along into the flour. The other day there was something the matter with the graham bread. When we pulled it apart, there were some strings in it. Some of you perhaps observed it. As soon as my attention was called to it, I knew what was the matter. I investigated it several years ago. I discovered what the trouble was. I said that batch of wheat must be condemned; there are germs in the flour, and the wheat must be condemned because there are germs growing in it that are not killed in the baking, so the flour was examined in the laboratory, and found to be exactly as I supposed. These strings were simply ~~xxxx~~ masses of germs strung together with an adhesive envelope. It is a peculiar kind of germ that makes an adhesive envelope about itself. This is going on in every home. The housewife knows that sometimes bread is good, and sometimes it is not good, although you make it in exactly the same way, and you do not know what the trouble is. You lay it to the yeast, or you lay it to the oven; you lay it to all sorts of things, but the real trouble is always in the flour. You happen to get a new species of germs that you were not used to; you

do not happen to guess right, or to make proper allowance for them; and that is what made the trouble. They look a little different than usual. So, instead of using raised bread, if we would use bread made in small cakes, baked so hard that it is baked clear through; or eat our bread in the form of zwieback, cut it in slices and toast it in the oven until it is brown clear through, thoroughly dry, then we have wholesome bread; the germs are killed, and the ordinary raised bread is a very objectionable thing, and I advise every one of you to discard the use of it. At our house we make very little use of raised bread. We eat wheat flakes instead of raised bread. Every kernel is made into a little cake by itself, then is baked thoroughly, baked and toasted. That is why wheat flakes constitute, I think, the most perfect form of bread you can possibly have, the most perfect form of bread that is known, because each single grain is made into a little cake, toasted by itself, and it is completely, thoroughly cooked, and it is all there. The bran is there, the entire grain is there; but the brain is broken up into such minute fine particles that it can all be easily digested, gives no irritation, and you get the whole grain, the lime with the rest.

Q. Should people with rheumatism in summer wear wool or linen?

A. Wear just whatever makes you most comfortable. On the whole, I think the best plan is to wear linen next the body, and wool on the outside. Or I may say, cotton. Cotton is just as good as linen practically. The cotton or linen will take up the moisture ~~and~~ quickly from the skin, then will pass it out to the wool more slowly. The wool will dry a little more slowly than linen or cotton, so you will be less likely to chill. Cotton takes moisture in quickly and gives it off quickly, while wool takes it in slowly and gives it off slowly. So if you have cotton next to the skin it will take the moisture up quickly, then distribute it to the wool, and you will be entirely protected from danger of chill by rapid evaporation; at the same time there will be something to take up the moisture of the body so the body will not be uncomfortably moist.

Q. What do you think of vaccination?

A. Well, we do not have to think about vaccination here very often, because it is very rarely that small-pox finds us off in this out-of-the-way country town; so we do not think anything about it. As a matter of fact, vaccination is to some degree a protection against small-pox. There is no doubt about it, but it has its inconvenience. It is the introduction into the body of a poisonous substance, of an infectious substance. The improved methods of vaccination are very far superior to the old way. The old way of arm to arm vaccination was a hideous thing. It might perhaps, with very great precaution, be better than small-pox, might have been in those days, but small-pox was a very hideous thing also. I should say, if you have got to have small-pox or vaccination, then it is far better to have the vaccination than the small-pox, because the body is not saturated with vaccination as with small-pox. There can be no doubt that small-pox leaves a person more susceptible to certain maladies than before. There can be no doubt that small-pox leaves a person more susceptible to tuberculosis, more susceptible to consumption and to a number of other maladies than before he had small-pox. Possibly vaccination may have a similar effect to some degree, though I am sure to a much less intense degree than small-pox, because it is a mitigated malady. However, I think we ought sometime to find a better means of protection against small-pox than vaccination. It is an artificial method; it is not the best method; but if I had my choice, I would certainly have vaccination ~~of small-pox~~ rather than small-pox if I had to choose between the two. I was vaccinated when I was a boy, and I remember I was pretty sick after it. When I was a medical student some twenty years later, I was vaccinated again,--but no, I was not vaccinated; I declined to be vaccinated; but I practiced among small-pox patients as much as I wanted to, in fact, more than I cared to. My preceptor in New York was afraid he would catch the disease. I vaccinated him every week, but I was not vaccinated

myself at all. I did not take the disease, but that is no proof that I myself or some one else might not take it. I have been vaccinated once or twice since, but nothing happened. I seem to be proof against vaccination. That reminds me of a story one of our nurses wrote me from Pennsylvania some time ago. She said, "Doctor, what shall I do. A doctor has vaccinated me, and it won't work; in fact, it does not work in any of our family, and the Doctor said if we would only eat pork it would work, because he said he has noticed that in families that don't eat pork ~~at~~ vaccination won't work, but in those that ~~may~~ eat a great deal of pork, vaccination works first rate. What would you recommend us to do?" I told her she better go without vaccination than to eat pork. The pig certainly was never made to be eaten. The eating of pig was forbidden under the old Mosaic law, and the ban has never been taken off. The pig was condemned by Moses, not as a merely ceremonial matter, but because it never was intended to be anything but a scavenger. It is bad enough to eat clean animals, but filthy animals like the pig ~~that~~ is a natural scavenger, that has a scavenger instinct, certainly never were intended to be eaten by anything but germs. I quite agree with Dr. Adam Clarke, the great commentator. One day at the dinner-table he was asked to ask a blessing where there was a roast pig. The center piece at the table was a roast suckling pig. When he was asked to ask the blessing, he said this: XXX, "O Lord, if Thou canst bless under the gospel what Thou didst curse under the law, bless this pig." I am afraid the pig was not blessed.

Q. Is there any form of preparation which can be absorbed through the skin to feed the nerves and tissues?

A. No. The skin is not a stomach. The skin is a breathing organ and an excreting organ. The skin lets things out; it takes very little in. It will take in moisture to a small degree. If a person puts himself to soak in a tub

the skin can take in some water, provided the temperature is below the temperature of the body, but if the temperature of the water is above that of the body, then the action will be outward instead of inward. If the temperature is ^{below} ~~above~~ that of the body, the action will be inward and there will be some absorption.

Q. On which side should one lie when sleeping, and why?

A. I don't know of any answer to make to that except that one should lie on the outside--that is outside of himself and inside of the bed. When I have recommended people to sleep on the left side, perhaps, pretty soon they have come to me and said, "Doctor, how am I going to do it? I went to sleep last night on the left side according to directions, and this morning I woke up on the right side. What am I going to do about it?" For me, I go to sleep on the right side of the bed, and wake up on the left side of the bed, or on the outside of the bed sometimes--on the floor. I am thankful ~~that I~~ if I can stay in bed. I don't think we can hold anybody responsible for what he does while he is asleep, and I don't think it profitable to give anybody directions about that. However, if you think you can manage yourself in sleep, I think it is a good thing to lie slightly inclined toward the right side; because the opening of the stomach is on the right side, and that will facilitate things a little. However, it is perhaps not quite so hard for the stomach to travel up hill as it is for you and me to do it, but it is, nevertheless, a little more difficult for the stomach, especially the crippled, dilated stomach, to lift the food up hill to the pylorus, than it is to lift it down hill; but the stomach works down hill instead of up when the person lies on the right side.

Q. Is it best to take the morning exercises before or after the morning bath?

A. Well, the morning bath is a matter of indifference, I think, so far as exercise is concerned, provided you take the exercise properly, and I might say, also, provided you take the bath properly. If you are going to do the very best

possible thing, perhaps it would be well to take a little exercise before the bath, then to take a little more exercise afterwards. If you bring the bath in the middle of the exercise period, it would be best of all, I think. Take exercise enough to get well warmed up, then take the bath. If you warm up by exercise, you will be certain to get a good, vigorous reaction, and that is what you want. Exercise after the bath is for the purpose of encouraging reaction. If you take a cold bath, exercise after the bath is undoubtedly an advantage.

Q. Give a few good preventives against taking cold.

A. The only way to avoid taking cold is to make yourself so tough you can not take cold. In other words, harden yourself up thoroughly harden yourself; that is the thing to do to prevent taking cold. Some years ago out West, a man, not a native of the place, but a farmer, a woodsman, stood beside an Indian. It was late in the fall, and the winds were blowing, the cold, November winds, and the snow was falling, and here stood the Indian with very little clothes on. His legs were bare, his arms were bare, his trunk was bare, and the snow was falling on his bare skin, and he did not appear to be uncomfortable. Here stood the farmer with clothes on, and a thick woolen coat, and thick boots, protected from the weather. He said to the Indian, "Aren't you cold?" The Indian said, to him, "No, I am not cold." He said, "Well, I should think you would be, with no clothing on." The Indian said to him, "Is your face cold?" The farmer said, "Why, no, my face is not cold." The Indian said, "Indian is all face." That is the thing. If you make the rest of your body as tough as your face is, you can not take cold. Nobody ever takes cold when he exposes his face. I have heard of people who took cold when they left off their gloves, but they are people who have been tenderly brought up, so coddled they have almost been brought up in thick clothing, hence it is rather dangerous for them to appear in public. I have known, however, one or two people who took cold when they ~~xxxxxx~~ saw the window open, although the air was going out instead of coming in. They took cold nevertheless.

They are psychopaths, and perhaps they will take cold anyhow, no matter what we do; but the way to protect yourself against cold is to make your skin so hardy and vigorous and active, every part of it, that it is able to take care of itself. How are you going to do that? By skin gymnastics, by skin training. How is that to be accomplished? In just the same way in which your face is made hard and tough,--by exposure to the air, by exposure to the sun and the cold bath. The face has a dose of cold water several times a day, at least it ought to and I suppose it generally does. Now if the back and the chest and the rest of the body, the arms and legs, were treated in just the same way,--exposed to the air and the sun and the contact with cold water, the circulation would be so active that there would be no difficulty about taking cold. Some years ago I was out to Fort Yuma, went out there to study the Yumax Indians while still in their primitive state. I found there a couple of good Catholic sisters who had gone out there to do missionary work among the Indians. I was talking with them about the children they had gathered into their school. It was extremely hot weather, and I found those children in the school were clad with thick woolen garments, and they had on shoes--no stockings, but shoes, and the sisters were laboring very hard to civilize them. Down in camp the children did not wear any clothes at all, and the old folks wore very little clothes. The women wore little bark aprons, and the men wore what they called gee-strings, which amount to a little less than a pocket handkerchief; but the children in the school were clad with thick woolen clothes; the boys had on thick pantaloons, thick coats, and thick leather shoes, and the teachers were making strenuous efforts to civilize them, you see. I said to one of the teachers, "How are you getting along with your school?" "Oh, we are having a very hard time," they said. I said, "Why, what is the trouble?" They said, "The old Indians don't like to have the children come to school." "What is the trouble? Don't they like to have them learn?" "Yes, they are willing that they should learn." "Well, why do they oppose the school? What are they com-

plaining about, then?" "They say the children ~~are not~~ ~~it~~ are not healthy after they come to school. They say the school makes the children sick." "Well," I said, "what sort of sickness do they have?" "Well, they have catarrhs, and they have sore throats, and they get colds." I said, "what do you think is the reason for that?" "Well," they said, "we don't know." I said, "what do the old Indians think about it?" But besides that they said, "Oh, yes, they have water brash." "What do the old Indians think about it?" "Well, the old Indians think it is because"--one of the sisters sort of blushed, looked a little ashamed; they said, "the old Indians think it is because they wear clothes." I suppose she was thinking what they would do if they had to allow them to come to school without clothes. I saw at once the truth of that. The old Indians recognized the fact that these children were not so healthy after they wore clothes as they were before. I said, "Well, what do they think is the cause of the water brash and the stomach trouble?" "Well, the Indians think it is because they eat meat." "Oh, don't they eat meat down in the camp?" "Oh, no, they never eat meat, they live on seeds, fruits, pemmican, mesquite beans, melons, the products of the forest, etc; they rarely ever had a taste of meat, rarely ever ate it at all"; but there they had meat every day, government corned beef which the government furnished, and the children got water brash. It is plain enough why they get the water brash. It is because the meat was overstimulating to their stomachs, created an excess of gastric juice, gastric secretion, and that is what they felt rise into their throats, making the trouble. Their stomachs were not accustomed to such stimulating food as meat, but to a natural dietary which was not stimulating, which does not irritate and overstimulate the stomach. And they took cold from wearing clothes, because when we put on clothing, we assume an artificial skin. Now, the natural skin of the body is able to take care of itself. There is a set of nerves and blood-vessels there that are continually changing according to the conditions surrounding the body.

Reactions are taking place continually. When the temperature of the air drops one degree, the skin responds, opens up blood-vessels to furnish a little more blood to keep the skin warm. When the temperature goes up a few degrees, the blood-vessels are opened up widely to allow perspiration to take place, so as to disperse the heat. When there is quite a drop in temperature, too much cold, the blood-vessels are shut up so as to save the heat of the body; so the skin is continually acting against the very slightest changes in the temperature. Now, when you put on artificial garments,--the coat, for instance, does not change at all. If the air comes in contact with the skin, the skin is continually adjusting itself to the temperature and the moisture and everything else that is taking place in the atmosphere; but my coat can not adjust itself; it has no blood-vessels and no nerves, so if the temperature rises a little, the heat accumulates in the body, there is no change, no adjustment, and we begin to sweat in a little while. If you were exposed to the air you would not perspire in that way--the bare body,--because the evaporation could be sufficient to carry the moisture off. Then the skin is damaged by this poultice effect of the clothing acting upon the skin, and the skin becomes debilitated and weakened. The wearing of clothing is a very unhealthy practice, and a very dirty practice, an unclean practice. The filth of the body which should be carried off by contact ~~with~~ of the air and body, and by the skin rubbing against things in running about in the grass and in the brush there is a scouring of the skin which does not take place when one wears clothing. The savage does not have to bathe if he does not want to, but he does bathe because he likes the contact with the water just as a bird or any other animal does; but the savage does not need to bathe for cleanliness, because he is kept clean by the contact of his skin with the bushes and the grass. The skin is falling off all the time. You know the snake changes its skin every year; and the lobster and the crab get a new skin every year. The bird moults its feathers. The lobster and

the crab moult their whole skin, and come out with a new one every year. If you want to understand this, take a Turkish bath when you have not had a hot bath before for a little while, a week or two, and just see what the shampooer will pull off from your skin; he will peel off the epidermis in whole ~~big~~ flakes. But ordinarily this peeling off takes place in small flakes, and this little scurf that is coming off all the while keeps the skin clean. The same thing takes place inside of the body, in the nose and the mouth, and the throat; there is a sloughing off of the mucous membrane all the while, which keeps the skin clean. Now, when we wear clothes, this process is prevented, interfered with, and the filth is accumulated, the old skin accumulates so the body is kept in a continually unclean condition unless there is the daily bath or the daily exposure to the air, or the daily rubbing and scouring of the skin. It is not necessary that one should use cold water every day, but it is an excellent thing, because it is gymnastics for the skin; it trains the skin vessels so they can open and shut easily. We take cold because the blood-vessels of the skin are not able to shut up. They should shut up quick in order to keep the heat within; but when our skins are not well trained, the blood-vessels are dilated, and they do not shut up, and when the temperature of the body falls we begin to shiver. That is an effort of nature to ~~make~~ create heat; an involuntary muscular effort that creates heat, so warms us up again; so shivering is an evidence you are taking cold, or rather it is an evidence, not that you are taking cold, but that you have taken cold, and the body is making an effort to cure the cold. So if you find yourself shivering and your feet are cold, the best thing in the world is to help the shivering along, just set yourself to shivering as hard as you can. If you find yourself getting a little cold and chilly, don't wait until you shiver, but begin to shiver voluntarily; set your muscles to going; set the muscles of your arms to going, and the muscles of your legs to going; set all the muscles just as tense as you can, and then make

them vibrate, and that voluntary shivering will prevent your taking cold temporarily, and prevent the involuntary shivering which will come later if you do not develop heat in some way.

Q. Somebody is complaining about the little folks marching in the gymnasium.

A. The difficulty I think has been remedied. A class has been formed for the special benefit of the children. We have three classes in the gymnasium,-- a class for little folks, a class for the young, and a class for the patients. Of course our patients have a perfect right to claim an exclusive privilege for the class that is given them for their medical benefit, and nobody has a right to demand a privilege in that class unless they are themselves patients. Boarders have been allowed the privilege, but when boarders become troublesome they have to yield to the sick people, for the sick people have the right of way in this institution. We are interested in the boarders too, but the sick people are our pets; we must give them the preference every time. They are here for serious purposes.

Q. Why is it the Sanitarium does not serve dates?

A. One reason is, as I said a little while ago, that dates contain cane sugar and are not so easily digestible. Many people can not eat dates, but I think after while we shall be able to get hold of dates that we can serve. For some years I have been trying to get hold of the Tunis date which is much more digestible and is not open to the suspicion that it is saturated with cane sugar. Some of these dates are soaked in molasses, smothered with sugar to give them the sweetness that cane sugar has. It is on account of that that we have rather condemned the date as an article of food and make very little use of it here.

Q. How can I overcome anemia?

A. Now, the old idea about anemia was that it was a condition of the blood which was due to the lack of iron. Iron is found in the blood in certain proportions, and when a man had anemia, there was less blood iron in his blood, so the

idea prevailed that a man that had anemia needed more iron, and iron was fed in large quantities, and curiously enough people who took iron got more blood, but it was not because the iron was manufactured into blood. You perhaps have heard the story of a man shut up in prison--I don't believe this story, of course, but it is just as probable as some other stories that I have heard,--a man shut up in a prison found himself unable to get out. He bethought himself that if he only had a file or something of that kind, he could get out. He bethought himself, and it occurred to him that he had been taking Brown's Iron Bitters for some time before he was put in prison, so he extracted some blood from his veins, and from the iron in the blood made a crowbar and made his way out of the prison. That yarn is just as reasonable as that ~~man's~~ man blood can be got out of iron.

A man may take iron with his food, or iron filings or any other form of iron, and there may be an increase in the blood, but it does not come from that iron. It may act as a kind of medicine in the intestine, may be an antiseptic, or kill germs, or something of that kind, but it can not be made into blood, because blood must be built out of organized material, out of living material. That is what the vegetable kingdom is for--to grow food material, to organize it, to make alive the dead elements found in the air and the earth, to build them up into live substances for food for animals, into stored energy; so we must eat our food alive, in the form of vegetables, if we want to get a good supply of iron. When I was a medical student, it was customary for a doctor to recommend his patient to go to a slaughterhouse and drink warm blood, because it was thought if he drank warm blood that would be the best way to get blood for his own body. It was found to be a useless practice as well as a very loathsome practice, a very repulsive thing to the patient, and there was no benefit from it. Once in a while, the patient got a little better, but in general he did not get better, and the reason was discovered after while,--that this ox blood did not become human blood; it had to be digested, to

be reduced down to the original elements just the same as foodstuffs in the form of vegetables, food taken from the vegetable kingdom. From time immemorial, I think, people who had little blood have been fed on lean meat. It has been the supposition that if a man had little blood, he must take more lean meat. It has been discovered in recent times that the trouble with the man who has too little blood is not because he has not enough blood-making material in his food; it is because he is not able to utilize the blood-making material of his food. The food always contains a much larger amount of iron than the body can make any use of at all. There is always a large surplus of iron in the food. Food contains a great deal more than necessary, unless one tries to live on sugar or something of that sort. Even rice contains iron enough, all that we need. There are two reasons why a person may be short of blood, why he may be anemic. It may be because he does not make blood enough, or because his blood is being spoiled. Blood is always being made, and always being destroyed. The blood-destroying process goes on at the same time as the blood-making process, and all the blood is destroyed once in six weeks. We have new blood every six weeks. A blood-cell lives only six weeks, so every six weeks, we have a new supply of blood-cells. So all the blood is destroyed in six weeks. Sometimes a person's blood destroying process goes on more rapidly than his blood-making process, then he gets pale, don't you see?--gets less blood. This blood-destroying process is accelerated sometimes by certain conditions that arise in the alimentary canal. It has been found in recent times by Prof. Herter, of New York, and by eminent European investigators, that there are certain germs that grow in the intestine which produce poisonous substances which absorbed into the blood destroy and absorb the blood, and that is the principal cause of anemia, the most common cause of anemia; of the worst form of anemia that is known to be true. How do you know it to be true? Because you can take some blood from an animal, put it into a test-tube, into a

glass, then take some of these germs which have been growing in another glass, put these germs along with the blood-vessels, and the blood is destroyed right before your eyes; you can see the thing done.) Now, when these germs are found growing in the intestine, when germs are found there, we can find them here in our laboratory. You saw a man here not long ago going about in a wheel-chair, pale as death. He had pernicious anemia. And you will see somebody here all the while with this condition; we always have several people here suffering from this disease. In the laboratory we examine the bowel discharges, and we find there the germs which make the poison which destroys the blood. The thing to do is to reduce those germs. The old idea was we ought to feed these patients meat. There was Frances Willard, who I am glad to tell you was a friend of the Battle Creek Idea, practiced the Battle Creek Idea, and a friend of the Battle Creek Sanitarium. You can not imagine how I felt when that woman was dying in New York when I knew that the thing that was being done for her was killing her, was the very worst thing possible to be done for her. She was fed upon rare steak, the so-called Salisbury diet, and at the very time she was dying on a meat diet, here we had people who were suffering from the same disease, and getting well. She died of pernicious anemia, and the things that were done for her in her last days were the very things, the very worst possible things to be done for her. I believe, just as much as I am standing here, that she might have been cured if she could have been gotten under proper influence and proper conditions. But unfortunately nothing could be done but to sit still and see her die. This has been found out. It was not then generally recognized by the profession, but at the present time, Prof. Krause, of Berlin, one of the greatest physicians living, and many others, have recognized the fact that meat is one of the worst things possible for one suffering from pernicious anemia. Why? Because meat feeds the germs that destroy the blood. Can you think of anything worse, then, than meat? Because meat is the very thing that destroys the blood. These poisons absorbed

from the intestine, which are produced in the intestine by the putrefaction of undigested remnants of meat, and absorbed from the alimentary canal into the blood, destroy the human blood. One of my colleagues, Dr. Mortensen, was attending his clinic in Berlin the last year, and Prof. Krause said, "Now, gentlemen, whatever you feed your patient, don't feed him meat, when he is suffering from pernicious anemia; give him a vegetable diet. Somehow a vegetable diet cures these patients. I don't know why, I can not explain to you why, but I know it does. Don't feed them meat." Now, for thirty years we have been curing these patients here at the Sanitarium on a non-flesh dietary. We did not know why it cured the patients, but I suspected why. I suspected it was because the disease was somehow due to poisons generated in the intestine. That has been my theory for a great many years. So we have been fighting these poisons in every way we could; but I did not know the fact that Prof. Herter and others have now brought out, that there are certain germs which produce poisons which actually dissolve and destroy the blood in great quantities; and meat is the thing that feeds these poisons.

Q. Can inactivity of the bowels of eighteen years' standing be cured?

A. Yes.

Q. I have been here six weeks without benefit; what shall I do?

A. Come and see me. I will tell you what to do. You are sure to be relieved. There is no reason in the world why you should not. I must say this, however. There are cases in which the bowel has become so crippled that for perfect action it must have some help, but the thing is to know what kind of help to give it. The proper help can be given it by proper regulations of the diet. Regulation of the diet will give the necessary help in almost every single case. Once in a while the colon has become so enormously dilated its walls have become weak so they are of not much more value as living and active organs than a pocket in your coat. Then the colon is simply a sack, nothing but a sack, and in those

cases there must be some special assistance given, some special exercise, special dietaries; but this thing can be accomplished in some way.

Q. Is it possible to reduce varicose veins by any method except operation?

A. No. The veins are permanently dilated; the valves are broken down, but the operation is a very simple thing. The operation for varicose veins is a simple one. Generally the application of a bandage is sufficient, but when such veins have become very troublesome and the bandage does not afford the necessary support and comfort, then an operation is needed, and the operation is perfectly safe and is easily done.

Q. Is a damp climate better than a dry climate for dry catarrh?

A. No, but dry catarrh is not a climatic disease. Catarrh of any sort is not a climatic disease; it is a skin disease. You can make your skin so healthy that you will not suffer from it either in a damp climate or a dry climate--from catarrh. As a matter of fact, the cure for catarrh of the nose is an outdoor life. If you live out of doors, whether it is a damp climate or a dry climate, you will not suffer from catarrh, but if you live indoors you will whether it is a dry climate or a damp climate. I must say this, however, further, that there are certain cases in which deformities are produced in the nose, in which the nose is so deformed inside that the surfaces touch, and wherever the surfaces come in contact, there will be an accumulation of secretion, and the germs will cause decomposition of that secretion, putrefaction will take place, and that will cause irritation and catarrh; so such places must be opened up by surgical measure. It is a very slight thing, however, and can be easily accomplished. Many people are suffering from chronic catarrh owing to this cause, and taking all sorts of medicines for relief, and are never cured because there are deformities in the nose which could be relieved in a few minutes by a competent surgeon, and which would effect a cure in almost as many days. No climate will effect a cure.

Q. When the blood test shows the white corpuscles to be 70%, does that indicate that the spleen is affected?

A. No, it indicates the resistance is low. Cold baths, the outdoor life, and proper diet will get it up.

Q. If fish are not good food for man, why did Christ feed the multitude on fish?

A. I don't know. There are some things I don't know, and I must confess. I am not omniscient; I can not give a reason for a great number of things that the Almighty does. Divine wisdom can do things that are far beyond me, and I can not give any reason, for I don't know any reason why I should be asked to give a reason.

Q. Is it good to eat dinner, immediately after coming out of the swimming pool?

A. Now if the swimming pool is very cold and you feel chilly, then you should have some exercise so as to have a good reaction before you eat your meal, and should not eat it right away. The blood would be shut up inside your body, and the meal would tend to make it go in instead of coming out as it should, and the reaction would follow, and your stomach would be congested.

Q. What is the proper diet for a case of decided auto-intoxication?

A. The Sanitarium bill of fare. Don't eat eggs, and don't eat too much eggs, or Protose, or any nitrogenous food. Make your diet of fruits and cereals. Fruits and cereals, we find from our observations in the laboratory, are the best diet for one who wants to cure auto-intoxication. We have a poison squad at the college over across the road, and we are feeding them on various kinds of poisons, but foods in ordinary use that are poison foods; for instance, such food as dead lamb, and dead hen, and dead cow, and other things of that sort. We do not feed them dead rats or dead cats, ~~but~~ nor things of that kind; we do not even feed them

dead pigs, but we feed various other things,--cheese, for example, that people are accustomed to eat, sardines, salmon, etc., and we find these are all poison foods. They enormously increase, increase 100 fold in some instances; increase 1000 fold sometimes, the amount of poison produced in the body. It is invariably the case that the poisons are enormously increased without a single exception. I am having the results tabulated, and will have a table printed and made into a slide; and next Thursday night I hope to be able to throw it on the screen so I can give you the absolute figures and facts. (We have been carrying on these experiments the last three or four months, on five healthy young men. They are still alive, but they have been pretty sick sometimes. One of them had to go to bed. He had been on a meat diet three or four days, and the poisons go in their work, so much that he had to go to bed for three or four days. He was a healthy young man when he began, but it really made him sick. We do not dare to have him go on in it.

Q. Do the majority of Sanitarium patients appreciate the benefits which they would derive from abundance of physical exercise, faithfully taken, under advice of their physicians?

A. I am afraid not. In fact, the average patient comes to the Sanitarium for rest. I remember a business man some time ago who had been here for a couple of weeks, and he said, "Doctor, you are working me to death. I declare, I have done more hard work in the two weeks I have been here at the Sanitarium than in fifteen years before. I came here to rest, and here you are making me work, as though I were working out a sentence of some kind." I said, "That is exactly what we are doing." This institution is a penal institution where men and women come to serve out sentences for wrongdoing at home. You have been sitting in your office there, and you are a hardened, old sinner; and there is nothing for you but to be committed here to this penal institution. Unfortunately the majority of people who come here, come here with the feeling that they have come here to

rest. Now, the matter of getting health is not the matter of rest so much as it is of strenuous work. I believe with Mr. Roosevelt in the strenuous life. I remember a man some years ago came here, and he said he had been in bed seven years. His doctor finally sent him here to see if we could get him out of bed. After a week I began to talk to him about getting out of bed. He said, "Doctor, I am so tired, don't you think I had better rest a week or two yet?" He wanted one or two weeks' more rest after seven years. I let him rest a week,--could not get him on his feet. I finally got him on his feet by playing a trick on him. I got him in the wheelchair, took him back into my operating room. I had the instruments all around there, the frightful things, got him in there where he could not get them out of his sight, and had a little conversation with him. I took him in there in the chair, then took the wheel chair outside, and asked him to excuse me a moment, and I did not go back. I had some business near by, and I left him there, but I sort of hovered around. About three hours afterwards, I found that man slowly edging his way down the hall, leaning against the wall. When he saw me, he fired a volley at me. I won't tell you what he said. I got a wheel chair for him, took him to his room, excused myself, made profuse apologies--I had been very much occupied, was very sorry, but I put him to bed, and he was very angry indeed; but you know, the very next day I was going up the street--it was when the old building was still standing, I was coming up the street, and I saw him on the fourth story, standing up on the porch, waving his hand at me, and I looked at him, and saw it was my friend from away down in Illinois somewhere. He had been a vigorous man and a thriving business man, but he got neurasthenia, got so bad he could not get up. He could see me, and he was waving his hands at me and went strutting up and down the veranda to show me how he could walk. The majority of people need exercise and not rest. The rest never cured him. If you have got a fever, you need rest. If you are so weak you can not stand up, you will have to rest until your legs get strong enough by exercise to hold you

up; but if you are able to stand up, if you haven't got any fever, or any acute malady that compels rest, exercise is one of the most valuable remedies you can possibly take. If we could get everybody in this audience and in this house out to the outdoor gymnasium, in the swimming pool, to get off their clothing and expose their skins to the air, to come in contact with the sun and the air, why, my friends, you do not know how sweet it is to get kissed by the sun, to have your back, and your entire body kissed by old Sol, all over, until you are brown as a mulatto or a North American Indian. You have no idea what a pleasure there is in living, this vital uplift that the sunshine brings down underneath your skin. With a brown skin, you will just feel a thousand per cent better than you ever felt with a pale skin. I remember one poor fellow who came here some years ago, as white as a sheet. He became almost as black as an Indian. There is a great deal of truth in what an old French doctor said to a lady who brought her children to him one day,--three or four little fellows, pale as milk,--she says, "Doctor, what shall I do for my children?" He said, "Roast them, madam, roast them." "What--what do you mean, doctor?" "Roast them, roast them--in the sun." That is the thing they wanted, and that is what you want my friends, a good roast in the sun. We are having a good dose of sun this summer, and I am very glad of it. We are having this summer a very splendid, typical Michigan summer, the old fashioned kind. Summer is a kind of Turkish bath that sweats out the old Adam, gives us a chance to build up a new, healthy man. We need to do a little sweating; it facilitates the rebuilding process. The gymnasium exercise in the morning after breakfast is splendid; that exercise is worth everything to get your chest lifted up, and your abdominal muscles pulled in, then when your diaphragm goes down and you are taking a deep breath that will give your liver a good, hearty squeeze, and gives that breakfast you have just been eating a good hug, and after dinner, the exercise squeezes your dinner, with the diaphragm churning up and down on top of it. Get your diaphragm to churning on the top of your stomach. This is a means by which the food can be worked over and ~~manipulated~~ manipulated, be forced out-

of the stomach. The work of the diaphragm is essential to good digestion. If you do not get exercise, you do not get this benefit. There are three things which exercise in the gymnasium is essential for. It is not simply to develop your deltoid muscles, or your biceps or triceps muscles,--that is not what it is for--to develop these particular groups of muscles, but the first thing is to get you to stand up straight, to get your chest up high, to get you in the habit of carrying your chest up; that keeps these abdominal muscles pulled in, squeezing your liver and stomach all the while. When you get into the habit of doubling over this way, that relaxes these abdominal muscles, takes the stretch all out of them, puts a sort of slack into these muscles so there is nothing at all to compress and support the colon and the liver, and they fill up with blood, and the blood stagnates, and this is a sort of stagnant pool there, and the liver begins to get congested; it is congested, passive congestion, and the stomach begins to get well, and the whole digestive process goes on with difficulty because of this lack of proper support and compression. Now, when you get the chest up, the whole thing takes care of itself; you do not have to think anything about abdominal breathing; you do not have to think about the stomach or liver; pull up the chest, pull these muscles in hard, and the thing will go on merrily. The idea of these exercises in the gymnasium is to give you a frequent reminder of this, to get you outdoors, so you will keep walking straight; so you won't go along with the hips in front and the chest behind. I met a man the other day, and he said, "Doctor, what am I going to do, I am getting so portly." I said "Come into the office." There were people passing in the hall continually, and I did not want to talk to him there, so I said, "Come into the office." So he came into my office. "Now, " I said, "look here, you are representing to yourself that you are getting an accumulation of flesh here, and you think you look aldermanic, but you are deceived about it entirely. Now stand up here, let me straighten you up. Look up to the ceiling; now bend over; now look up as high as you can; now straighten up. Now," I said,

don't you see you have got a whole lot of room to let here? You have been going around carrying your hips in front instead of behind, and you really thought you were getting fat!" This man was the most astonished fellow you ever saw. He thought he had got to go under a course of training here to have his fat reduced, when, as a matter of fact, he was just fat enough, hadn't any fat to spare at all when he got straightened up; so we lost a job, you see. That is one thing you learn in the gymnasium. Stand straight, keep your body in good poise so you can go right straight up on your toes without bending forward. You see the majority of people going around in this way, standing on their heels. When you say to such a man, "stand on your toes", he has to come up that way, you see. That is the only way he can come up on his toes. One should stand all the time with his toes under him so he can go straight up without swaying forward. The rate at which you are getting well, my friends, depends on the rate at which the blood is circulating. It is the blood that heals, my friends, remember; it is not the foods you eat that heal; it is not the massage you take that heals; it is not the electrical current; it is not the X-ray; it is not what the doctor does for you; that is not the thing that heals you; it is your own wonderful blood that heals you; the life is in the blood; creative power is in the blood. That is the reason why the blood was held so sacred by the ancients; that is the reason why God told Noah he could eat the flesh of the animal, but must not eat the blood. That is why Moses said to the Children of Israel, "you must not eat the blood, on the penalty of your own life. You must never eat the blood. That is the reason why the apostles said to the Christian church in the first century, "you may ~~eat~~ do many things the Jew is forbidden to do, but you must not eat flesh with the blood; you must not eat blood, and you must not eat anything strangled, because if you eat a thing strangled, you are eating blood." That was the edict of the apostles twenty-seven years after Christ, given to the Christian church, but the Christian

church have paid no attention to it, and have gone right on eating blood. You can read all about that in Galatians, and I think the 15th chapter of acts; and I would like to have you read Adam Clarke's commentary about it, and he takes about four pages in demonstrating, to my satisfaction and I think it ought to be to the satisfaction of anybody, that that forbidding of blood is just as binding upon Christians today as it ever was upon the Jews, just exactly as binding, because it was given to the whole race, to Noah in the first place, then to the Hebrews, then reiterated to the Christian church by the apostles, by the greatest authorities that have lived since Christ himself; so that is a thing to be thought about. Now, why was this? Because the blood is a sacred thing. The life is in the blood. The rate of circulation of the blood is the rate at which you are getting well. So I beseech all of you to ~~mx~~ improve your opportunities to get these splendid exercises.

v-8-20-8.

QUESTION BOX LECTURE and THE SIMPLE LIFE, LECTURE

On the Sanitarium Driveway, Thursday, August 27, 1908, at 8:00 P. M. by

J. H. Kellogg, M. D.



Question: How does yogurt differ from yhourth?

Answer: Yhourth is the milk preparation, and yogurt is the dry preparation as we use it here; but yogurt and yhourth are simply different names for the same preparations. Kefir is a different ferment. Yogurt is prepared from the Bacillus Bulgaricus, an acid-forming bacillus which produces lactic acid from the milk sugar. Kefir is a different sort of ferment, a special ferment obtained in the Caucasus, and it produces a different change in the milk. It produces some alcohol, so it is not so desirable as the yogurt ferment which produces no alcohol.

Q. How does the ferment in yogurt differ from the lactic ferment developed by Metchnikoff?

A. It is the same thing. It is the very thing that Metchnikoff studied, and the preparation we have here I obtained from Metchnikoff in Paris last year, and we are cultivating it here.

Q. Will trypsin cure cancer?

A. There are cases reported which seem to be cured. Personally I have very little faith in it.

Now, the question,--how to live a healthy life. That is what every single one of you are interested in, I am sure. I have just been talking to a gentleman who was talking about going home, and I said to him, "Now, when you go home, keep right on living the way you have been living here, just as far as you can, and if you do this, a year from now you will appreciate a great deal more than you possibly can now the benefit you will derive from the Battle Creek Idea,

from the simple life." I met a gentleman half an hour ago who said, "Doctor, I don't feel a bit better." "How long have you been here?" "I have been here two weeks, and I do not feel a bit better. I would like to know why it is." "Well," I said, "how could you expect to raise a crop of wheat in two weeks?" Now, health is a thing that must be cultivated. Good health is a crop that you have to raise. You have to plant the wheat or the corn; you have to sow the seeds of good health, and then you have to wait for the harvest. Now, I was just saying, we have to sow the seed. You know what the Good Book says about that,--"Whatsoever a man soweth that shall he also reap." That is just as true of health as it is of disease. Somebody asked Robert Ingersoll once what he would have done,--he had been complaining about things, criticising things, and a friend asked him, "Now, what would you have done if you had been on hand at the creation of the world and had had a chance to make it, how would you have fixed things up better?" He thought he was a great wit, you know, and he thought he made a very witty and a very wise reply. He did not, but he thought he did. He said, "I would have made health contagious instead of making disease contagious." Well, perhaps that was a very witty response. Nevertheless, it was not sound. It was not apt, because, as a matter of fact, health is a great deal more contagious than disease. I see some of you looking askance at that. You are querying whether you can believe that or not. Now, let me ask you to consider a case. Here is a man who says to himself, "Now then I would like to have small-pox just to see what it is like." Now, what is the first thing for that man to do to get it? He has got to hunt all over the country to find another man that has got small-pox; then when he has found him, he has got to sit down beside him, to rub himself against him in order to inoculate himself. He has got to go to a whole lot of trouble to get small-pox before he can get it.

Now, another man says to himself, "Now, I would like to have dyspepsia, I would like to be a dyspeptic; I would like to have a really monumental case of

dyspepsia; I would like to be the worst case of dyspepsia that ever was." How in the world is he going to get it? If he is going to get it, he has got to sit down at the dinner table, and the breakfast table and the supper table, and abuse his stomach day after day for five or ten or fifteen or twenty years. There was Bismark who abused his stomach for sixty years or more, and it still held out. He was able a few days before he died to sit down and eat the most prodigious dinners of indigestible things, dinners that a working man should be afraid to eat. He had a most astonishing degree of vigor and vitality in his digestive organs. He never was able to spoil his stomach, in other words. The stomach will stand up and resist invasions, repair itself, recuperate against a tremendous amount of injury and damage. Suppose a man said, "I want to get tobacco heart. Now, I am going to smoke; I am going to smoke and smoke and smoke until I get tobacco heart." It may take him ten, twenty, or thirty or forty years, and think how much it is going to cost him, how many cigars he has got to buy, to pay for, how much tobacco, and how much trouble he has got to have ~~he~~ puffing away on those cigars in order to get tobacco heart. Why, it is a tremendous task for a man to get tobacco heart. It costs him a whole lot of money, it costs him a whole lot of trouble, but it comes after while.

There was a great funeral in town here a day or two ago; there was a man died, had a stroke of apoplexy. I saw an account of it in the paper, and I was reminded of a circumstance. Fifteen years ago that man's father called upon me, and asked me to examine his heart. He was a doctor also, a veterinary surgeon, as this man was. I examined his heart. I said, "Why, Doctor, you have got tobacco heart." He said, "How is it possible for me to have tobacco heart? Why, here I am only forty-seven years old, and my father and mother have smoked ever since they were children, both of them, and they are over eighty years of age, and they have not got tobacco heart; how can it be that I have got it at forty-seven?" At 57 that man was dead, and two or three days ago his son died at forty-three of apoplexy. Now, there you see, is an evidence of the reaping. There is a sowing

and there is the reaping, the harvest; but it took three generations to kill that man by apoplexy at forty-three. It was necessary for his grandfather and grandmother to smoke from childhood up; it was necessary for his father to smoke all his life-time; then he had to smoke; he was a great smoker, and he had to smoke until he was forty-three years of age, until he was finally killed off by apoplexy. So you see the human body has tremendous power, tremendous resistance. If a man has disease, he has to cultivate it; he has to work for it; he has to sow the seed and raise the crop, cultivate the crop before he can harvest it; before he gets a really serious chronic malady of any sort. Now sometimes we are cultivating disease unconsciously. Sometimes we do not know it. Probably that is true in the great majority of cases. People are simply following their example. That man could not have been made to believe--the man that died the other day,--that tobacco did him any harm at all; because his father smoked all his life, and his grandfather smoked all his life, and "I have been smoking all my life; how is it possible it can do me any harm?" He lived only half the length of time his grandfather lived, and three quarters the length of time his father lived. Now, if he has got any sons,--I don't know whether he has or not,--but if he has ~~has~~ I will guarantee if they follow their father's example they won't live until they are forty. I

That is the case with you. It is not what you do but what your father and mother do, and what your grandfather and grandmother did,--what your great grandfather and great grandmother did. I am going to read something to you from an old fashioned book, which has just occurred to me, which I think will interest you very much, in this matter.

Now, if we want to have health, as I said a moment ago, health is contagious, more contagious than disease. It is very easy to get, very easy to cultivate it. It is not nearly so hard work to be healthy as it is to be sick. It does not cost anything like so much to be healthy as it does to be ill. It is a

great deal easier to catch health than it is to catch disease, and that is the way God made it. He made it easy to be good and hard to be bad. He made it easy to get health and hard to get disease; but you have to give a little attention to it. The trouble is we have gotten into the habit of cultivating disease. We have been at it so long it has gotten to be second nature to us, and we do not stop to think of cultivating health. We are cultivating disease all the time unconsciously and sometimes consciously. I met a man just a few minutes ago. I said to him, "I think you ought to stop smoking, sir." The first thing when I met him, I said, "My friend, you are intoxicated." He said, "I have not had a drop of liquor." "Nevertheless," I said, "you are pretty nearly dead drunk; you are tremendously intoxicated with food." Food intoxication is a great deal worse than alcohol intoxication; it kills ten people where alcohol kills one. There is no doubt about it. This man was in such an intoxicated condition that I could smell the poison in his breath, but it was not alcohol I smelled. Alcohol would have been more agreeable. It was the most horrible odor of putrefaction; it was a dead cat smell or a dead rat smell; it was a regular carrion smell that he was carrying about with him, and his whole body was saturated with it, so that his breath was loaded with it. Now that man I hope will reform, I hope we will get him to be a temperate man before he gets away. At the present time he is an intoxicated man; he has been intoxicated for the last twenty years all the while; he has not been sober a minute; he has been under the influence of poison all that time. He has not had a clear head for one minute, and the consequence is his liver is swelling up to twice as large as it ought to be, and it is badly crippled. Now, I said to this man, "You must never eat any more meat as long as you live." "Allright," he said, "anything you say here I will do." I said, "you must not ~~eat~~ take any more tea or coffee." He says, "I will never drink another drop." He said, "I have not drunk any tea or coffee for some time." I said, "You must not take any tobacco." "Well, now, Doctor, how about that? I smoke about four cigars a day. Why, I

used to smoke twenty cigars a day. My doctor said three or four cigars a day wouldn't do me any harm; that wouldn't hurt me." I said, "Your doctor smokes, doesn't he?" "Oh, yes, he smokes." "Well, then," I said, "he is not competent to advise you; a doctor who smokes can not give proper advice about tobacco; he is prejudiced; his brain is not clear enough to do it." "All right", he said, "I will cut them out entirely. I have got three or four cigars in my trunk but I won't make any use of them." This man said, "I have been smoking fifteen or twenty cigars a day for a great part of my life, and why should three or four cigars do me any harm?" I said, "That is reason enough, isn't it?" If you have had a big fire in your house, then a little fire would do more harm than it would if you had not had the big fire previously. Suppose somebody says, "There is a little fire in your house, and you better put it out." But you say, "Oh, I had a big fire last year; this doesn't amount to anything." If two thirds of your house was burned up by a big fire, and then afterwards a small fire should come along it might be of more consequence to you than the big one was. After the big fire you might still have left enough to shelter you, but if a little fire should come along then and burn up the last room in the house, it would leave you no place to cover your head. Now, the man who has been smoking year after year, and year after year, and year after year for fifteen to twenty years, that man hasn't any guarantee, from the fact that he has smoked so long, that tobacco is not hurting him; but he has the positive assurance, the absolute proof that he is so badly damaged that if he does not stop smoking pretty soon he won't have occasion to smoke any more; he will be dead, and his smoking will have to stop.

About twenty-five years ago I got aboard at rain one morning to go East to see a patient, and I met on board the train an old friend of mine, Major Pond. You have heard of Major Pond, I guess. I was very well acquainted with Major Pond. He always used to stop to see me when he went through here. He was an old lyceum bureau manager for many years, and for some years he was Mr. Beecher's manager.

He found me on the train, and he said, "Good morning, Doctor; I am glad to see you. I have got Mr. Beecher aboard, and I want you to meet him." So he took me down the train to meet Henry Ward Beecher, and I was very glad to meet him. We talked a few minutes, chatted a little while, and Mr. Beecher said, "You are a doctor, I want you to tell me something." He said, "I have great fits of melancholy, when I do not care much about this world or the next one. I just feel as though I do not care for anything at all. I just have a kind of melancholy, depressed, despondent feeling, and there doesn't seem to be any reason for it. I think I have about as much reason to feel satisfied with life as anybody. I have made something of a success of life, and I do not see any reason why I should feel that way, but I feel that way without there being any reason for it at all. How do you account for it?" I said, "Mr. Beecher, let me see your tongue." So he put out his tongue, and I looked at it,--I declare, my friends, it looked as though it ought to have the cityscavenger to take care of it. It was one of the worst tongues I ever saw in my life, except of a man who had typhoid fever or was suffering from some acute illness of some sort. It was an awful tongue, and I got his breath, and it was a very bad breath. I said, "Mr. Beecher, I think you are suffering from a disordered condition of your stomach and bowels." "Doctor," he said, "there isn't anything the matter with my stomach. I can eat anything I want to eat; I can digest everything." So he undertook to digest everything, and in about three years, he was dead of apoplexy. Mr. Beecher died because he had a weak heart; he had diseased blood-vessels; he had been suffering many many years from intestinal auto-intoxication and did not know it. He had been cultivating death instead of cultivating life and health,--had been cultivating death.

I said a little while ago that health is more contagious than disease. I have not yet proved it to you. I only showed you that it is hard work to get sick. You have to cultivate sickness, to work for it, and it is a very expensive

job. Just think how much a bon vivant pays for big dinners. Just think how much money is expended every year on big dinners, and every day, by the people who ~~is~~ are diners out, and who enjoy big dinners.

Now, there is a great man who lives down east; I think you must know him. He was a great after-dinner talker, a great wit. For a number of years he was president of the New York Central Railroad. Does anybody know who I am talking about? (Voices: Chauncy Depew.) Yes, that is the man. Now, Mr. Chauncy Depew occurs to me just at this moment as a pretty good illustration of a man who cultivated disease for a good many years. A few years ago he began to find he was getting down and out. He could not do business any longer. He was getting rheumatism so bad he could scarcely walk around. He was getting so thick headed he could not make those brilliant after-dinner speeches any more. So he has not been so conspicuous of late years as he was before. The Montauk Club every year got together and celebrated Mr. Chauncy Depew's birthday with a birthday dinner. Last year they did not celebrate his birthday. He is a member of the Montauk Club. They did not have their meeting last year, because Mr. Depew was so sick he was not able to be there. I am inclined to think he was in Europe at the time,--possibly not; at any rate, he was too ill to be at the dinner; but a few months ago they had their annual dinner, and Mr. Depew was there. And he made a speech, and it was a different kind of speech from any he ever made before. It was an after-dinner speech, but of an entirely different tenor from any speech he ever made in his life before. He told a little story of his experience for two or three years. He began by saying, "Some years ago, I was present in Paris at a dinner which was in honor of the great French chemist, Chevereur; it was the 100th anniversary of his birthday. That man had lived 100 years, and he sat there at the table in celebration of his 100th birthday, still in the enjoyment of all his faculties, as bright intellectually and as capable as he ever was in his life before." Mr. Depew said he sat right across the table from him, and he said to him, "Prof. Chevereur, how have you managed to live so long and keep such magnificent health?"

And he said in reply, "I have lived simply; I have no vices. I do not use tobacco; I don't take wine; I eat very simple food and very sparingly." Those were the three rules this man gave, the three things he gave as the reason why he had lived 100 years and was still in good health. And here is Mr. Chauncy Depew an old man at a little more than half that age, decrepit, infirm, getting enfeebled in body and mind too, I am afraid,--from some things I saw published in the newspapers a few years ago, but perhaps they were not true. But Mr. Depew said, "Two years ago I found myself sick. I found myself with rheumatism so bad I could hardly get about, and getting worse all the time." He said, "I diminished my butcher's bill; I stopped eating so much meat, and I found the less meat I ate the less rheumatism I had. By and by I stopped meat eating altogether, and I got rid of the rheumatism altogether, and I changed my habits of life; I stopped drinking wine; I stopped using tea and coffee; I adopted the simple life",--really the Battle Creek Sanitarium bill of fare; and he said, "I got rid of my rheumatism, and today I am as well as I ever was in my life; I feel twenty years younger"; and there he was, looking well, bright and happy. He had gotten well just simply by ceasing to cultivate disease. The health came back, you see, just as soon as he stopped cultivating disease--health came back. It is natural for a man to be well. It is not natural that he should be sick. It is an artificial condition; it is an abnormal condition, a condition that comes upon people as a result of wrongdoing. It is the result of sin. "The soul that sinneth, it shall die", the Bible says; or the margin reads, "dying thou shalt die". So here Mr. Depew had been cultivating death and disease, and he suffered the consequence of it. Now he has turned over a new leaf; he has become a vegetarian; he has become temperate in every way, a reformer. He set a good example,--started out with that society club, started out at once to preach a missionary sermon to them, and I hope it did them good. It was published in the newspapers, and it must have done a great

many people good.

Now just think of it--how contagious health is! For instance, here is the fresh air we breathe. Now indoors, by and by it will be getting a little cold, and we will shut up our houses. I have known people to put larding around their doors and windows so not a breath of fresh air could get in. I have even known women to put cotton in the key holes to keep out the very last breath of God's fresh air. I can imagine almost all of you next winter,--or last winter, rather, it won't be next winter,--sitting up there in your houses with the houses all shut in air tight. The old fashioned houses were healthier than modern houses because they could breathe. There were chinks, and a roaring fire-place with a mammoth mouth sucking up the air, and it would keep pulling fresh air in from outdoors so the air was changing constantly; the house was breathing continually. But the modern house does not breathe. It is shut up so tight it can not breathe. Quite a good many of our modern women have their lungs shut up so tight they can not breathe. There they are, shut up in that fatal air, cultivating disease, when outside there is a great ocean of pure, God-made fresh air that ~~is~~ has health in every cubic inch of it, with its life, animation and vitality in the oxygen stored up in it, in every cubic foot of it enough to keep you going for about a quarter of a minute,--not quite so much as that,--about ten seconds. But shut up indoors, you breathe the same air over and over and over and over.

Now, suppose you had here a place where the water was running, a stream of water running, and here is a receptacle catching the water. Here comes along somebody who drinks out of the cup, and pours the balance into the barrel. Here comes somebody else, washes his mouth, brushes his teeth and spits the water into the barrel. Some one else does the same thing. So that barrel is full of all sorts of things from unclean mouths, and ~~from~~ perhaps from tobacco soiled mouths, and you can imagine what is there in the barrel; and here you come along--there is the pure stream of water falling, crystal pure water, falling down from some mountains

mountain stream, and here is your cup that you can hold out and catch some of that pure, sparkling water; but instead of that, you take and dip some water out of the barrel and swallow it. Now, that is a most disgusting picture to think about. I have drawn you that picture because I don't want you to forget this thing. But that is exactly what you are doing when you shut yourself up in a tight room and are breathing the same air over and over again, air that somebody else has spit out. And that air is laden with impurities from the body, from the work of the muscles and the liver and the stomach, that have been at work. There may have been fermentations going on in the stomach; and worse than that, it may be laden with those horribly putrefactive poisons absorbed from the colon where there are dead cattle and things rotting and undergoing decomposition,--a veritable Golgotha; for that is the exact situation.

I met a man today and he said, "Doctor, there is a bad odor about me. I have been here two weeks and have not got rid of it yet." I said, "I do not wonder there is a bad odor about you. What do you eat?" He said, "I eat so and so." I said, "Do you get all your meals upstairs?" "Well, I go down town once in a while and get a square meal." I said, "It is that square meal that stinks. It is that square meal that is rotting, and the stench is arising from that, and I don't wonder you have a bad odor about you." I gave him a little bit of a lecture right there. Now, these dead turkeys, dead rabbits, dead birds you swallow, a portion is digested and absorbed and is utilized, but there is always some remnant that is not digested, and that goes on down into the colon, the capacious portion of the intestine five feet long, and there it remains one day. That is enough for it to get to smelling pretty bad. It remains there two days, and that is horrid. It is there three days, and that is loathsome; it stays there four days, or five days, perhaps a week--two weeks, three weeks,--just think of it,--what would be the condition of a dead cat in the corner of the parlor, for instance,

that had been there one week, or two weeks or three weeks? The very same thing happens inside of the body as happens outside of the body. I am not making the picture a particle worse than it is, not a bit worse; and these poisons are absorbed into the blood, and come out in the breath; and when there are 100 persons in a room shut up tight as a bandbox, and when all these impurities are coming from the stomachs and the livers and the colons in the foul air poured out from the lungs, those poisons you breathe in, you breathe down a specimen of every one of them; every one of them is represented. With every breath you take you are getting a little taste of every person there,--a most miscellaneous thing. If the impurities of the air were only as visible as the impurities of water, my friends, we would all want to live outdoors every minute. I am thinking this moment how delightful it is to be out here in this fresh air when we are talking about this thing. If we were indoors now, everybody would be looking at the windows to be sure the air was fresh, that they were not getting a piece of their neighbor. This thing is real--what I am saying to you; it is not an imaginary thing, or a whimsical thing at all; these things are simply downright, hard, solid facts; but we do not stop to look at it in a practical way; we have not been accustomed to look at it in a practical way. So one of the first laws of health, if you want to live well and to live long, is to breathe pure air. Breathe pure air. You have got to make provision for it; you have got to provide for it. You have got to see that there is room for it, that there is a place for the fresh air to come in at, and another place for the foul air to go out at. There must be two holes in the house, unless there is a big hole there somewhere, then the fresh air will come in at the bottom, and the foul air will go out at the top. But it is necessary to have two holes, one for the fresh air to come in at, at the bottom, and the other for the foul air to go out through, at the top. If the house is heated by a furnace so the air comes in warm and enters the living rooms warm, then the opening may be anywhere at the bottom, the middle, or the top; it

doesn't make any difference where it comes in, because it will go straight to the top anyhow, no matter where it is it will go ~~out~~ to the top any way. But now it makes a great deal of difference where the cold air outlet is,--or the cold air inlet. If the air comes in cold, then the outlet must be at the top. Why? Because, as that cold air remains in the room it becomes warm, and the longer it is in the room the warmer it becomes, and it keeps rising, rising; and when it has been in the room a long time and has become impure, it is up at the top; and the oldest air that has been in the room the longest time will be the warmest air, and the warmest air will be at the highest point, up at the top; the warmest air will be at the top, and there should be the outlet. But with that sort of arrangement the feet will always be cold. It is best to have the fresh air always come in warm. Then where shall we have the outlet? At the bottom. Why? Because the air is warmest when it comes in at the bottom. As the air becomes cooler and cooler, it keeps settling, settling settling until by and by it gets down to the floor. The oldest air in the room, the most impure air in the room will be down at the floor so there is a place for it to get out. So have the opening at the bottom.

The old fashioned fireplace is the best kind of a ventilator. The only objection to it is it is on the inside wall. If you put that fireplace on the outside wall it will be in the proper position and the best kind of a ventilator. You can not make ventilators work on the outside wall unless they have heat in them. A ventilator will always work on the inside wall without heat, because it will be warmed by the house; it will have the temperature of the house, and the ventilator may be simply an open space in the wall, an opening at the bottom, going up through the roof, and that will work all the time except in summertime, when the windows are open. So it is a very simple matter, you see. How large a place should it be? Every ordinary living room in the whole house ought to have an opening 8 x 10 at least; and that opening ought to go straight up through the

roof for every room, or at least not more than two for rooms, and they should be adjacent on the same floor. That is the way I have my house arranged. It is very important also that you should never connect up two rooms on different floors with the same duct. If you do, the foul air from the room below may come up and go out into the room above, so the air will be mixed up; but provide ^{an} abundance of fresh air.

The best plan of all is to live as much as possible out of doors, and especially to sleep out of doors. I consider ~~outdoors~~ outdoor sleeping one of the most important measures for health you can possibly adopt. Man is naturally an outdoor animal. We have no business to live indoors. We can not live indoors without suffering ill consequences if we do. ~~Man is an animally an indoor xxxxxx~~ Man is no more an indoor animal than is a monkey. The average house in which you live, my friends, in wintertime would kill a North American Indian or a South American monkey in less than six months. We only stand it, endure it because we have become somewhat immune to dirty air, have become somewhat addicted to it, immune to it, inoculated with it,--fascinated with it so we can ~~xxxxxxxx~~ stand it a good deal better than the savage man. My old friend, Pastor McCoy here, whom you all know, told me that when he got back from the army he could not sleep in the house. He came home in the spring, and he could not sleep in the house. He would go to bed in the house, but could not stand it. He had to get up and go outdoors, and he slept outdoors all summer, and he did not go into the house until cold weather came and drove him in. Hundreds had that experience. That is the experience we have at our house. We all sleep out doors. We can not sleep indoors. Four years ago I turned my wife outdoors, and she has not slept in the house since. In fact I turned my whole family outdoors four years ago, and went out myself, and we live outdoors. What a splendid time you have in winter time to get outdoors and get the fresh air. You have been shut up indoors, and you

get a chance to have an outing,--how much good it does you. You go out and take a sleighride, and in two or three hours you come home and say, "Oh, how much good that did me. I feel like another person"; and you are another person; you have been reconstructed; you have been born again; you have burned up the old man you have been cultivating with disease, lowered resistance, lessened vigor, that is soiled, palluted, filthy from breathing foul air, and you have gone outdoors, and you shed him in the fresh air. The oxygen you have taken in has burned him up. The dirt is carried off, and you come back a new person. Now, my friends, see what an opportunity there is to have an outing every night, to have a fine sleighride in wintertime every night of your life; to have a fine outing, and get up in the morning feeling as gay, as fresh, recruited and rejuvenated as you do when you go out to have an outing on purpose. Just think how many opportunities you have missed. When you go home, fix that thing up the first thing you do. That is what I have done at my house. If you will take a little walk up to my house--about half a mile out on Manchester street here,--you can walk out there, and walk right in; there is no gate, and no fence to keep you out, but just walk right in and go around to the back side of the house, and there you will see the outdoor bedrooms up there, two stories of them, and they are brimful. I am the only person who sleeps in the house, of our family. I do it because I have to stick close by the telephone; but I have my room arranged so that the wind blows right through it. I have two windows wide open, one on either side of the bed, and the wind blows right through; and I wake up sometimes with two or three inches of snow on my bed. When we go to bed in winter time we dress up as though we were going to take a sleigh ride. We are all bundled up, have on big thick hoods, and furs, and leggings, thick heavy robes, and we are just fixed up to go out for a sleighride, and we could go for a sleigh ride just as well as to go to bed, exactly. But do not sleep cold. Take pains to see that you are comfortable.

There is no advantage in sleeping cold. But we don't get cold. You never want to sleep cold. We sleep warm as toast. You take in more oxygen at a breath, breathe in more pure, vitalizing air, and you make more heat, and wake up in the morning with such a keen appetite, such a zest for work you are glad to spring into the activities of the day. Never miss an opportunity for an all-day outing, or an all-night outing such as I have been describing, of nine or ten or twelve hours, or seven hours as the case may be; get out in the fresh air. I hope every one of you will do that.

By the way, I notice in reading some architectural journals that the architects are getting hold of that idea, and the architectural journals are saying that every architect now in making plans for the house must take into consideration the outdoor sleeping rooms. Twenty years ago nobody ever thought of such a thing. That shows progress doesn't it! The architects are talking about it and putting it into the journals. Really it is getting to be almost a fad, now, to preach diet reform and to preach general hygienic reform. So breathing pure air and sleeping outdoors at night is very essential to the healthy life. By the way, you must not be afraid of the outdoor air. Some of you folks live down south, and you say it is malarious in your region, the outdoor air is so dangerous. We have discovered that it is not the outdoor air that is dangerous, but it is the outdoor mosquito that is dangerous. It is the mosquito, not the night air. And it is dangerous around the marshes, and down near the ground, because that is where the mosquito lives. When I was down in Rome twenty-five years ago last spring, I was out on the Campagna there, and I saw high scaffolds with little houses on top of them, and my guide told me that those people were sleeping up there to get away from the malaria. I saw one house in a most curious place. It was along the Appian way, and there was a very tall, great tomb there, just forty feet tall, and there was a little hut on top of that tomb, and there was a ladder beside it, and the people climbed up there every night to sleep on top

of that tomb. It is because there is no malaria up there. The malaria is down around the ground, so there is no malaria up there. Why is it? Because mosquitoes fly low; they do not fly high. There was just as much night air there as at the bottom, but there were no mosquitoes. So it is not the night air that is to be feared at all. Put up mosquito bars to keep the mosquitoes out, and you won't have any malaria. Malaria comes always from the mosquito bite. There is a bare possibility that it may come from bad water sometimes, but I think it is almost absolutely certain that it is only from the bite of the Anopheles mosquito that one will get malaria; but don't be afraid of night air.

Another thing to do for health is to Fletcherize. I am going to have a sign painted and put up in the dining room, "Fletcherize", so as to remind everybody to do it. I am going to have it printed on the bill of fare--"Fletcherize",-- so as to remind you of the thing. I do not know what I should do with myself if I did not enjoy the advantage that comes from careful mastication of my food. I remember a time when I did not do it,--twenty-five or thirty years ago--thirty-five years ago when I began to write articles for my paper on the subject of health,--I began editing my journal, Good Health, just thirty-five years ago,-- and when I began that I began to see the importance there was in chewing, and I began to preach to some other people, to chew, and I chewed, myself, and got great good from it. I sometimes got careless about it, got in such a hurry I really did not take the time to chew. I always dictated my letters when I was eating, and so swallowed my food in a hurry, and did not take time to chew; and I suffered ill consequences from it. I found it did not do me any good; in fact, it did me a great deal of harm; so I found it was a good thing to reform.

That is the reason why we have got zwieback. That is the reason why we attach so much importance to zwieback here, and why we made it in the first place. About fifteen years ago a lady came into my office and she said, "Doctor,

I want ten dollars." I said, "What for?" "Well," she said, "for damages." I said, "What harm have I done?" "Well," she said, "you have smashed my teeth." I said, "I don't know how." She said, "Well, you told me I must eat my food dry, chew it well; then you said I must eat zwieback, and I have been trying to eat your zwieback, and I have broken my teeth, and I want you to get me a new set." Well, I began to look around for some way to get out of such scrapes in future. I managed to get out of that insome way; but I made up my mind I would not run any more such chances as that; so I began to look around for some way to get the people to chew, to give them something dry to chew, some dry cereal to chew, some dry cereal toasted which they could chew without smashing their teeth, and I thought about it, thought about it, meditated over it, and dreamed about, and finally one night I dreamed how to do it. That was the first Granose that was made, or the first toasted wheat flakes that were made, were made next day. I woke up in the morning; the telephone called me up, and I awoke right in the middle of a dream, and I went back to bed, and I said to myself, "That was an interesting dream. I can not recall much of it, so I believe I would like to finish it up." So as I lay my head down upon the pillow, I began to pick up the threads of the dream, finally got them all together, dropped asleep again, and finished up that dream, and I found toasted wheat flakes, and the next day I made some. For several years I had been trying very hard to find some way of doing it, but had not succeeded. From toasted wheat flakes, or Granose flakes, as the first ones were called, we got toasted corn flakes, which was an easy step from Granose flakes, and toasted rice flakes,--the whole family came along from that dream. At that time we used to put upon the table at every meal a whole bowlful of toasted wheat flakes, or Granose flakes as we called them, and we used to require every patient who came here to eat a whole bowlful before eating anything else, and to eat them dry. That is a thing I would recommend every one of you to do; it is one of the very best things you could possibly do. If you eat toasted wheat flakes or toasted

corn flakes, don't deluge them with cream, but eat them dry. Toasted wheat flakes I think are better for that than toasted corn flakes; but toasted rice flakes are better than anything else; but always eat at every meal some dry food. The drier the food and the more thoroughly you masticate it, the better your digestion will be and the more certain you will be to get the maximum benefit from the least digestive work. Now, suppose a person does not ~~make~~ half chew his food. Then the stomach and bowels have to wrestle with all that food and it takes three or four times as much digestive energy to digest the food if it is only half chewed, and you do not get half the good out of it then; so you see it is a great loss. Now, it is extremely important to take pains to masticate the food with such thoroughness that you can ~~digest it~~ taste it well, that you get all the flavor out of it, because in this chewing of the food you get the osmazones, you get the peptogens which stimulate the stomach to make the gastric juice necessary for the digestion of food.

Another thing which is very necessary if you are to live the healthful life, is to avoid meats of all kinds. Meat is full of germs. There are 200 or 300 billions of germs in every ounce of meat. Think of it! You can not imagine such a quantity,--200 or 300 billions of germs in every ounce of beefsteak or of sausage, or mackerel and codfish, in herring or any of these things,--there is an enormous number of these germs of putrefaction which are at work; and when you eat meat, you not only swallow these germs, but you swallow the poisons which the germs have made, and these germs do not stop working when you eat them, swallow them; they keep right on; and that is the way you get the infected colon; that is the way you get things rotten down here in the intestine,--is by eating meat already in the process of decay. Meat does not have to be so far gone in decay that it smells bad before putrefaction is begun. Putrefaction goes on a long time before the meat smells so bad as to make a real malodor, that is, for a person who

is accustomed to meat. For me, however, the odor of meat itself is extremely obnoxious, it is extremely loathsome. I am glad to get as far away from it as possible; and the same thing is true of almost everybody who is not accustomed to the use of meat. A friend of mine in India told me that whenever a Brahmin goes by a butcher shop, he always turns his head away, makes a wry face, and holds his nose. It is such a horrible odor to him, so horribly disgusting to him. So drop out the beefsteak. There is no question but what the use of meat shortens life. I think it is the foundation of a large number of maladies. Prof. Sherman, of Columbia University, New York, says the use of beefsteak and sugar are the principal causes of bone deterioration; that half the population of the United States are suffering from lime starvation because of the use of cane sugar and meat. ~~Cane sugar is the next~~

The use of cane sugar is the next great evil I ought to call your attention to,--the use of cane sugar. The average American uses three and three tenths ~~oz~~ ounces of cane sugar every day, or 75 pounds per capita every year. The Englishman eats 86 pounds of sugar per capita per annum, while the native of Italy uses only 7.7 pounds per capita in the whole year. The average American eats just ten times as much sugar as the Average Italian does. The Italian is a tougher man, a hardier man, a man who can endure more than the average American can. He is in better health, does not eat so much beefsteak or so much sugar, cane sugar. Cane sugar is not a natural food any way; it belongs to the herbivorous diet. Cane sugar is a food for plants and animals, but never was intended to be food for human beings. Cane sugar is not easily digested in the human alimentary canal. Several hours elapse after the eating of a meal before the cane sugar is digested at all, while the natural sugar for human beings is maltose or malt sugar, and fruit sugar which are naturally found in foodstuffs. Cane sugar is food for plants; there is cane sugar in the sap of the cherry tree; but there is no cane sugar in the cherry. There is a digestive process going on in the cherry while the

cherry is getting ripe, which converts the cane sugar into fruit sugar, and that same process takes place in our bodies, only more slowly and with greater delay and difficulty. Cut out cane sugar. What will you put in place of it? You may eat sweet fruits of all kinds, and you may eat malt sugar or melrose, malt honey as we call it. I advise you to get in the habit of using it here at the Sanitarium. Cut out the beefsteak. What will you put in place of it? You don't need anything put in the place of it at all. I used to think it was necessary to put something in place of it, so I advised people to eat a great deal of nuts, to eat a great deal of eggs and such things to take the place of the beefsteak; but that is not necessary. I myself suffered somewhat from the attempt to substitute eggs for beefsteak. I suffered ~~fr~~ something from intestinal auto-intoxication because of it. I endeavor to profit by what I learn; so I cut out eggs. When I find a thing is good I do it. When I find a thing is good for my health, I do it if I can. If I find a thing is unwholesome, I stop doing it. It is the most absurd thing in the world for a person to go on cultivating disease when he knows what he is doing,--just as absurd as it would be for a man to be sowing seeds of weeds, Canada thistles, perhaps, noxious weeds, in his flower garden when he ought to be pulling up the weeds instead.

Another thing which is important, is don't eat too much animal fats. If you don't eat meat, you won't. If you eat nothing ~~in~~ but butter for fat, take pains to see that the butter is always clean, that it is always sweet. Never swallow into the stomach a particle of butter that has the least bit of strong flavor about it. It will infect your stomach, it will inoculate your stomach; it will introduce the unfriendly germs that you want to get rid of. If you eat milk, take care that it is clean. It is one of the dirtiest things that come upon the table. Commercial milk sometimes has as many as a million germs in a single drop, or even more than that. In a strange place, have the milk boiled; or, what will be better still, call for buttermilk instead. Buttermilk is safe. The ~~son~~ milk

germs in the buttermilk kill off the unfriendly germs and prevent their growth. There are hardly any germs left in buttermilk. They are all carried off in the butter. So when you eat the butter, you get all the germs there were in the milk, the gleanings from the barnyard that come in the butter. See how important it is, then, that the milk should be clean. I would recommend ~~that you have~~ if you would have a well ordered household, ~~that you~~ with a certain trend toward health, that you make butter at home. Teach the hired girl how to do it. Get the cream, sterilize it, cook it, boil it for fifteen or twenty minutes until the germs are killed off, and it can be churned, or shaken up in a bottle even; it can be churned by simply shaking the bottle. Cool it well in the ice, then shake the bottle a little while, and the butter will come. A fruit jar is a very good thing to make it in on a small scale. Have a little butter made every day, and you have something that is wholesome, readily digestible, that does not interfere with the digestion of other foods, and does not inoculate you with hateful germs.

Look out that the bowels move rythmically. It is normal for the bowels to move after each of the principal meals of the day. If you have two hearty meals and one light meal, the bowels ought to move twice. A very proper way is for the bowels to move night and morning. Some of the healthiest people I know, their bowels move three or four times a day,--before breakfast, after breakfast, after dinner, and just before going to bed at night. Some of the healthiest people I know of, that have the sweetest breath, and the cleanest tongues, and the clearest skins, and the liveliest bodies have the most endurance of anybody I know of, have that habit. I think one of the most awful things that can happen to a person is to have inactive bowels, to have foodstuffs that have been swallowed lying around in the colon day after day, rotting. It is a terrible state of things. A mother can always tell whether the child's bowels are bad or not by the breath. The breath of a constipated child has a peculiar odor, a fecal odor. Why? Because that fecal odor is taken into the blood, and its putrefactive poisons are taken

off through the lungs. That means, don't you see, that the whole body of the child is saturated with fecal odors, and the fecal poisons; and that is true of everybody whose bowels are inactive. Don't imagine that the enema is sufficient to overcome this difficulty. The bowels ~~must~~ ^{cannot} be washed out with water ~~by~~ or by any other mechanical means; it can not be done, because the worst trouble is higher up in the small intestine, ~~which~~. Only the colon is accessible to water. The general trouble is higher up in the small intestine where the water can not reach, because of the ileo-caecal valve, where the small intestine ends and the colon begins, at the right side here, near where the appendix is located. That valve closes intensely, and can not be opened from below unless great force is used which ordinarily can not be employed.

How shall we make the bowels move? By diet, exercise, the moist abdominal bandage, by taking pains to drink water freely,--a glass of water at bed time, a glass of water on getting up in the morning, and several during the day; or a couple of oranges at bed-time; an orange or two before breakfast; plenty of fruit with the meals, especially acid fruits; plenty of water and plenty of exercise. Lie upon the back and raise the legs to the perpendicular. That is a very good plan; and take pains particularly to always carry the chest out, to carry it high; to stand right, and breathe right; take deep breaths. That is one of the very best things I know of. If the bowels won't move, then employ Colax. That is a harmless remedy,--Japanese seaweed prepared by thorough cleansing and making into little cakes. One or two cakes of Colax three or four times a day. People who have had half a lifetime inactive bowels had better form the habit of taking Colax, a cake or two of it two or three times a day, right along steadily. I take Colax every day of my life, and find it of immense advantage to me. I am satisfied that I have more endurance and a clearer head, and can do a great deal more work by hastening the activity of the intestinal movement so that the food

stuffs that remain shall leave the body in a few hours instead of remaining twenty-four hours, so that they shall be discharged within eight or ten hours, so there is no time left for putrefaction; no time left for the absorption of these poisons. That is the way it is with the eagle. The eagle can live 100 years on a beefsteak diet, on a carrion diet, on the worst diet possible. Why? Because its alimentary canal is very short, only two or three feet long, and its bowels are moving every few minutes all day, so there is no time for putrefaction. The bowels are emptied frequently. All carnivorous animals have frequent movements of the bowels, and that is what saves them the consequences of intestinal auto-intoxication, from putrefaction,--because there isn't time. If a man has been a meat eater so that he has his entire alimentary canal infected, he has got to have that infection as long as he lives; he can not get rid of it in a few minutes, or a few days, or a few months. He has simply got to fight it as long as he lives, by living upon a sterilized diet, the antitoxic diet; in this way he can hold the intoxication down; but if he wants to bring it down to the lowest possible point, he must hasten the movements of the alimentary canal until there is not time for putrefaction to take place. Use buttermilk instead of fresh milk. Take pains with the diet to see that everything is right and clean; then see that the bowels move regularly two or even three times a day; at least once a day. On no account allow the bowels to be neglected. If you will do this, you will find a most wonderful difference.

Stand straight, stand erect, take deep breaths. This matter of carriage I am satisfied, has a great deal to do with living well and enjoying good health. If one goes around with his shoulders down and his chest flat, he can not half breathe. And the worst thing about it is the abdominal muscles here become relaxed. I examined a man today, and as I examined his abdomen, put my hand upon it, if I had not seen his face I certainly should have said he was a woman, and I

told him so. It was the most astonishing thing. We find now and then feeble little women who have not any development of the abdominal muscles; they were just simply strings. I said to this man, "You have had a sedentary occupation, haven't you?" "Yes," he said, "I am a cigar maker." "How long have you been working at it?" "For twenty-five years." This man for twenty-five years had just been sitting down doubled up in a heap working, and his abdominal muscles had hardly been contracted in all that time, and the result was they had just degenerated into strings. These muscles should be tense so you can hit them a hard blow without any unpleasant effects. A person whose abdominal muscles are so lax that they afford no protection, have no toughness, no firmness, afford no protection at all for the natural support; but if the abdominal muscles are strong enough so you can hit them as hard a blow as you like and do not feel any inconvenience from it, it is because they have tension in them to support the organs in place, to hold the stomach up; Now, when you relax the abdominal muscles they lengthen out; when you contract them, they shorten two or three inches, don't you see? The muscles are shortened that much. You put a slack of two or three inches into them so they can not contract, and there is a relaxed condition, and the blood runs away into the abdomen as into a stagnant pool, and stagnates there; the liver and the stomach and the bowels are congested; and intestinal catarrh is a consequence. Auto-intoxication may come because the bowels are incapable of resisting the germs that are present within it. The liver becomes congested. When one stands erect with the chest up as it ought to be so these muscles are properly stretched and tense, then you can take a deep breath, and the lungs are ventilated all the time, and the liver is squeezed hardly, and all these organs are properly emptied of blood, don't you see, at every breath you take. So sit up straight. If you have the ordinary kind of chair, get some little cushions and fasten on the backs of the chairs. You will notice some

little cushions on some of our chairs here. I think you can buy these at the desk, or the medical office. Get one and take it home with you for a pattern. Have some made for all your chairs. Reform the family chairs. You notice the Sanitarium chair we have here has a peculiar curve in its back, and these chairs are made expressly for the institution. When the Sanitarium burned up six years ago, I really felt rather glad that the old chairs were all burned up and we could have some new chairs. So I gave the chair makers a model. The manager of one of the largest chair manufacturing establishments in the country called upon me. When I began to tell this chair maker I wanted a chair made according to my model, he began to smile. He said, "Doctor, I think we have got something in stock that will fit your case." I said, "I have a new idea in chairs." He said, "Doctor, I have been in the business for thirty years, and I do not believe you can show me any new ideas in chairs." I made a picture and I brought in a model that I had our skilled carpenter, Mr. Matthewson, make, and showed it to him. He looked it a moment, and looked rather surprised. He said, "Doctor, I will have to own up, this is a new idea; this is something new. I did not believe anybody ~~skanik~~ could show me anything new in chairs, but that certainly is something new." That man was the manager of the largest chair factory in the world, and he looked at the chair and he said he thought he could make a little improvement on it. He went to work and made one and sent it to me, but it was so much worse we would not have a thing to do with it, and had to get somebody else to make the chairs because he was so much bigoted with the idea he had to have a finger in it somewhere. You see the seat slopes ~~now~~ and the back slopes more, and there is a curve here just right for your back to keep you from putting that hump in your back. You can get some of these chairs here if you want them; we can have some made for you by the same parties that made them for us. The Modern Medicine Company will see that the chairs are made for you. But I will finish this story next time.

For some little time we have been at work organizing what has already been called the university of health. The Sanitarium here since the World's Fair at St. Louis has been called the university of health. The St. Louis Fair authorities sent us an invitation to come down there and have a celebration. So they named one day Battle Creek Sanitarium Day. It was their own proposition, not ours, and we gathered our friends in and had a glorious time; and since that time our work here has several times been referred to as a university of health. So we determined to organize an educational scheme. I want to give you just one word about it. This is a part of the scheme. We propose to organize in every community a good health club, and to put the members of that club in the way of getting wise and learned and informed in relation to health. We have organized what we call a correspondence school of health, and there are various courses,-- courses on food and diet, courses on health exercises, and in several other subjects. Each one of these courses has six lessons, and these lessons are gotten out in this form. Here is one on food and diet. They will be illustrated, and these lessons ^{of} ~~xxx~~ courses are five dollars a course of six lessons by mail, sent out one lesson at a time. There are questions and answers arranged for, and a series of questions to be answered after the lesson has been studied. These courses are organized in connection with two large volumes, an encyclopedia of health, to be used as a text-book, and to be studied. There is also the Good Health going along with it, and when there is a large club organized of 100 persons, then we send a lecturer there, and the lecturer will give a course of lectures; and when the agent is in town organizing the Good Health club there will be some demonstrations of simple measures in home nursing etc. We are getting our missionaries ready; are starting several in town today, getting ready to go out as missionaries of health, and ~~w xxx~~ we have a missionary appointed at the Sanitarium. Mrs. Guyon (or Guinan?) is our missionary here; you can make appointments with

her through Miss Zahn, in the ladies' medical office. If you ~~ant~~ want to become members of this university of health, we will get your names, and follow you up after you go home, just follow you up and see that you keep in the right road. If you undertake this thing, I am sure you~~it~~ will not regret it. You will find as the years go by that you will be getting stronger, more vigorous, more efficient, enjoying more health and vitality, enjoying life better; and not only that, but you will be doing good missionary work for your neighbors.

But I will tell you how to live 100 years next time. I thank you for your attention.

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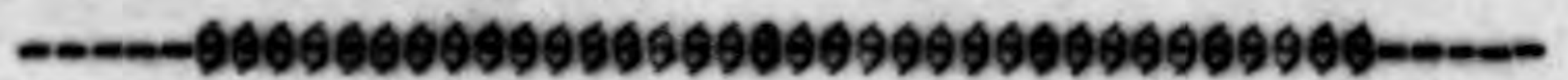
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QUESTION BOX LECTURE

On the Sanitarium Driveway, Battle Creek, Mich., Monday, August 31, 1908, at 8 P. M.

by

J. H. Kellogg, M. D.



The other evening I was going to read to you something from that delightful book, "Pepys Diary." I presume some of you have read it,--a book that was written during the great plague, and at the time of the great fire in London, about 200 years ago. Mr. Samuel Pepys tells how he took a lunch or dinner one night at the Pope's Head,--they have a great many heads over there, you know--Pope's Head and many other kinds of heads,--and they took dinner at the Pope's Head,--a little inn by that name at the head of the street, and he says, in his diary for July 28, 1666,--"28th. To the Pope's Head, where my Lord Brouncker and his mistress dined and Commissioner Pett, Dr. Charleton, and myself ~~was~~ entertained with a venison-pasty by Sir W. Warran. Here very pretty discourse of Dr. Charleton's, concerning Nature's fashioning every creature's teeth according to the food she intends them; and that men's, it is plain, ^{will} was not for flesh, but for fruit, and that he can at any time tell the food of a beast unknown by the teeth; and that all children love fruit, and none brought to flesh, but against their wills at first." Now, this is quite an interesting incident to have occurred 200 years ago, so you see that the preaching of the non-flesh diet, and the low protein diet is not an innovation; it is not a new thing at all. Here was a man 200 years ago, a physician, a london man, Dr. Charleton, physician-in-ordinary to the king, who was making the very same arguments you have heard me make here.

People say, for example, "Oh, a man has canine teeth, and if he has canine teeth, why should he not eat flesh?" Now, in the first place, man has no canine teeth, as Dr. Charleton had already discovered. He has human teeth, and not canine teeth. If man's teeth are like the teeth of any other animal beside human beings, they are like those of the monkey. The monkey has exactly the same kind of teeth, the same number of teeth that man has, and they are arranged in the jaws in exactly the same order, and set in the same way with one exception,--the eye teeth, or cuspid teeth, the stomach teeth are a little set apart from the other teeth. These teeth, the cuspid teeth, or so-called canine teeth, are in the monkey somewhat longer than the other teeth, but in human beings they are no longer than the other ^{more} teeth; so you see that in that respect the teeth of the monkey are very much like those of the dog than are the teeth of humanbeings. They are set somewhat apart from the other teeth, and they are longer than the other teeth, just as a dog's teeth are. The dog's canine teeth are twice as long, nearly, as the other teeth; they are somewhat pointed because they are cuspid teeth, and they are set apart from the other teeth, so that they can lap by as the jaws are closed. That is the reason why a little space is left for them. In that respect, as I have remarked, the monkey's teeth are more like the dog's teeth. The monkey, you might say, has canine teeth, but it certainly seems entirely out of place to say that a man has canine teeth; for his teeth are not longer than the other teeth, and they are set close to the other teeth, and there is no chance for them to lap by; they could not be used for tearing purposes; they are entirely different from the teeth of the dog and other carnivorous animals in which these teeth are supposed to be intended for the tearing of flesh. Well, but what about the monkey's diet? Is the monkey, then, a carnivorous animal? Ask any keeper of a menageria what he feeds his higher apes, his gorilla,--that fierce animal of the forest, the real kind of beasts, the gorilla, the chimpanzee and the orangoutang,--those great manlike apes,--ask him what he feeds them. He will never tell you he feeds them flesh. He would never

tell you he feeds them flesh. He would never think of such a thing as feeding flesh to a gorilla, or an orangoutant, or a chimpanzee; no one ever heard of such a creature eating flesh. The gorilla will sometimes kill beasts in the forest that invade his home. He will sometimes wait up in a tree, and when an elephant comes smashing through, he will spring ~~up~~ down upon his back with a club in his hand and will beat him to death. He is a match for an elephant. It has been said that a gorilla with a club in his hand,--he generally carries a club along with him, knows how to use a club, knows how to fence most dextrously,--the gorilla is a match for a lion. These powerful apes will take the hunters rifle, his heavy rifle barrel in his hands and snap it in two as though it were nothing but a twig. It is the most powerful animal of its size, probably, in the world. This animal never tastes flesh, never touches flesh, has no taste for blood; it lives entirely upon fruits, nuts and cereals. These large apes sometimes down in Africa, I have been told, will invade a corn field when the ears are getting nearly ripe, when they are ready for roasting, for example, when the corn is in the milk state,--they will invade a corn field and will pick off the ears, and will toss them along from hand to hand, over a long row, away up into the woods where they live; many of them will come down, and they will pick off an ear and toss it to the next man, and he to the next man,--the next monkey, I should say,--and the next ape, and so on; for these manlike creatures are constantly making one feel that they are really caricatures of men. Their diet is a non-flesh diet; they never taste flesh. Our teeth are exactly like theirs, only that their teeth are a little more like dog's teeth than ours. Ours are further removed from the teeth of the dog than of the monkey, so we ought to be further removed from flesh, further removed from the dog's diet; and we are. We have no right whatever to taste flesh, by our anatomy. Cuvier, the great comparative anatomist, Linnaeus, Buffon,--all the great comparative anatomists, have unhesitatingly proclaimed man to be a non-flesh eating animal, a frugivorous animal; and that is not a new idea at all.) Plutarch; the

famous Roman biographer,--you have heard of him; you have read his wonderful book, "Plutarch's Lives", the model for all biographers since his time. (Plutarch wrote an essay against flesh eating in which he used the same argument exactly,--that our teeth are not like the teeth of carnivorous animals; our hands are not formed for seizing an animal and tearing its flesh. An eagle has talons, a lion has sharp claws and sharp teeth; man has a hand not adapted to tearing like those of the lion or other members of the cat family,--not such hands or such feet, but he has hands adapted to plucking, picking, reaching up and plucking the fruit, picking the nut and breaking off the shell. He is adapted to feeding himself with fruits and nuts, and not feeding himself with flesh. Plutarch says, "but if you will eat flesh, then eat it as the lion does. First, seize the animal by the nape of its neck, tear open its throat, suck its blood, then rend out its vitals, its entrails, then tear its flesh off its bones and gnaw its bones, swallow its quivering flesh, just as a lion does,--if you will eat flesh." So we should seize the animal as the lion does, and as you see other carnivorous animals do; but how is it? We could not bear to eat flesh in its natural state. A ripe peach from the tree is served up to us in the most delicious form, and possibly we do not want anything more but that delicious peach; it is all right just as it comes. The nut as it comes from the tree,--we ask no seasoning for it; it does not have to be cooked, and dressed, and fixed up in some deceitful way; but how is it with flesh? We could not bear to eat flesh from an animal just slain, and eat it,--the warm, quivering flesh,--it would be impossible for us to eat it in that way. Oh, no. In the first place, it must have a name to deceive us. We would not think of serving up upon the table a piece of flesh and passing it to our friend, and say, "Will you have a piece of cow?" Oh, no. You would not say, "Would you like a taste of this fine ox?" Oh, no. But we use, first, a French word to hide it--bif. We say, "Will you have a piece of beef?"--a French word we must have to hide the

idea, the repulsive idea of that dead beast that has been slain; and yet some people become so debased, really so carnivorous in their instincts, that they really are almost ready to go the whole figure, and become truly carnivorous, get down on all fours and gnaw bones with the dogs. I was walking along the street with such a gentleman once. He was a friend of mine too, but he was a dietetic unregenerate,--an acquaintance at any rate, and we were going along the streets in Chicago, happened to be near the stockyards, and a fine, large ox, a noble looking creature was coming down the street, led along to slaughter; and I observed this gentleman looking at him, eying him sharply, and pretty soon I noticed him smacking his lips. I said, "My friend, what do you mean, smacking your lips in that way?" "Oh," he said, "I was just thinking how I would like a piece of him for dinner." Think of it, my friends! I said, "Why, I am frightened; I am afraid of you. Nobody will know what you may do next. I shall expect you to run out and take a bite off a cow or a sheep going along the street, or if that was not handy, maybe you would take a bite off me, who knows?" Some time ago we had a man lecturing here in town, a very distinguished gentleman lecturing here,--Mr. Thompson-Seton, or Seton-Thompson--I don't know which it is now; at any rate, we had him up here and he had dinner with us. He said he did not like his dinner very well. He missed his beefsteak very much. I said, "Mr. Thompson, I thought you must be almost a vegetarian." "Vegetarian?" said he. "Yes," I said, "I have read your books, and you tell so much about animals, and the wonderful things they do, one can not help but feel that they are akin to us." He said, "Of course, they are akin, of course they are. They can think and feel as we do, of course they can,--there isn't any doubt about that." I said, "Well, it seems repulsive to slay and eat them; it seems almost like cannibalism." He said, "So it is; it is just the same; but what is the harm of cannibalism if you can not get anything else to eat? I would shoot and eat a man if I had to, if I could not get anything else." I saw what Mr. Seton-Thompson, or Thompson-Seton had come to, or what he

had degenerated to, because he had recognized the kinship of these loer creatures to the fullest extent, had appreciated their intelligence, and their kinship with human beings, while at the same time he had continued to feast upon them and to eat them, and to kill them, and to slay them, hunt them in a ruthless way until he had actually come to the point where he did not see any particular difference in eating a beast and eating a man,--did not know any difference at all in killing a beast or a man,--eating a man or an animal was all the same thing to him, to Mr. Thompson; it was simply a matter of circumstances. Now, I don't mean to say Mr. Thompson is a dangerous man, at the least, that he is likely to kill anybody; I am only relating the conversation we had. Down deep in his heart he ^{doesn't} see any particular difference. Now that is the fact, but that is one extreme, you see. Then there is the other side of the thing,--recognizing the kinship of these creatures, recognizing their intelligence, the sentiment which they manifest, the power to appreciate love and sympathy, hate and almost all human emotions they are able to experience. Then, to think of slaying and eating them as common food! Why, my friends, an animal is not a thing; an animal is a being. An animal is not a thing like a stone, or a potato,--an animal is a creature; an animal is a being; a being that can feel; it is a sentient being, and it certainly is closely related to us. Its flesh looks just like our flesh. It has white nerves, and glistening tendons which look just like ours. The blood that courses in the veins of the sheep is just as red as ours. The brain of the sheep, or especially of a young monkey, for example, looks exactly like a human brain; it is so nearly like the brain of a young child that it takes a skilled anatomist to tell the difference. So the inside appearance,--the liver, the stomach, the heart, the lungs and all these parts--they look exactly like our own. One thing I noticed when I was a medical student,--I heard it remarked among my fellowstudents who were working in the anatomical laboratory making dissections,--I heard a good many among them saying, "I am a vegetarian, these days; I can not eat beefsteak." Here they would be

dissecting a human rib, working upon the muscles, then go home and sit down at the table, and there find some ribs served up, roast ribs on the table, to make them think of what they had just been looking at. It seemed altogether too much like cannibalism to eat that pig's rib, or cow's rib that looks for all the world like a human rib, so it would seem like taking up his own ribs and gnawing off the flesh of it,--it seems too much like treating a human being the same way. That is a common experience among medical students; they can not eat beefsteak; they can not eat meat while they are pursuing work in the anatomical laboratory. So it takes a long time of hardening to get to it. But I must drop this subject. I simply wanted to get in a few shots, because you will be going away, some of you, pretty soon, and I want every one of you to go away from this place a vegetarian, a non-flesh eater; to go away thoroughly settled in your mind that you do not want to eat any more meat. Some time ago a very distinguished preacher, no less a preacher than the Rev. Dr. Hillis, of Chicago, now of Plymouth Church, Brooklyn, N. Y., came up to see me at my house one day, and he said, "Doctor, I wish you would tell me what to eat. For some years I have been paying no attention to this question; in fact, I confess, I considered you an extremist, and I many times made sport of you and your ideas as being ridiculous and very extreme; but he said, "I have been changing my mind lately. I met a man down in New York some time ago and he said, 'Dr. Kellogg works like a horse.'" He said, "Now, I am going coming to the point in my experience where I must have command of all my powers; and the next ten years I have an opportunity to do the best work of my life, and I must do it--just before he went to New York,--so he said, "I have made up my mind it must make a difference what a man eats, and I thought I would stop off here and have a chat with you on this question of diet, and I stopped over on purpose to come up to have a chat with you, to see you. Now, I would like to know what you had for breakfast." I said, "First I would like to say a word or two

two to you further about this question. You say you want me to tell you what I eat. Don't you know?" "Why, no," he said, "I do not know what to eat. I have not given very much attention to that question." "Now," I said, "Here you are, a very learned man." He told me he had been making sport of me, don't you know, and I thought I would pay him back a little bit.* "You are a learned man, a college graduate, a theological college graduate besides, and you have been a public teacher for many years; I have read your writings myself with a great deal of pleasure, and yet you do not know what to eat. Why," I said, "there never was a horse or a cow or a sheep that ever came to me to ask me what to eat. A horse has horse sense, and he knows what to eat; but some people seem to have lost their horse sense, and they do not know what to eat. Now," I said, "it is a very surprising thing that an intelligent, learned man like you ~~do not know~~ does not know." "Well, Doctor, I acknowledge my ignorance; I am ashamed; I am very much ashamed that I do not know what to eat; I ought to know, but I never thought anything about it." I said, "That is just the point I want to make plain to you, that our universities are not teaching men the most important things they ought to teach them. In fact," I said, "a part of our business at Battle Creek here, at the Sanitarium--a principal part of our business is to cure up and to restore to health the college-maimed and university-crippled men and women that are turned out by the hundreds every year, that are "sicklied o'er with a pale caste of thought", as Shakespeare says, that are crippled, sometimes for life, by the long neglects during their college years, and the unequal education which they get, and the great amount of time spent in the old mythologies and the old fables which are called history very largely, and the utter neglect of the study of man himself. Was it Pope who said, "The noblest study of mankind is man." There isn't anything anybody can study that is of so much importance as the human body, as man himself." If a man gets a watch he inquires how to take care of it. If a man buys a threshing machine he gets instruction how to run that threshing machine so as to

know how to get the most work out of it, and he studies all the time how he can get the greatest efficiency out of that threshing machine. If a man has got a locomotive or a boiler or an engine, he is all the time studying what kind of coal he can get to put into that furnace that will make the most steam, that will give the most power, the most work for the money he expends. He tries different kinds of coal, subjects the coal to various kinds of tests, perhaps gets a calorimeter, or sends it away to some university to have it subjected to a calorimeter to know how many heat units can be obtained from every pound of coal; so he can know how much work he can get out of it, how much energy he can get out of it; so he studies everything pertaining to his machinery, to his business,--how to make it give the greatest returns for the money expended and the time and the energy expended. Now, what does he do about himself? He eats anything that happens to come along. I was talking to a man in Chicago some time ago, and I said,--he had blotches all over his face,--"what do you eat?" He said he had a coated tongue and a very bad breath. He said, "Oh, I eat whatever is set before me. I sit down at the table; when I get through with my work I go into a restaurant, and I say to the waiter, 'Here bring me something to eat quick.' And when the waiter says, 'What shall I bring you?' I say, 'Bring me everything on the whole bill of fare; anything you have got; I don't care what it is.'" And he said, "The waiter brings me beefsteak, or mutton chop, and I eat that. If he brings yellow dog, I eat that; anything that comes along, no matter what it is, my stomach can digest anything"; so I said, "so you swallow everything, I suppose?" "Yes," he said, "I just take anything that comes along,--everything." Now that is the way a man feeds himself. How strange it is. Some time ago down in New York a gentleman said to a man who had two boys and four dogs, "Now, my friend, I notice that you spend a great deal of time with your dogs, and you do not spend much time with your boys. I observe that you take care of your dogs yourself, you prepare their food yourself, feed them yourself, look after their kennels; but you turn your boys over to a tutor. Why is

that?" "Well," he said, "you see my dogs have a pedigree." The boys hadn't any, that is, that was worth talking about. Now, my friends, just think of that. Every ~~man~~ ought to be trying to keep up his blood, he ought to be taking good care of himself anyhow, ~~that is~~ if he does not of his children, so as to keep up the strain, to keep up the pedigree; but unfortunately we haven't any kind of society in this world but blue blood aristocracy. We need a red blood aristocracy. We need an aristocracy of health, instead of the old, effete aristocracy that has run out until the blood is blue and bad and filled with lunacy and bad disorders of various kinds. We want a new aristocracy, my friends, and I hope some of you are going home and going to help us to start it, beginning with your own children. Raise those children right. Teach those children that the best thing, the most important thing they have got in the world is their character, their reputation; and the next most important thing is their own bodies; the bodies God made for them,--the most important piece of property that they own is their own bodies, and that the character of that body, the ~~character~~ ^{care} and the operation of this machine so as to get the greatest efficiency out of it, out of this wonderful machine--the most wonderful thing God ever made--that that is a large part and one of the most important parts of the business of life. So it means something--what you eat. What we eat today is walking around and talking tomorrow; and if it talks bad tomorrow it may be because it was not eaten right if it was good food, or that it was bad food to begin with; and if the walk is not straight, if it is not strong, if it is not efficient and upright, it may be your trouble is in the quality of the thing we eat.) That is a thing worth thinking about. I am afraid some of you are going to get away without getting converted, and I want to convert every last one of you to the Battle Creek Idea of diet. It is not the Battle Creek Idea; it did not originate here; it is not a fad or a whim of mine; but it is the old way. I met a gentleman yesterday up at my house, and I said, "I am

glad to see you; you have come up to see my garden of Eden, haven't you?" Here is where we are trying to live garden of Edenstyle, as far as we can. We have to conform to some of the conservative ways of the world and the conventional ways of the world; we have to adopt some of them, and we live in ~~it~~ an inclement climate and have to wear clothes. Clothes are awfully dirty things; it is an awful dirty habit, this wearing of clothes, for it accumulates the dirt and keeps it on the skin when the air and the sunlight ought to disinfect the skin and keep it clean and healthy. Nobody could ever have skin diseases if we did not wear clothes. (It is because we wear clothes that we have skin maladies. The skin would never get dirty if we did not wear clothes. The only dirty thing that ever comes on our skins is the thing that comes out of ourselves. That is the only really dirty thing we ever come in contact with,--is the waste, effete, poisonous matter that comes from within, the rottenness that is absorbed from our colons, if you please, and is carried in the blood by and by out into the skin and upon the skin. Sometimes I have come in contact with people, and the moment I touched them I felt my hands were soiled. When I work in my examining office I never touch one patient until after I have washed off the previous patient--never in the world. I would not think of doing so. I won't touch a door knob or anything else when I come in contact with a sick person, from force of habit, for I find a great many people, when I come to touch their skins,--they are actually slimy because of that effete waste matter that is coming out upon the skin; and there are some people that do not recognize that fact, or they forget about it, and they do not take the pains to take a bath every day to wash off that effete matter. If you are going to wear clothes, you have got to have a bath every day. At least, you have got to give yourselves some kind of grooming, with a dry towel at least, or with a wet towel, or with some sandpaper, or something, so that your skin will be scoured off and made clean. The body ought to be exposed to the air, and to the water.

Benjamin Franklin set us a good example, for he took a bath every single day of his life. Benjamin Franklin was a vegetarian, by the way. Did you know that? When he was a printer's boy in Philadelphia, ran away from home, in two or three years he began to be a vegetarian, and he adhered closely to the non-flesh dietary the greater part of his life. Why? Because it was natural; it ~~is~~ was reasonable; it appealed to his reason. He was a scientific man. He was not the only great man who followed this mode of life. A good many men at the present day are coming to recognize the value there is in a natural dietary, and not because I teach it, or because anybody else teaches it, but because it is the right thing; it appeals to the natural instincts of a normal man as it does to the instincts of a child.

Question: If we require only from one to one and a half ounces of protein a day, how is it that many people lose strength and get run down when they give up meat?

Answer: Now, that is not my observation. My observation here at the Sanitarium is just the opposite of that. For example, we have here at the Sanitarium about 1000 employees. It takes 1000 healthy people to take care of 1000 sick people, and in winter time the proportion is two to one. Now, we have no meat. For forty years there has been no meat served on the table of the employees of this institution; for more than forty years, for forty-two years this institution has been carried on by people who do not eat meat. These bath men and bath women who take care of you in the bath rooms, the nurses who stand by your bedsides so patiently and work for you, and the doctors that you meet in the offices-- these rosy cheeked, healthy looking doctors that have so much endurance, sit in their offices all day and hear your tales of woe without getting out of patience, without getting tired, at least, too tired to go on,--now, these men and women who are doing the hard work in this institution, to say nothing about myself, are all

of them vegetarians, non-flesh eaters; none of them eat meat. There isn't a doctor about this institution that ever tastes meat. There is not a doctor here but has been abstaining from meat for years and years. My colleague, Dr. Riley, has been a non-flesh eater to my positive knowledge, for twenty years or more. I think pretty nearly twenty-five years--for twenty years anyhow, he has been an abstainer from flesh; and here is another of my colleagues, Dr. Mortensen, who I know for fifteen or twenty years has been an abstainer from flesh, and Dr. Stewart and other doctors have all of them been abstainers for years and years; and you see sometimes over at the office here, our healthy, hearty looking treasurer, Mr. Murphy,--he is another man who has been abstaining from meat for twenty years. Mr. Murphy came from Boston when he came here; and he had been a business man connected with a large meat market in Boston, and he thought meat was very good and he used to take home every day for his wife to cook for him just the finest, nicest cuts of meat he could find in the market, and he used to ^{eat} ~~take~~ a whole lot of it; and when he came here to the ~~the~~ Sanitarium, it took a little while to win him off. He ate his beefsteak right along for some time, several years. Finally I said to him one day, "Mr. Murphy, I don't think it looks well for you to be eating meat when I am preaching vegetarianism, and here are the rest of our folks here, hardly any of them eating meat, scarcely one of them, and you are eating meat, and I don't think it looks well. I think you ought to turn over a new leaf on that thing." "Well," he said, "Doctor, I never thought of it at all; I will never eat any more." And he has never tasted it since. He looks a great deal better and hardier now than he did then. I never heard him complain of getting weak. These helpers who come here all get better. We had a social out at my house the other night, and there were gathered out there 500 or 600 or 700 of them in front of my house, and I stood up and talked to them on the lawn there, and I said, "I would like to know how many of you have improved in vigor and strength since you

came here to the Sanitarium?" Half of them put up their hands; half of them put their hands right up at once. I said then, "I would like to know how many of you have depreciated in vigor and strength since you came here", and I saw just one hand going up. I looked and saw a great, big, strapping, hearty fellow, and I said to him, "Stand up, I want our folks to see how weak and puny a man gets from going without meat." (It is an utter mistake to suppose anybody has to eat meat to get strong, or to be strong. The idea that a man must eat a strong animal in order to be strong is a relic of an importation, if you please, from heathendom. Down in the South Sea Islands some time ago, or the Sandwich Islands, a Sandwich Islander came up in court in dispute with reference to a piece of property. The judge asked him what proof he had that this property was his, and he gave various trifling proofs, and finally he said, "Now, Judge, I will give you the positive proof. The final proof and the positive proof is this: that I ate the owner." He had killed the owner of that piece of property and eaten him, and by that means he became possessed of everything that belonged to him. We had some time ago here a Maori from New Zealand; he was a native Maori who came here to be educated. We educated him in our college here, had him a number of years, and finally graduated him from our medical school and sent him back to New Zealand, and at the present time, he is one of the chief health officers of New Zealand, that is, for the Maoris. He has charge of a large district of Maoris. He is a young, bright, smart, capable man. I was talking with him one day, and he told me some very interesting things. "My ~~ix~~ grandfather", he said, "was a cannibal. My grandfather ate missionaries." he did not feel at all proud of it. He was a great chief, he was the grandson of a great Maori chief, a young man of large wealth, but he did not have ~~right~~ control of his property because he was a minor, or there were other minors in the family yet younger than he, so he had not yet become of age. Maui Pomare, for that was his name, said this to me. and he said, "I said to my grandfather, 'Grandfather, why did you eat men? Why did you eat a chief when you

killed him? Did you eat him because you liked him?" "Oh, no, Oh, no I didn't eat him because I liked him--oh, no; but I ate him so that I might become possessed of his courage, so that I might become possessed of his valor, and become possessed of his strength, and of his property, his wives and all the rest of his property. I ate him to become possessed of everything he had!" I suppose that idea has survived some how or other in the race. Our forefathers in England about 2000 or 3000 years ago roamed about clothed mostly in war paint and feathers, and eating their enemies. They were cannibals, two thousand years ago, and this great appetite for beefsteak is due to the fact that the cannibal still lives and yells in our hearts. (We have got the old cannibal instinct still in us. When we eat, meat, when we taste blood, it wakes it all up. I had an illustration of that told me some time ago, in a story of a man who had a pet lion; he had raised him from a cub, fed him on bread and milk, and got along all right, never had any trouble with him. The lion used to play with him, and one day the lion in play bit him a little hard and got a taste of blood, and immediately it aroused all the ferocity of the beast in him, and he set to devour his keeper, his friend who had raised him; laid right hold of him, and it was only with very great difficulty that he was rescued. This idea that one must eat, as I said before, a strong animal, is an entire misconception. We should eat, rather, what the strong animal eats. The ox is strong; what makes him strong? Corn, the products of the vegetable kingdom; that is where he gets his strength. The elephant is strong; where does he get his magnificent strength? Not from eating flesh. The elephant is, like myself, a vegetarian. I am very proud of my good company.

Q. If all the world should adopt the vegetarian diet, what use would the world make of animals? Would not they soon overrun the earth?

A. Well, now, then, that is a poser, isn't it? What are we going to do with them if we do not eat them? If we do not know what else to do with them, we must eat them, of course. If you have got any old thing lying around the house, you do not

do not know what else to do with, eat it. The animals will take care of themselves if they are not cultivated. Why, we do not have to eat the dogs in order to keep them down; we do not have to eat the cats or the rats in order to keep them down. If we do not cultivate animals, if we do not rear them, and take pains to multiply them expressly for food, there won't be any difficulty about that; they would be regulated just like the rest of the animal kingdom. We only eat a few animals. What about the great number that we do not eat? There are only a very few that we eat. This matter of supply and demand always regulates itself. There will be no difficulty whatever. It is a very expensive thing, a very troublesome thing--rearing animals for food. Flesh food is the most expensive of all foods. Just think of it,--a pound of beefsteak--how much is it? On an average, taking the civilized world over, it costs probably about twenty-five cents for a pound of real, fine, clear meat--25 cents a pound. Now, then, in a pound of beans there is more beefsteak than there is in a pound of beefsteak. There is more protein, there is more actual protein food, nitrogenous food corresponding to the meat, there is more of it in a pound of beans than there is in a pound of beefsteak--25% more. Now, the beefsteak costs 25 cents, and the beans cost, how much?--two cents? Say two cents. So you see how expensive the meat is. It takes forty times as much land to support a man on beef or pig as it does to support him on corn, or on bananas, or on wheat.

Q. What kind of sugar is there in the sweet potato?

A. The sugar of the sweet potato is cane sugar, and dextrine; the carbohydrates are starch, dextrine, and sugar.

Q. Is it necessary to take Colaxin with Colax? What part does each affect?

A. Colax maintains proper volume for the intestinal content, and moisture, prevents the drying out of the intestinal contents, and it acts as a broom, gathers up and sweeps the bacteria away, affords bulk on which the intestine can act. It is generally quite sufficient in itself, and requires nothing more than if one

takes the proper quantity of food and the right kinds of food; but there are some cases, quite a number of cases in which it is not alone effective. For instance in an aged person, in a person who has a dilated, atonic colon, who has very weak abdominal muscles, who has been very long suffering from an inactive state of the bowels,--in such cases it is often necessary for a time to take Colaxin. Colaxin is composed of Maltose and figs and tamarinds and a very small amount of the cascara sagrada. A much smaller amount of cascara sagrada is sufficient in that form than would be required in any other form. The amount is so small it may be used for six months or a year without any harm. It is a food laxative. It should be used continuously and systematically every day for several months or weeks at least, so that the bowel will have a chance to contract, to empty itself completely, and will acquire the habit of discharging its contents. After while the amount may be diminished. But it is very important that there should be a thoroughgoing emptying of the bowels, at least every day, and in cases of severe intestinal auto-intoxication,--in such cases, twice a day.

Q. What causes psoriasis?

A. It is a germ disease; parasites growing upon the skin, and low vital resistance. Dr. Buckley of New York has called attention to the fact that persons suffering from psoriasis can not be cured so long as they are eating meat. The majority will continue to suffer from psoriasis as long as they are eating meat. Dr. Buckley read a paper on this subject at the meeting of the American Medical Association in Chicago, and for twenty years he has been teaching that; the leading skin specialists of New York have been teaching that persons who have psoriasis or eczema or other skin diseases must give up the use of meat to get rid of those diseases which are due to intestinal auto-intoxication.

Q. Will you kindly tell what laxative foods should one with hyperhydrochloria and constipation eat?

A. Now, such a person should take laxative foods, and foods that will oppose intestinal auto-intoxication. The best foods are, say, prune marmalade, fig marmalade, bromose, together with prunes, stewed prunes. If the stomach is pretty sour, one must avoid acid fruits for a time, but he may be able to take sweet fruits; but it is important also to take a considerable amount of fat along with it; so fat should be freely used. Ripe olives, olive oil, the natural salad oil, nut butters, and particularly nuts themselves.

Q. Of what benefit is yogurt?

A. Yogurt contains millions and billions of friendly germs, which drive out the unfriendly germs which are in the intestine and render it impossible for them to grow. That is one of the most important foods in auto-intoxication.

Q. If a person is losing flesh from cancer, had he not better take beef to build up on?

A. No. Nobody ever got fat on beef. You can not get fat on beef. Beef does not feed the fat tissues of the body. Beef is utilized only in small amount. Suppose a man eats now four ounces of meat. In that four ounces of beef he will take all the protein that he can utilize. Kindly follow me just for a moment now, and I will show you this argument so plain you can not escape it. One can not store up protein in his body. We can store up fat and we can store up carbohydrates. Why? Because they are deposited underneath the skin in residual tissue, and we round out our bodies with fats and carbohydrates; but protein is another thing. We can appropriate only just a certain amount of protein. Protein is for repair--not for storage, but for repair. When an engine stops at the roundhouse, or a locomotive stops, they put coal into the tender, and that coal that goes into the tender corresponds to the starch, fat, sugar,--the carbohydrates; but by and by, once in a while, they stop somewhere to get a bolt or a washer, or a box or a wheel or some thing else for the engine. That is protein, if you please; that is protein. Now, they can not take on any more, or do not want to take on any more; they can

not utilize any more than there is space for. If a bolt has dropped out, they can put another bolt in its place, but there is no place for a boxful. Protein is the metal repair, as I said; and one or two ounces a day is all we can possibly use. Suppose a man eats half a pound of meat. A man told me a few minutes ago that he had been in the habit of eating a pound and a quarter of beef three times a day. He said, "If I was well, I think this diet I am getting here would not go very far with me; ~~it would~~ but I hope before we get through here he will get converted. He had a stroke of apoplexy last week, and that is where he got it. Apoplexy is a beefsteak disease. Rheumatism is a beefsteak disease. No one would have it if they did not eat beefsteak. Ulcer of the stomach is a beefsteak disease; auto-intoxication is a beefsteak disease. We would not have tam in the first place if we did not eat all these flesh foods, if we did not eat these animal proteins. Now, if you eat four ounces of beefsteak you are taking all you can possibly utilize. Suppose you eat a pound more; what becomes of it? It is not stored up in the body; you can not get fat on it; it is impossible to store it up. It goes out through the kidneys and the bowels as so much poisonous waste matter. You can not store it up. All the fat comes from fat and carbohydrates; so you will never get fat on meat.

Q. Are the proteins of yogurt to be counted in the day's rations?

A. Yes.

Q. How do you expect to live to see the results of your hard work if you continue at your present killing pace?

A. That is what people have talked to me for forty-five years. They have said, "Why, Doctor, you will break down pretty soon, you will fail up pretty soon." I was such a puny boy my father thought I ought not to study even when I was a boy. He would forbid me to look at a book for months at a time, for three months at a time. I confess I did it though, on the sly. I would get up at night after he had gone to bed and study from ten o'clock to three o'clock in the morning. I

began that form of studying when I was a boy fourteen years old. I deprived myself of sleep when I was a boy of fourteen years, and have ever since. I am working every minute of my waking hours; absolutely take no recreation. I have never had a week's vacation in my whole lifetime. I am sure that since I was a boy of ten years I have not had twenty days off; but I have been working all the time the last thirty-five years, since I have been a physician I have had to work every day of the week, as well as all the time I was awake. So I have not had a vacation; and I can tell you further, I do not feel the need of vacations. I have sometimes, but it was not work that made me tired sometimes--it is not work. It was auto-intoxication. I did not eat meat, but I ate eggs, I ate a couple of eggs for breakfast and two eggs for dinner. I thought I must do it, because I did not eat beefsteak. Since I cut my protein down to just what I find in potatoes, and what I find in watermelons, and in bread--to a small ration--eat about half what I used to eat--less than half,--I am sure about one third of what I used to eat, I find myself immeasurably stronger, more enduring, more efficient, getting stronger every day of my life. I was just thinking as I was coming along down here today how thankful I am for such splendid health, and for feeling today, going on fifty-seven years old, younger, feeling stronger, and healthier, better, freer from inconveniences of any sort than I ever saw in my life; and I have not stopped work, but have kept right on at work, and I have learned how to eat, learned to chew my food. I knew about that, but I did not do it. I taught a lot of people to do it, but did not do it myself. And if I could get a little more sleep, I do not know what would become of me, hardly. I get up in the morning as it is, feeling as though I could jump ten feet high. I just feel like a calf that was capering around in a pasture, and think I would just like to kick up my heels and jump around. When I go home at night at ten o'clock or one or two o'clock, when I leave the institution and ~~home~~ go home, if I do not have a bicycle as I generally do

dog I take to my heels always and run just as hard as I can. I would not dare to run in day time. People would think ~~something~~ ~~was~~ somebody was dying, and a crowd would run after me. But I run at night just as hard as I can; there is a lot of work waiting for me that I have to go through sometime before morning. I am not telling you this to boast of myself, for I am rather a puny man; but I feel it is my duty to say to people whenever I get an opportunity that it is not work that hurts; it is not work that kills. Work is the healthiest thing in the world. It is not work at all. I see a great many people who tell me they are just broken down with work. It is not true. I have met very few people in my life who were broken down with work. It is not work; it is worry, worry, and wrong diet. It is unnecessary and useless expenditures of energy,--that is where the real trouble is. Now, if you will be careful to eat properly, you need not be afraid. I can not determine my work; I can not regulate my work. I belong to the fire department, and I have to go when the bell rings; so I am kept on duty sometimes more hours than I would like to be.

Q. What causes cracking at the base of the brain?

A. Just the slipping of a tendon or cartilage. Don't worry about it; it won't do any harm.

Q. I am unable to reason out how yogurt germs can be of help if the hydrochloric acid in the stomach kills all germs. Will you kindly make it plain?

A. It does not kill all the germs. When you take yogurt into the stomach, the yogurt prevents the secretion of hydrochloric acid while the yogurt is there, and that yogurt passes out of the stomach so quickly, being in a fluid state, it does not have an opportunity to get disinfected; and so the germs are not killed.

Q. How many children have you raised or adopted?

A. I think Mrs. Kellogg and I have had forty children in our home. We haven't that number now. We have raised two or three crops, but the last crop

has been thinning out. One of our ~~girls~~ girls is to be married tomorrow, and another one pretty soon, and we are not going to have very many left in a little while. We have been thinking perhaps we would have to start another crop.

Q. ~~What is the cause of colds and how may they be cured?~~

A. Now, I must tell you about that. Mrs. Kellogg got started out in the world as a teacher, and I got started out as a teacher, and we intended to be teachers all our lives. I was teaching school and boarding round when I was sixteen years old. Mrs. Kellogg took her classical degree when she was sixteen years old, and she went at teaching; so we both of us had our lives marked out to teach, and there was not anything in the world I wanted to do so bad as to just gather in homeless, neglected, poor little fellows that hadn't had a chance, and to give them a good chance; and I bent all my energies to that when I was a boy, from the time I was twelve years old until I got into the school room; and when I came into medicine, it was purely an accident. I never intended to do it. I told my mother when I was a boy I would be anything but a doctor; I would not be a doctor; and when I was twenty years old, my father ordered me off to medical school. I went to obey him for just one year, and for no other reason. When I came back, I never intended to go to medical school again, but circumstances came around me in such a way I was compelled to do it. I said, "I will study medicine from a scientific standpoint, but I won't practice it"; so when I got a diploma at Bellevue hospital in New York, I said to the professor, "I never intend to practice medicine; I have studied medicine simply from scientific interest;" but this institution was a little affair, a little, two-story, wooden building--you can see the picture-- I will show it to you next Thursday night,--a picture of that wooden building; and it had been running about nine years, and it really had gotten into a bad way, and there was nobody took any interest in it, no physician they could get, and it was a Hopson's choice that they came to me. I was a boy only twenty-three years old, and they came to me and asked me to come in and take charge of it. I agreed

to do it for just one year. I intended to go to Europe to study education and other things; I was going to continue in my educational work; I had not the slightest idea of giving myself to medicine. I agreed to stay a year, and I stayed a year; and I had so many patients I could not get away, and we had to build a building. I stayed another year, put up a building, and then when we got the building up, we had such a big debt they said I had to stay to work the debt off. When we got the debt worked off, we had so many patients we had to put on an addition to the building, and then another. So I had to work all the time. And I sat down and wept and sobbed many a time because I saw those little boys and girls I was interested in just going wild, and I was not doing anything for them; and it worried me. I did not have a happy day, not one happy day until I had been in this institution about ten years, and one day it happened that Mrs. Kellogg said to me, "You are going down to New York; now find a little baby and bring home." So I hunted over the hospitals to see if I could not find a baby that had a good pedigree. The baby had to have brown hair and blue eyes, and to be a bright little girl, and to have a good pedigree. I hunted for such a child, but could not find any. I hunted three years for such a baby and could not find any. By and by a neighbor came in and said, "My wife is dead, and I have got some children; I am going to give away some of them; will you take this little girl?" We said, "Yes, bring her in. If she wants to stay, all right." She came in. A few days afterwards I was sitting at work, and this little tottler, only three years old, came up to me and said, "Papa, Mr. So-and-so wants to see you." Her father had called and she came and pronounced his name, and said he wanted to see me; so I found the little girl had adopted me; so we thought we would let her stay. So she was satisfied. She is grown up now and got three little girls of her own,--no, two little girls, and a boy. I am getting so many grand children I get them mixed up sometimes. Well, in a little while a lady came along to the Sanitarium here and found out she had a hopeless disease, and had got to die. There was no hope for

her, I told her, and she burst into tears, and sobbed, "What shall I do with my children?" I said, "How many have you got?" She said, "I have got four." "All right," I said, "send for them, and I will take them." So she sent for them, and I took them. They are grown up now and got children of their own. One of them is a doctor, another is a teacher, and they are all doing well. By and by, I saw an article in a newspaper that there was a little boy and girl away down in Illinois found in a garret, with their mother dead on the bed, a little boy of four, and a little girl of six. And the mother had died of tuberculosis, and the father had died of tuberculosis, and those little ones were found there gnawing the tip ends of tallow candles--the last thing they had in the house to eat. The little girl had been out when the mother died, and the boy had been there, and they were all alone. I telegraphed to keep those children for me, and I sent a lady down to get them. That is the way our work went on. If anybody came along and did not have any friends, we took them in. By and by we started up the Haskell Home, and I am glad to tell you that through this agency we have had forty in our own home, but we have found homes and gathered in nearly 600 more; and you know that has been the recreation of my life--when I found one day about fifteen years ago I woke up to the fact that I was doing exactly what I wanted to do; and I have been happy enough ever since. I had thought that I had gotten so far away from it that I could not. Excuse me for this digression. People ask me sometimes about our home, so I have taken this time to tell you just a word about it. Mrs. Kellogg has been a very busy woman. She has helped me in editing Good Health for thirty years, has been assisting me and has done the principal part of the work. The real drudgery and the hard work Mrs. Kellogg does. Mrs. Kellogg helped me to build up the Sanitarium bill of fare when it was simply what the ordinary bill of fare is with the beefsteak and all meats left out of it. We had to build up a new dietary, and I recognized that, and I begged Mrs. Kellogg to take hold and help me about that; for I did not know how to get help in any other way. "Well," she said, "I was not brought up in a kitchen, and I am afraid I can not do very

much." I said, "Well, we will learn; I was brought up to cook and I know how, and we will start in." So Mrs. Kellogg went to the best cooking schools in the world, went into that study as early as possible, and we got every point we could get from the art of cookery, the science of cookery, in all the ~~de~~ schools of domestic economy; and we had to do a whole lot of new things, to invent a whole lot of new ways, and I am glad to tell you that I owe to Mrs. Kellogg more than to anybody else, and the institution owes to her more than to anybody else, the building up of the dietary of this institution, so that we have a palatable bill of fare. Mrs. Kellogg for quite a good many years now has not been able to give attention to that matter, but we have other very competent persons giving attention to the work, adding to it almost every day, making most important and valuable additions.

Q. What is the cause and cure of colds?

A. A cold is due to low resistance. The cure is to toughen yourself. Dr. Brown-Sequard had a way of curing his people of taking sore throat by getting cold. You know you take cold, and get sore throat by having the wind perhaps, blow upon the back of your neck. So he had his patient sit down in a chair, had a little water put on the back of the patient's neck, then had somebody stand with a pair of bellows and blow on the back of the neck, the first day half a minute, the next day a longer time, the next day a longer time still, and when he got them up so they could stand the cold wind blowing from a pair of bellows on the back of the neck for fifteen minutes, they were well; then they were discharged, and graduated. That is why we have the fans in the bathroom. If you will all go around there in the windy corner and let the wind blow on you until your skin is hard, and smooth and cool, you won't take any cold after your bath. Another suggestion-- keep the blood well in your feet. We have in the bathroom what we call a grass walk. As you go in there, have the water turned on, and walk back and forth in the grass walk on the east end of the swimming pool. A man told me today that he

to stop it.

Q. Was Mr. Post a charity patient when he was at the Sanitarium?

A. No; he paid his bills; and he got a full return for what he paid. Mr. Post came here a very emaciated, a very weak and feeble invalid. His wife,--not his present wife but his former good wife, pushed him around in a wheel-chair, made sunshine for him, tried to cheer him up; but he forgot about that after while. I have nothing to do about that, however; but this good woman would tell you, if you saw her, that Mr. Post got marvelous improvement here in this institution, that he built up until he was so proud of himself he used to walk down town and show himself all about to the merchants down there, to show them how wonderfully he had improved; and he was the most strenuous advocate of Battle Creek Sanitarium principles that we have ever had in this institution, and was one of the most grateful patients we ever had, but some business reverses that had been threatening him for a long time came upon him and completely floored him; his very last hope of saving his real estate business down in Texas went to pieces, and he was worried to death about it; and he began to lose his appetite, and he lost flesh, ran down, and kind of gave up. But his wife did not give up. She was one of the grittiest women I ever saw in my life; she just hovered about him, cheered him up, brought him in to see me and I tried to cheer him up; and she said to me again and again, "Doctor, there is nothing the matter with Mr. Post in the world, but he has just got the blues. If he would stop writing these business letters, he would be all right; I know it." And he would say, "you just keep still", but she would not keep still. She told me the truth. By and by Mr. Post's exchequer gave out completely. I am telling you these things because Mr. Post has taken particular pains to send out several misrepresentations in regard to this matter, so I am taking the pains to tell you the truth. Mr. Post left the institution because he hadn't any money left to pay his bills, and that is the only reason he did go away.

He had a farm down in Texas, and he offered us the farm if we would take it for a year's treatment. We investigated the farm and found it was not worth paying taxes on,--nothing but a sand heap; it had not raised anything in several years, and the taxes had not been paid. So we said to Mr. Post, "We won't take your farm, but we will allow you to stay here at a very low rate, and you can pay the balance some time when you get better." But Mr. Post was actually at the end of his rope. He did not say very much about it--we knew that afterwards,--and he had to adopt the most humble means of making a livelihood for a short time, and his wife helped to support him, I understand. He went outside the institution to live in a little cottage, and he got along some way; and he ran across a mind cure doctor who made him believe he was well, and he was well at once. But the mind cure doctor does not cure auto-intoxication; the mind cure doctor can not kill germs. He can make a man think for a little while he has not got any germs, but the germs keep crawling about there just the same. Mr. Post had been cured, made well, strong, hearty, rosy, plump, rosy checked,--thoroughly restored to health; but he went down under mental depression, and came up when the pressure was taken off. I would never have said a word about the matter except that Mr. Post every now and then has an advertisement in a newspaper publishing some falsehood about the institution here, or his connection with it, or me or some one else; but I pay no attention to them unless I am asked, and whenever I am asked I tell the truth.

(Applause.)

Q. Is alcohol necessary in the practice of medicine?

A. No, it is absolutely unnecessary. Dr. McCormack, one of the leading physicians of Kentucky, and a lecturer for the American Medical Association, stated at a meeting of the Committee of 100 held in New York City, at which I was present, some months ago,--he said publicly there,--"I am thoroughly convinced that alcohol is entirely unnecessary in the practice of medicine, and that it ought

to be abolished from materia medica and left out of our literature." Dr. McCormack is a pretty good authority, and has had an opportunity to study this ~~xtm~~ subject thoroughly, and he agrees with hundreds of other physicians who are carrying on their practice entirely without alcohol; and this institution has treated 100,000 patients, and most of them successfully, without a drop of alcohol. We never use it. (Applause.)

Q. If, according to your chart, the food leaves the jejunum free from germs, will you kindly explain to us how they arrive in the ileum?

A. It is because they get in there, and some of them remain there, continue to thrive and grow just as the ~~whits~~ weeds when they once get into your garden stay there. You do not have to plant weeds, you know; when they once get in there, they thrive.

Q. What causes one to start out of their sleep with palpitation of the heart and a choking sensation of the throat.? Although very sleepy, this will occur many times during the night?

A. Well, it is probably indigestion.

Q. What causes regurgitation of food and water?

A. That is water brash. It is due to an irritable condition of the stomach. It is due to an excessive secretion of gastric acid; that is the cause; and this excessive secretion causes a spasm of the pylorus. The lower end of the pylorus, or the esophagus, rather, shuts up so that the saliva is swallowed down into it, retained, and does not go into the stomach, so in the morning when you wake up, perhaps there first of all comes up a large quantity of clear, tasteless liquid,-- simply saliva you have been swallowing which has never entered your stomach because of spasm of the esophageal opening, the lower opening of the esophagus. That is the more recent explanation, and I think is the right one.

Q. What fat will the skin best appropriate to its use?

A. The skin will not appropriate fat; it makes its own fat and it remains

on the outside of the skin and needs to be washed off now and then. The skin will not absorb fat to any appreciable extent.

Q. Why do you cut out buttermilk? Some prefer it to yogurt?

A. Because we can not get it twice alike, and it is full of barnyard germs. Yogurt has all the good properties of buttermilk and is sterile except for the friendly germs; and it can be made alike, uniform, and is in every way better. The bacteria or germs found in buttermilk are feeble germs, not able to accomplish as much as the Bulgarian germs which are found in yogurt.

Q. Outline diet and treatment for hyperacidity.

A. Eat a considerable amount of fat; chew the food thoroughly, and take dextrinized cereals.

Q. Is corned beef the least harmful of all meats?

A. It is perfectly harmless as long as it stays in the barrel. It won't do anybody any harm at all; but it is a bad thing to go into your stomach. It makes autointoxication and other things, and is difficult to digest. I am not going to recommend any meat at all. We can get along without it, and we are better off without it.

Q. What will relieve mosquito bites?

A. Mosquito bars.

Q. What will be the effect of small doses of arsenic?

A. Another word about mosquito bites. Hot sparging with a little hot soda water will afford relief, but the best of all perhaps is menthol linament. That will cure them.

Q. Please say what a young man should eat who has liver trouble, also the treatments he should get.

A. A man that has got liver trouble should eat good, Sanitarium food, plenty of fruit; take care to keep the bowels moving properly; take care not to eat too much fat, animal fats and animal food. ~~Swiss milk~~ Eggs, meats, and

animal fats--those are the things to be avoided as much as possible,--meats entirely, and animal fats taken sparingly. Biliousness so-called, or liver trouble, is not in the liver at all; the whole trouble is in the stomach and bowels, and chiefly in the colon. These suggestions are good for a young woman too.

Q. Are the articles for sale at the stand between the lobby and gymnasium healthful? What is in other candy that makes it unhealthful?

A. Yes. I do not know of anything that is sold at the ~~bank~~ food stand that is not healthful. (Cane sugar is the unwholesome element of candy. Sometimes there are paints, dyes and things of that sort, but the really bad element of candy is cane sugar. But you say, "I get pure candies." Then you get cane sugar. Cane sugar is the thing that is harmful. More than an ounce or two of cane sugar is certain to make mischief. It does harm; produces harm and irritation. A ten per cent solution of cane sugar is irritating; whereas malt sugars are not irritating.) The candies at the palm garden stand here are made from Meltose or malt honey and do not contain cane sugar except a very little bit in the coating of the chocolates. The centers are malt honey and are entirely harmless and wholesome.

Q. Why do some people have too much acid in the stomach and others scarcely any? What is the cause and what the prospect for a cure?

A. The stomach is irritated by beefsteak, by deficient chewing of food, by eating too much ~~like~~ sweets.

Q. Is cod liver oil better than olive oil?

A. No, it is not so good. Cod liver oil contains the extract of rotten cod livers, and that is the only thing it has that is not in good olive oil or any other good oil. It is objectionable on that account.

Q. A person who feels always weak and tired, has no appetite to eat after a night's sleep, never feels rested in the morning, is not able to do any work without getting fatigued and he feels all the muscles aching, perspires so freely

and gets stiff--what is his trouble, and what is the remedy?

A. He has got autointoxication, sure. He has intestinal autointoxication, and if he will take care to get his colon into a thoroughly healthy, clean condition, drink more water, live outdoors, take more exercise, lives on a thoroughly antitoxic diet, he will feel entirely different. The time will come when he will feel like a spring lamb when he springs out of bed in the morning.

Q. Is clover tea beneficial? Will it cure cancer?

A. No.

Q. Will baked potatoes, whole wheat bread, some malt honey on latter, injure a 15 months old baby?

A. No, not if the baked potatoes are thoroughly crushed. The baked potatoes must be thoroughly mashed, made thoroughly smooth, and all the lumps should be gotten out of it. Unless it is thoroughly mashed, made perfectly smooth, it will make trouble for the baby. The principal trouble with bak potatoes is that they are not thoroughly chewed, but swallowed in lumps; otherwise they are the most easily digestible of all starchy foods.

Q. What would you feed to a healthy child of this description?

A. Feed such a child wheat flakes--they are better than corn flakes,--rice, malted nuts, fruits of various sorts, banana pulp put through a colander is a very excellent food for such children,--and some cream, perhaps.

Q. Is catarrh a curable disease? If so, what treatment would you recommend?

A. Yes; it sometimes needs a surgeon to remove polypi or some other growths from the nose.

Q. What is neurasthenia?

A. Autointoxication,--another name for it.

Q. My stomach has no free hydrochloric acid and test shows about .038 total acidity and acid combined chlorin .018. Can I be cured?

A. I am sorry for you. A person whose stomach will not make hydrochloric acid has got to have trouble all the rest of his life; that is, if his stomach is worn out so it will no longer make hydrochloric acid, he has certainly got to have trouble. He must take the greatest care possible. I should advise that person to take yogurt at every meal. The acid of the yogurt will to some extent take the place of the acid of the gastric juice, so will afford him some protection against the bacteria which are always swarming, ready to make mischief in his alimentary canal.

Now, I want to make a little announcement. Next Thursday night I am going to tell you how to live the simple life. I told you a little about it the other night, but next Thursday night we will have some pictures and finish up telling you how to live the simple life. Next Sunday night I will talk to you some more about divine healing, about the sub-conscious mind, and some other questions of interest.

HELPERS' MEETING

At the Sanitarium Gymnasium, Wednesday, September 2, 1908, at 8:00 o'clock P. M.

Eld. Tenney: We have with us tonight Dr. M. G. Kellogg who has for many years stood by this work, a brother of our own Dr. Kellogg, and who has been instrumental in building up the health and sanitarium work not only in this country but also in other countries. Dr. Kellogg was in Australia during the building of the Sydney Sanitarium and had the work of the putting up of that building on his hands. He is not only a medical man, but he is a builder, an architect as well, and carried (as I very well know, for I was on the ground myself) the principal burden in putting up that very creditable building which, as some of you have perhaps seen the picture of it, is out ~~an~~ twelve or fifteen miles from Sydney, on high ground overlooking the city,--a most beautiful situation, and a beautiful building. The burdens connected with the putting up of that building, almost without funds, as you might say, without resources, with a very small constituency, and under the most trying circumstances, forms a chapter that perhaps never will be read in this world's history; but God knows all about it, and I know that Brother Kellogg went forward with that work under circumstances of the greatest discouragement and the greatest difficulties, and yet with the blessing of God was able to establish it there and see the building well and comfortably finished before he completed and laid down his work.

Dr. M. G. Kellogg: I am pleased to meet this company of workers, fellow-workers in the cause of Christ. Whoever engages in the work of uplifting humanity engages in the work of Christ. That was the object for which He came into this

world; I understand that it was for that purpose that he gave his life--that he might uplift humanity and bring them near to God that they might through him become the children of God. I suppose that those who are here before me this evening are believers in the doctrine that I have just enunciated--that Christ came to uplift humanity, and that is the reason why you are here--is because you wish to become co-workers with him. You wish to become acquainted, or to become better acquainted than you have been heretofore with the principles for which he stood and for which he labored. This institution has been established in the Providence of God, for the purpose of ~~is~~ upholding those principles and presenting them to the world. It was my privilege to become acquainted with those principles in early life. Fifty-five years ago the Lord called me to the work of the ministry, preaching the gospel of Christ. I engaged in that work for a time, and I found that the presentation of what is considered generally as the theological part of the subject was but a branch, but a part of Christ's work. When I came to read the story of the life of Christ and his divine mission here upon earth and work among the poor, I found he went about doing good; spent his life, his time and his strength in trying to uplift humanity, and I became satisfied that there were principles of the gospel of Christ that I did not fully understand, and I sought earnestly to obtain an education concerning those principles. I believe I am the very first who was connected with the people for whom I was laboring, that made it the object of their life to become acquainted with those principles, and to seek a scientific education on the true healing art, to know how to go out and benefit my fellows. In 1868, forty years ago, I commenced the practice of medicine, and I found that it was not simply to go out and administer drugs that the Lord wanted to have me do, but he wanted to have me present principles of truth and of right living before the people in such a manner that they might avoid the diseases to which human flesh was supposed to be heir, that they might escape the evils of

this earth and that they might prolong their lives; and I felt that he would have me present those ideas to the people; in other words that I should engage in an educational work as well as the work of healing the sick. Now, this institution had been established; I was residing in California at the time,--it had been established a year or a year and a half before I commenced my medical work, and it began as a very small affair, like a seed planted in the field; and it began to sprout and grow up, and I have seen it grow from the seed that I was to plant here in Battle Creek until it overshadows the entire earth, and its fruit is dropping in every nation upon the face of the earth. The principles for which this institution stands have gone out far and wide, but they have called for great sacrifice and arduous labor on the part of those who stood for those principles. I remember very well that in 1877 over in California the proposition was made that we establish an institution there similar to the one that is being conducted in Battle Creek. I had the privilege of founding the St. Helena Sanitarium. I not only had the privilege of going in there and being its first physician and establishing it, but I had the privilege of taking hold of the pick and the shovel with my own hands and grading a road up the side of the mountain over which I could haul the timber upon the mountain side where we built the institution; then I had the privilege with my own hands of going down and hewing down the side of the rock, which was lava formation, or rather volcanic ash formation, cutting out and making plates for the institution to stand upon. Then I had the privilege with my own hands of framing the building and putting it up and finishing it off. I made every window frame, every door frame and set them up, and built the stairs and did the principal part of the work. I had the ~~pleas~~ pleasure also, after it was opened for patients, to see it filled up within two weeks to overflowing; and we had to put up tents for our helpers to sleep in. The time had come when that portion of God's harvest field was ripe for the reaping, and what God wanted was laborers to step in and do

the work; but we had very little means. There were four of us who established it with money--one \$4000, another one \$1200, another one \$1000, and another one \$1500. The \$1500 came in afterwards, however; but that was all we had to start with, and the result was that we had to work very hard. In the morning at daylight, I would take my pick and shovel, or the tools, and go out and work until it was time to give the patients treatment. Then, with my own hands, without a nurse to assist me, I gave the treatment; and when the treatment hour was over, then went at it to work again, and so I worked all summer long. I remember one of the patients came to me one day, and she says, "Dr. Kellogg, you love to work the best of any man I ever saw." "Why", I said, "I have worked all my life; that is what God intended man to do,--that he should work, labor with his hands, the thing that was good; labor with his mind, with his brain, and do all things possible for man to do to help forward his work. Well, I saw that work enlarge. It has got to be quite an establishment, now. Then, afterwards, the Lord in his providence saw fit to call me to the islands of the sea, and I went out with the same principles for which this institution stands and for which you are working. And I had the privilege of introducing these principles among the natives, giving our methods of treatment. I visited them in their houses.

I remember when the vessel on which I reached one of the islands got near the island, word went ahead that there was a doctor aboard the ship, and when we came to our anchorage in the evening, just at dark, and I heard some one speaking in the native tongue--I did not understand what they were saying, but I looked over the side of the vessel, and there was a canoe with three natives, two native men and a native woman. The woman was a large, tall framed woman, I suppose she was probably six feet tall, and as they came up to the boat, she caught hold of a rope, swung to the boat, put her feet against the side of the vessel, pulled herself up, and she explained in her own language what she wanted, and repeated her exclamation. I said, "What does she mean?" Dr. Read, who is here now,

happened to be on board the ship, and he said, "She says, 'Doctor, Doctor, come quick, come quick; my father is very sick.'" Well, I went out, a mile and a half, after dark, and I found her father, a native, lying on a pallet of grass, and he had injured his knee; his knee was swollen, and it needed opening to let the pus out. He was a great sufferer. I gave him the treatment that he needed, and went on and left him. I do not know whether he recovered or not, but continually there were cases of that kind occurring.

I had the privilege of going to other islands, to many islands. This was in the Society group, and we always introduced these principles. We tried to hold up the principles of the gospel of Christ as an uplifting principle, to elevate mankind, to bring them nearer to God, to place them in a position where God would have them be, where they would be free from disease and could avoid its ~~curse~~ curse. We tried to teach them at that rate, and we had some success. It was my privilege to assist Dr. Braught in the establishment of a sanitarium in Samoa. I had the privilege of helping him from the start of this building until he got it completed, assisting betweentimes in his surgical operations, of which he had many, and helping to get the work well established there. I had the privilege also of going over to the Tongan islands and laboring there. Many times I would be called to go eight or ten miles to see a patient. First I had to go afoot. Afterwards I secured a horse; and under great difficulties and under conditions of considerable poverty, lack of means, at times it seemed almost impossible to obtain food. I remember one time I was turned out of a rented house where I had just got my work well established there, and the only place I could find to live in was to go into a native hut there where there were three rooms in the hut, and I found to my surprise, one day, as I was writing a letter to my brother, The Doctor here, on my typewriter,--found several young men and women natives looking over my shoulder. I inquired who they were. They were the sons and daughters of the man who owned the house in which I lived; and there were

thirteen in that family--eleven children. We had three rooms, of which myself and wife occupied a room and a half, and he and his small children and his wife occupied one room, and he and his entire family had the privilege of the room of which I had the privilege also. We did a work there, and afterwards I went to Australia and helped to establish an institution that was built under the most trying circumstances. Eld. Tenney referred to it. We commenced work, and when I asked how much means they had with which to do it,--not a dollar in the world over enough to pay their ~~debt~~ debts, they said. "Well, how do you expect to build this institution?" "Well, we have got to have an institution here, and we are going to move out and try to build it." They had not means with which to procure the plans for the institution. I told them I would make the plans for them. I did so; they were accepted, as Eld. Tenney told you; it is a beautiful building. They accepted the plans and then they asked me to take the oversight of the building, and you may judge of the sacrifice that had to be made, the hard labor, the planning and the earnest prayers that had to be offered to God for help. But we hadn't any means. But I had the privilege in the course of months, to see that building, builded at a cost of \$37,500, and to see it filling up with patients before I left; and a good work is being accomplished. Now, I want to say to you in conclusion, my friends, that the work in which you are engaged is a part of Christ's work. It is bringing men and women near to God; it is placing them in a position where God's spirit can operate on their hearts and do the work that he wants done, of purifying them, and making them clean people. And my prayer is and has been for this institution that God will make it a powerful institution for good in the land; and my prayer for every one connected with it is that God will make them co-workers with himself in the work he is doing for humanity. May God bless you.

Dr. J. H. Kellogg: We are not going to have a long meeting tonight, so

I hope none of you will feel too tired to remain a few moments. I I am glad we have had an opportunity to listen to my brother, Dr. M. G. Kellogg, and I presume he has told you that he was here forty years ago, forty-one years ago. This is his third visit since, I think. He was here for a year or two; then again for a few months; and now he has come again to remain a little while; so he is almost as much a stranger to me as to you, except that we have kept in close touch all the years by correspondence, and I am glad to have an opportunity to hear him tell you about his experience in building sanitariums. My experience has been connected with one Sanitarium, but he has been traveling over the earth, building sanitariums wherever he went; and he has himself profited by it; he has been through all sorts of hardships and adventures--he has not told you about that; but he could talk to you for several weeks, and tell you many interesting stories of adventures of all sorts on sea and land, as a pioneer in the great West, traveling all the way across the continent on foot, a pioneer. He visited California in the early days as a mariner, and the islands of the sea. But he is a demonstration in himself of the value of these principles, having been practicing them now for forty years, and he finds himself at seventy-six years old still a young old man. I shall be very glad if I am as strong and hardy as he is when I am twenty years older, when I will be just his age. I was thinking--I was listening to his talk, and I was thinking as my brother was speaking of it,--forty years ago, if the whole American people could have been induced to take up these principles and make a practical application of them what a splendid thing it would be, what a wonderful nation we would have had. If 100,000 people could have been induced, or 20,000 people, forty years ago, to accept these wonderful principles, what a marvelous result the world would have seen. There was a small body of people who were interested in starting this institution forty years ago, the Seventh-day Adventist people had such an opportunity; they got hold of these principles, and the whole

people were thoroughly inoculated with the idea, and for a few years they ~~fast~~ followed them closely; then they backslid and practically gave the principles up. But here in this institution, and at the institution at St. Helena which my brother founded some thirty-two or thirty-three years ago, and in a few other places, the principles have been kept alive, have been maintained, and a propaganda has been going on out in the world. So today we find there are some who have profited by these ideas and principles. My father, as I am sure my brother very well remembers, considered me such a puny boy I was scarcely worth raising. I remember how that on his death bed some twenty years ago, twenty-eight years ago, nearly, now, he said to me, "John, if I had known you were going to amount to anything, I would have taken more pains with you." But I didn't amount to very much as a boy, and I have not amounted to very much as a man; but what I have done in the world and what I am in the world I owe entirely to these splendid principles. When I look about here and see so many young men and young women coming into this institution, and see their opportunity to learn these principles while they are young, especially when I see the little boys and girls who have been born into this splendid faith and think what a splendid opportunity it is, what a splendid future they have, I am glad to look around and see these boys and girls, vegetarian boys and girls who were born vegetarians, and born in the right way and have the splendid opportunity they have to go right. When I was fourteen years old, I had become a confirmed invalid. Nobody thought I would live until I was ~~forty~~ twenty years old, and I was so pale and puny I did not grow any after I was twelve or thirteen years old--I don't think I grew half an inch. I was such a puny boy nobody ever thought I would grow up to be of age. My father often told me he never expected me to become of age. I was brought up with that faith, that I was going to die very early; so I made plans for that; but my plans did not turn out that way; and I have been the most astonished man all my life to find myself alive at 25, and at

thirty, and forty; and here I am nearly 57 years old, and still alive and in better health than I ever had in my life before. So I know I owe it all to these principles, and I am so grateful I can not keep still. I have to talk to everybody I come in contact with about the glorious principles we have--these glorious facts; and here is Dr. Geisel who has been out in the world making everybody hungry for these principles. And here is this letter I am going to read to you, I got from a business man a day or two ago who came here a short time ago; and I want you to see the impression made upon him here. This gentleman is a prominent business man in Chicago. He is a representative there of a very wealthy corporation, and he writes this. He does not address it to me, but to the whole Battle Creek Sanitarium; so that means to you.

"After nearly a month of sojourning and treatment in your hospitable retreat, I am in a mood to write you a word of grateful recognition. You need no praise from me, for your work speaks for itself; but I should feel that I was withholding something that belongs to you if I did not tell you of the pleasure, the betterment and the content I have received from being under your care. The longer my stay there, the more I realized what a wonderful and humane industry you are carrying on. It was a constantly interesting study and surprise. From the singing of the hymns; the consistent recognition of the Seventh Day (though I do not follow you in that doctrinally,) the sweet and kindly spirit that was manifested on every hand up to the skillful and tireless treatment given to every ailment, I felt that an intelligent Christian spirit pervaded all that was done and in yielding to such gracious insistent conditions I was greatly helped and healed. Having said that in a general way, let me speak more specifically of the valued services of Dr. _____, under whose care I was placed. Other members of your staff may be just as efficient as he, but among all the doctors I have known and received treatment from, none ever won my confidence and esteem more

than he did. From the first he seemed the master of a difficult set of conditions and with consummate skill he carried his scheme of treatment to its ultimate, the result of which proved his wisdom and untiring vigilance. He has my sincere appreciation for his firmness in keeping me in harmony with what he was trying to do (that was no small work) and in following up his work by thorough and constant knowledge of what I was doing to either hurt or help his delicate task. He certainly deserves the praise bestowed upon him by me and by other patients with whom I talked but who may not be so gratefully disposed as I am to give him credit in this way for his successful service.

Of the Sanitarium as a whole I feel a very high appreciation, and to each individual with whom I came in contact I would like to be able to extend my thanks.

Very cordially yours,

C. R. Stouffer."

"I do not mention the doctor's name, because I believe the gentleman would have had exactly the same impression from every doctor in the house if he had been under their care. This is only an expression of what hundreds, or thousands of people, I might say, are feeling every year. We have some 6000 or 7000 people coming here every year, and what a splendid thing it is to be engaged in,--what a splendid enterprise to be connected with--an enterprise that causes people to feel like that. Now, that man has been looking back here to this institution with those grateful feelings in his heart, and he will continue to do that as long as he lives. I met as I was coming into the door here, a man who said, "Doctor, this is the fifth time I have come here, and I have brought two others with me; so you see I do not forget what you did for me." I see one of our old nurses sitting back here, Mrs. Hanson, who was here a number of years ago and has been sending a string of patients here ever since she went away. Why? because she believes these principles. Now, we have something great here. It is not something that is simply a fad, or a whim, or a fancy, but we have great foundation principles

that are old as the world itself, that have been buried and forgotten in the ignorance and the darkness that have accumulated through the ages, and now these principles are coming out and shining with marvelous brightness, every year a little brighter; but during these forty years, a large part of the time we worked under a cloud of unpopularity, and scorn and stigma. I remember very well just twenty years ago--for twenty years ago there was an effort made to cast me out of the county society of this Calhoun County. They did not quite succeed; so it was carried up to the state to turn me out of the state society. What for? What crime had I committed? I was endeavoring to establish a new school of medicine known as rational medicine. I was endeavoring to found a new school of medicine known as rational medicine. The men who brought this charge evidently had no conception of rational medicine. They were practicing empirical medicine, and they did not believe in rational medicine; they did not know what it was. They were willing to go on with their pills and their decoctions and did not want anything to do with the rational medicine. I pleaded guilty. I was not trying to found a school, however, but that I was working for rational medicine, and rational medicine was a thing everybody ought to be working for. I did not yield. The effort failed to cast me out of the County society, but it only failed by one vote, just one vote, and that vote was mine. I voted for myself to stay in. And that is the only time I ever did vote for myself, but that time I thought it was necessary, because the meeting was packed against me, and I knew that I belonged in. I did not propose to be cast out, so I took counsel with myself and voted for number one to stay in. When the matter was brought up before the State society, a more intelligent class of men were ready to take the thing under consideration, and when these charges were read, and they saw the proofs brought against me, they fairly scouted the whole thing, and the result was the charges were fully and unconditionally withdrawn; and the next year I was unanimously elected president of the Calhoun County Medical Society. What makes me think of

it and the reason why I happen to mention it just now is that this forenoon I was called up by a telephone by an officer of the county society, and he said, "We are going to have a great medical meeting in Battle Creek in a short time, and we would like to come up to the Sanitarium and have a banquet. Could we have the privilege?" I said, "By all means come." Now, I just mention this so you will see, not how we have changed for we have not changed; we have not gone back on anything; we have been advancing all the while, making steps in advance all the while in the direction of rational medicine and progress and improvement, but the medical profession has changed; the world has changed; there has been such an ocean of light flooding the whole world upon these principles that the whole world has become enlightened more or less; and at the present time nobody is opposed to the things we are doing here in this institution. No intelligent woman, no intelligent physician anywhere--half the patients we have here are sent here by physicians. More than 4000 doctors are sending us patients here continually. That is really why we are full--there are so many doctors working for us. There is not a day but some patient comes to me and says, to me, "My doctor sent me here. I was talking with several patients this evening, and one lady was in Chicago and said she was going home, and her doctor said, "No, I want you to go to the Sanitarium, go up to the Battle Creek Sanitarium and build up." Every single day letters come to me saying, "Can you help this thing or that thing? I want to send some patients to you;" or letters of introduction come in and say, "I am sending this patient to you because I think that is the place for them." So you see the world is advancing. Now, then, we ought not to be ashamed; we ought not to be discouraged or ashamed that we are in this thing. I am not. I am proud that I have the privilege; and I will say a little more,--I am proud that I had good sense enough to get aboard this ship forty years ago, or thirty-five years ago; and I am proud my brother was aboard the ship ten years

before I was, that we saw the truth in these principles. And Eld. Tenney has reason to be proud that thirty years ago he laid hold of these principles and has been following them all these thirty years, and that he has profited by it. I owe everything I am, as I said, and everything I have been able to do in the world,— I owe to these splendid principles. Now, any man or any woman that will espouse great truths like these, great, fundamental principles and stand by them, they will make something of him, they will do something for him, they will enable him to be of service in the world. I got a letter just the other day from a poor fellow that came here from prison, came out of prison and came here. He seemed to be a reformed man, seemed to be sorry for what he had done, promised not to go back into his wicked ways; so we took him in and gave him a chance. After while we took him into our trainingschool. I had a letter from that man the other day, and it did me good to get that letter from him. He came into our training school for nurses, worked his way along up, went to medical school, got a medical education, and today that man is a physician in a large sanitarium, and he is practicing these principles, representing them. And he is doing pretty well, to. I don't think there is anybody here that knows him, but I know him. He has not been connected with the institution as a doctor, never was; he was only here a short time, got hold of the principles of nursing, and went out, and he has gradually worked his way up, and today he is standing straight for all these principles. See what these principles have made of him. See what these principles have made of a jail bird. And I might tell you many other stories similar to that one. I was down to Chicago one day, and I got a telephone message; one of our workers telephoned me and said, "We have got a boy here that we caught here a few weeks ago, and we took him in, and we have kept him here, and it seems as though he would make a man, would amount to something if we could only keep him; but he is getting the tramp fever; that is on again, and he is going. We have

done all we could to keep him; we have tried to get him to stay here until you got here, but now he is off, and he is going to take a certain car, going down the street, down into the city" (it was about four miles from there), and I got a telephone message, and I had a watch set on the cars, and when that car came along, I had that boy spotted and laid hold of him. And I took him in and talked to him and prayed with him too, and finally I brought him up to Battle Creek and sent him out on a farm, kept him there all summer, just had him watched, corralled, herded like a flock of sheep to keep him from running away. Now, then, I hung on to that boy, sent him to school. The last time I was down to Chicago I met him on the street. I said, "How are you, John?" He is getting along fine, had just been appointed an assistant professor in one of the medical schools in Chicago. Just think of it. That boy had been a gambler, had been in prison; he was a tramp, as tough a case as you ever met in your life; but he was changed; he was changed. He is one of the assistants--not a full professor, or a full assistant professor, perhaps, but an assistant in medical school, and he has accomplished something. Everything in the world that boy has accomplished, he owes to these principles. That boy would have been absolutely ruined if he had not got hold of these principles. That is what attracted him. He was completely stranded, never would have amounted to anything in the world. I love to see what these principles are doing for him. I have done a good deal to help him. I don't know as he has done anything for me, and I don't want him to. If he will stand up for these principles, that is all I or anybody else ought to ask of him. But I have talked longer than I expected to talk. I did not notice Dr. Geisel was here.

Dr. C. Geisel: I do not want to say very much, but I do want to say a little. Dr. Kellogg likes to tell us when we go out into the field that the biggest business the Battle Creek Sanitarium has on hand is to save decent folks. Tonight he has been telling us of the power of these principles for another kind of folks. Now you wait a minute. I know the power of the principles for decent

folks, and I want to give you one of two of what seems to me rather striking instances that we have run across within the last two or three weeks that we have been out. The manager of the educational department of Mountain Lake Park, one of the largest Chautauquas in the country, a man by the name of George Pierce, a retired minister, stated after a lesson in which we had spoken about the poisonous effect of meat and the possibility of bringing diseases into our own bodies by the use of meat,--when we came out from the lecture he said, "Wait a minute, Doctor, I want to say something. You don't put it half strong enough. I have expended thousands of dollars to rid myself of my rheumatism. I have consulted an endless number of physicians." Then he said, "About three months ago I got hold of a little book called, "Shall We Slay to Eat?" and I cut out the meat, and my rheumatism is gone." I was rather glad to hear it, because he looked a dear, good man. And I said, "What have you been doing with your time since then?" He said, "Oh, bless me, I have been back in my church. For two years I had been away from my pulpit; I could not do anything for the cause of the Lord Jesus Christ, because I was all cramped up with rheumatism." He said, "Lots of souls in my flock were going to destruction because I was not there to look after the lambkins. Rheumatism got me, and I had to stand by the way and fool with that." And then he said, "Daily I pray the Lord God to bless that little book, "Shall We Slay to Eat?"-- Funny little book; some of you have seen it. Now that is one.

Here is another. Up at Miami Valley we met one of the teachers of that wonderful, wonderful, wonderful woman, Helen Keller, one of her instructors, one of the women who had stood by that girl with wonderful brain shut up in an absolutely--I was about to say tight box, ~~could not see~~, could not see, could not hear, could not speak, yet a normal brain in there and through all those long years to follow the first eighteen months of that child's life, she has struggled to free a normal brain from its imprisonment; and her teacher said with tears running down her face, "Dr. Geisel, Dr. Geisel, if you had been there when our

baby was a little baby, and had taught these lessons of domestic science, she never would have gone through that awful struggle for mental freedom." And I said, "Pray tell me why!" She said, "She was a normal child until she was eighteen months old, could hear, could see, could speak as babies speak. Then there came an attack of indigestion followed by brain fever, and the indigestion was directly traceable to ignorance on the part of those who prepared her food." Big things? Prevention is better than cure any time of day. If you prevent a soul from making the mistakes that put them away down there in a cell room, you have done something for the cause of righteousness, for "the bird with the broken pinion never soared so high again", and it is true physically as well as morally. Prevention is much better than cure. That was to me a wonderful message from that instructor of Helen Keller's,--that ~~that~~ this wonderful, wonderful message of healthful cookery, as put forward by the Battle Creek Sanitarium,--if it had been given to that family, that wonderful brain would never have been imprisoned, and there would not have followed the wonderful story her life shows.

But here is another wonderful thing. In a nurses' class gathered at eight o'clock in the morning. One of the members of that nurses' class was as bright and happy as she possibly could be. I said to her, "it strikes me, you are wonderfully pleasant." "Yes," she said, "I have something to be happy about." There were ten or fifteen minutes before time for the class to open. Mrs. McNally could not keep still. She says, "Why don't you have a testimony meeting, Doctor?" I said, "All right, Mrs. McNally may begin. The class is going to have a testimony meeting." And she was quick to rise to her feet, if you please. She said, "I want to tell you something. We had diphtheris in our neighborhood this winter, all around us; everybody had diphtheria. Somebody came to me and said, 'Mrs. McNally what are you going to do when it gets into your family?' And I said rather proudly,, 'It won't get into my family.' Well, but it did. A child awoke one morning with the unmistakable great patch in the throat, and the unmistakable odor, and by and by the temperature was away high the doctor came and the

takable odor, and by and by the temperature was away high, the doctor came, and the child was very, very sick. With a good deal of effort that child was pulled through, and two other members of the family contracted the disease", and she said to her good husband, "This has got to stop; this won't do at all. He would have been a better physician if he had prevented it spreading, and it would likely have saved the baby's life, for he can't go through with it." He said, "What are you going to do about it?" She said, "Well, you remember; I am going to hunt up that book I got at Chautauqua two or three years ago." And the book she hunted up--you have seen it,--the Home Hand Book; and she turned the pages of it until she came to the pages of diphtheria; then she treated diphtheria in those two cases in her family, did not call the doctor again, and both of them made a splendid recovery. And that was the testimony she was itching to give that morning in the nurses' class. Good enough. By the way, her daughter is one of our medical students. She came up to us last year in very much the sameway. That is not so bad.

Now, I have one more, and I am going to sit down. There are hundreds and hundreds and hundreds more. She came mincing across the ground three years ago, a fashionable--would I say, dream? Hardly that, and it is hardly a nightmare either; neither a nightmare nor a dream, nor yet a symphony in gray,--a wonderfully accurately or up-to-dately dressed woman in pink and gray, and heels about that high (indicating), with a waist--I could span it, I guess, with my fingers,--mincing across the grounds, wonderfully, delicately put up in every possible way; and for a lesson on dress she came to me, and said, "Ah, I want to go down to your tent if I may; I have always been interested in this question of dress." yes, I thought she was, myself. She said, "I would like to see some of the garments you have spoken about", and I thought I should determine to show them. And she came. And then when she came in--we were in a log cabin, not a tent; so when she came inside the little cabin door she herself pushed the door to, then she took her

handkerchief and rubbed the color off her cheeks, and she said, "you thought I looked pretty healthy, didn't you, but I don't; that is put on." And I thought to myself there were several things put on that might do well to come off, but I did not say very much, because I thought it would not do; so I let her do the talking. She said, "It will all come off, every~~h~~ bit of it, and I am a sick woman. I don't know what I am going to do to get out of this awful physical condition I have gotten into", and inside myself I had been saying, "Get out of your corset first, then you will get out of your sickness afterwards." But I didn't need to say that, for she really was more intelligent than she appeared to be at a glance across the woman. And she said, "My physicians tell me my kidneys are afloat; I have a floating kidney; that my stomach is prolapsed; ~~and~~ I am a wreck, Dr. Geisel, and I wonder if anything can be done for me." Then we took a manikin which Dr. Kellogg was kind enough to provide for us some three or four years ago, and I showed her the normal position of the internal organs; then we took that old, old outline chart of ours and showed her the misplaced organs as represented by the outline chart, and pretty soon we got somewhere near the correct things, as the Battle Creek Sanitarium helps us to put out, you know--the freedom waist, and the simple arrangement of clothing. That was three years ago. We went back to that Chautauqua this year, and coming toward us, as we came in the gate~~s~~ that arched gateway of this splendid campground of some 200 acres of woods,--coming towards us I saw was a rollicking healthy woman, a picture of health, and it would not rub off either, and she had in her carriage trundling before her a jolly little baby of about eighteen months' age, one of the healthiest looking boys I ever saw, a perfect little rowdy, healthy from the tip of his toes to the top of his head. We drove through the gateway to the grounds, and she stopped that trundle buggy, looked up into the carriage, and exclaimed pleasantly, "You don't know me?" And I didn't know her. I didn't think I had ever seen her before,

and when I said, "I don't think I have ever seen you before, Madam," ~~she~~ --she weighed less than 100 pounds, and now she weighs 140, thank you, and she is still wearing healthful dress, and attributes every single bit of the joy of perfect physical health, of the normal mental poise and of her present peaceful attitude toward the Lord God Almighty, attributes every single bit of it to one lesson heard on the Chautauqua ground, and she had prepared a funny little poem which she sings to the tune of "Auld Lang Syne", a sort of praise or benediction upon the Battle Creek Sanitarium. She has never seen the place. She has never seen the place, but she ~~has seen the~~ is singing the praises of the Battle Creek Sanitarium when she has never laid eyes on it; and what did she get from the Battle Creek Sanitarium? She got health. She says she has to thank the Battle Creek Sanitarium for the joy of motherhood, and the splendid health of that beautiful eighteen months' old boy. And she could carry the normal mental poise; for she said to me that day in the log cabin that her physician had said he thought she was losing her mind; her mind was perfectly normal. That is not all she got. She began taking Good Health, and from Good Health she got on the track, if you please, of some other literature, and from some literature, I don't know just what, that she got from the Battle Creek Sanitarium, that woman read herself into faith in the Lord Jesus Christ. And one morning under the trees at family worship, Chautauqua worship, if you please, and the whole Chautauqua family gathered there under the trees to worship the Lord God Almighty, that woman gave her testimony; and she said, "When the books are opened up yonder, if I am asked how I came in, I shall have to say, "It was through the Battle Creek Sanitarium that I came to know my God and Saviour, Jesus Christ." And she added, "I have never seen the Battle Creek Sanitarium; I have just felt its influence." You are the Battle Creek Sanitarium, and you can make the Battle Creek Sanitarium influence felt that way, for you are a part of it; I am a part of it; He is part of it--up there (Pointing) (Applause.)

Dr. M. G. Kellogg: I would like to say just one word and that is this: that during all the forty-five years that I have been applying these principles to my own life, I have not had a single day of sickness from disease that incapacitated me from physical labor. And I owe my good health--I am 77 years old, nearly,--I owe my good health today to the principles that I have tried to follow during these years. (Applause):

v--9-10-8.

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HOW TO LIVE THE SIMPLE LIFE

A Stereopticon Lecture at the Sanitarium Gymnasium, Battle Creek, Mich., Thursday,
September 3, 1908, at 8 P.M.

by

J. H. Kellogg, M. D.

How to live the simple life is our subject tonight. We talked about this a week ago, said a few things, and tonight we are going to tell you a few things more. I have a little booklet entitled "The Simple Life" consisting of about fifty rules for living the simple life. I would like very much if every one of you would get a copy of this and take it home with you, and I will guarantee if you live according to it, you will not be sorry. You will find yourself making progress healthward steadily, not each day nor each week, but every month you will find yourself a little higher up; and every three months, and every six months, and every year, you will find yourself ahead of that.

I had a letter today from one of the most prominent business men in the United States, a man who has built up an enormous business. I am going to tell you who he is. I had a letter from Mr. W. D. Simmons, the head of the Simmons Hardware Company of St. Louis. Now, you can ask him, if you discredit anything I say, and he will tell you it is true. I have a letter from him. In it he said, "I am going to send a friend of mine up there to Battle Creek; I am sending him up there that he may get converted to the Battle Creek Idea and become as thorough an advocate and adherent to these principles as I am." Mr. Simmons was here last

year, just brokendown with hard work--well, not hard work after all; it was wrong diet, not knowing how to live, not knowing what to eat; he paid no attention to eating. He came and spent four or five weeks with us, and he got a start, and one of his principal lieutenants came here a little later to be initiated, and he told me that Mr. Simmons had more than doubled his efficiency. "Why", he said, "He is entirely another man. He is just going like a buzz saw all day long, and just as bright and active and as vigorous and cheerful as a man can be, just putting life and enthusiasm into his business every minute." Now, that is just what a man needs to be who is head of a great concern like that. Mr. Simmons appreciates this thing because it is worth dollars to him; it is worth hundreds and thousands of dollars to him because it enables him to keep up high pressure steam all the while, and to enthuse it into everybody in connection with his business. He sent the manager of the St. Louis part of his business up here to stay a week with us to get initiated. He was very skeptical when he arrived, but before he went away he was thoroughly converted. Mr. Simmons sent his wife and children up here so that they might get initiated, and they were thoroughly converted when they went home, and have adopted the whole Sanitarium idea in their own home. Now, you know Mr. Simmons to be a clear headed and a level headed man, and he looked at this thing from a business standpoint, and when he was here he was just going into everything from one end of the institution to the other; and when his wife was here, she went down into the cooking school right away to learn all she could about how to cook, to learn how to do this thing at home, for her sake, and for her children's sake, and her husband's sake. I am sure Mr. Simmons would not object to my saying what I have said, because when he went home, he got his great family of workers together, and he talked these principles to them; he is doing his best to convert them, because he wants them to become more efficient.

Another business man was here a little while ago, Mr. Kilpatrick, from

the West, from Nebraska. He is one of the great railroad builders of the United States. He and his two brothers were the superintendents ~~max~~ of the building of a large part of the Union Pacific Railroad, and they have built a great many railroads. Mr. Kilpatrick has been here a good many times, and the last time he was here he said to me, "Doctor, I will tell you what ought to be done. The Railroad companies of the United States ought to send their presidents and their vice-presidents and their leading men here to spend two weeks in this institution every single year. They could afford to send them here and pay their salaries and pay all their expenses, and I am going to take this up with some of the railroad presidents I know, and I am going to advise them to do that, and I believe they will." I told him I did not believe they would because they would have to be converted first; but he was so enthusiastic over what this thing had done for him and his family the last five years--for they have been following these ideas for five years or more now,--that he was very sure if he could only let them see what it has done for him they would want the same thing ~~for~~ done for all their employees.

I began telling you a little story the other day about the Rev. Dr. Hillis who came to see me about diet. I had a little talk with him, told him what I eat and what I did not eat. "Why," he said, "you don't say anything about beefsteak" when I told him what I had ~~break~~ for breakfast. "Don't you ever eat beefsteak?" "Never". I said, "Oh, no, I stopped eating beefsteak more than thirty years ago." He said, "Now, Doctor, don't you ever feel a hankering for a nice, juicy beefsteak?" "No," I said, "I don't." "Now," he said, "when I feel sort of weak, it seems to me as though if ~~I~~ nothing would hit the spot like a piece of juicy beefsteak; and I go and eat one, and it does; I feel better right away. When I eat a nice, ~~juicy~~ large, juicy beefsteak, it sets me up right off. I feel strength and energy I did not feel before. And you never feel any inclination for meat at all?" "Not the slightest," I said. "Why should I?" "Why," he

said, "I don't think there is anything very much nicer than a nice, juicy beefsteak." "Well," I said, "I can't imagine anything worse. Why should a man want to get down on all fours and gnaw bones with the dogs?" He said, "I never looked at it that way. And you never, then, really feel any desire for beefsteak at all?" "Now," I said, "look here, Mr. Hillis. If you were driving down the street and you saw a dead sheep by the wayside and a dog there gnawing the bone of that dead sheep, gnawing ~~its~~ one of its legs, for example, would you feel like going out and getting down alongside of that dog and gnaw another leg of that sheep?" "Oh," he said, "doctor, that is too disgusting to think of." I said, "What is the difference--whether you gnaw a bone by the roadside or at the dinner-table? What is the difference? If you should find a dead hen on your front porch, you would call a scavenger to carry it away. If you found that same dead hen around at the back door, you would have it taken in and cooked, and you would eat it. You would have it buried in your stomach instead of in the potter's field. Now, I have not the slightest desire to make a cemetery of my stomach." He sprang to his feet, and he smote his fists, and there was a fearful look upon his face,--"Doctor," he said, "Doctor, I am a fool! I am a fool! I have been a fool all my life, and I will never eat any more beefsteak as long as I live!" I don't believe he has tasted it since. I see every little while an article in a newspaper from him, and he tells young men how to be efficient, how to be strong, how to be well, to be able to do the greatest amount of work, and one of the things he always tells them is, "Don't eat beefsteak." He is preaching the doctrine of natural diet, and the simple life all the time, and doing a great deal of good.

Now, here are some rules about how to live the simple life. We will skip over the first part of it, for this only tells you the things we have been talking about--gives some principles. Now, I want to read some of the rules and give you the reason why.

1. Give attention daily to cultivating health. It will pay. Is there anything that will pay any better? I believe that nine tenths of all the business failures in the United States and in every other country are due to the failure of physical health. The man gets his blood clogged with poisons, and these poisons contaminate and paralyze his brain. His judgment is modified; he loses his keen sense, his keen ability, his keen business sense, his keen ability to weigh things. He can not make up his mind. Here comes a business proposition. He can not make up his mind what he wants to do. Why can't he? Because he can not marshall enough data before his mind at once; he can not get enough data before his mind at once so he can see where the preponderance is. He sees just one thing at a time. He can not take into his mental vision a large enough number of things so he can weigh them up and see where the preponderance is. He only gets them in succession, one at a time, one at a time; first one thing in favor, then one thing against; then another thing in favor, and another against, and he can not make a balance of the two. His brain is not keen enough to do it. Now, that is the trouble with the man. What is the real trouble? Beefsteak. Beefsteak is the cause of most business failures. There isn't a bit of doubt about it. Beefsteak, rotting in the man's alimentary canal, poisoning and contaminating it. It would pay him to give attention to this matter of health.

2. Make every reasonable effort to maintain intact and if possible increase the capital of physical and mental health. You can increase the capital. You can not only keep what you have got, but you can get more. You can build up health; you can fortify yourself against the evil day to come. You can build up resistance against disease. I was just talking to a lady a few months ago, and she says, "Doctor, cold weather is coming; I shall be leaving you pretty soon, going down to Florida where it is warm." I said, "It is the worst thing you can possibly do." "Why, I never can stand the cold weather." Cold weather is the best

best thing you have got. It is the very best friend you can possibly have. Cold air is absolutely pure, better than you can get in summer time. That is what makes the brighter fire on the hearth--the pure air. The same thing is true of blood filled with poisons, and tissues contaminated with poisons, shoulder joints grating and creaking, and the muscles crying out at every movement so you can hardly make a move of any sort without pain. All the tendons and sheathes of muscles, and gliding parts are all irritated, and sensitive. That is what is the matter with that woman. She knew what was coming. Now what is going to cure that woman? It is not warm weather. Warm weather will never cure her in the world. Cold weather is the thing that is necessary. The oxygen gets into the body and burns up the waste matter just as the brighter fire upon the hearth burns up the waste fuel. Our winter patronage is increasing steadily, and especially from the South, curious as it may seem; at the present time, our winter work, we have ten times as many people from the South as we did fifteen years ago, because they are finding out that it is a good thing to ~~get~~ come north and get this pure, fresh, cold, vitalizing, stimulating, tonic air. Well, that is one way. Cultivate it, to increase constitutional vigor by ^{purifying} ~~uplifting~~ the body, and purifying the blood by this vitalizing element.

3. Give to the body and its functions that care and study which you would accord to any other valuable and costly mechanism so as to become familiar with its needs and the best means of supplying them. Take just as good care of your liver as you would of your watch. Now, how many people do that? Your watch you carry with the greatest care; you have a chain on it to keep it from dropping. You would not allow any accident to happen to it for anything; but how about your liver? Here you almost impose insults upon your liver. You send down a spiced pickle, for instance. That is assault and battery on your liver--a spiced pickle. Mustard, pepper, peppersauce, ginger, horseradish, and all those

things that burn and sting and blister as they go down your throats are insults to your liver; they simply punch holes in it, tear shreds in it, and you are abusing your liver in the worst kind of way, for all that poison has to be strained out; you can not make brains and muscles out of such rubbish; it has to be strained out, and the liver and the kidneys are both strainers to strain it out, and they are both abused and damaged.

4. Eating for health and efficiency. Eat only natural foods That is, those foods that are naturally intended to be eaten. That means cut out all the meats and the flesh foods of every sort. They were never intended to be eaten. Animals are eaters, not eatables; kindly remember that. An animal is itself an eater, not an eatable. Apples, peaches, plums, pears, cherries and the nuts, and all the good things that grow out of the earth are eatables, intended for man and for animals to eat; but animals themselves--they are ~~an~~ not eatables; they are eaters, and eaters are not to be eaten, they are to eat.

9. Animal fats, such as lard, suet, and ordinary butter, should be avoided. Animal fats are unwholesome. They should be eaten as little as possible. They are a very common cause of biliousness. Why? Because they prevent the stomach from making gastric juice; they hinder the stomach in making gastric juice. Pawlow of St. Petersburg found that out. I went over there last year to see him, to look into his experimental work, to see that it was really genuine. I had no doubts of it really, but I wanted to get a closer view, and get the latest news, and I am getting now every little while something from Pawlow's laboratory, and a day or two ago a box came in. I will bring it in here and show you how it came. Pawlow's first assistant, Dr. Sokoleff has sent me some interesting samples, straight from his laboratory, and they are very interesting. I have not yet got through the whole thing. I will look it over and tell you about it next time, bring it in and let you see it. It is very interesting. I found there

Pawlow had made many other experiments, experiments upon the stomach of a dog to see what would increase the flow of gastric juice, and what would hinder the flow of gastric juice, and he found that thing that would hinder it more than anything else was fat--fat. Fat stays in the stomach. Dr. Cannon, of Harvard Medical School, has been making experiments, and he finds that fats stay in the stomach longer than any other food substance. Why? Because the gastric juice can not digest them, and they hinder the work of the stomach.

10. Avoid poison foods. What are poison foods? Tea, coffee, chocolate and cocoa all contain poisons. There is more poison in a cup of tea than there is in a glass of beer. Now, about half this country, or more, I think, is at the present time under prohibition laws. When you come back here next year, I hope you will find Battle Creek under prohibition law too. It won't trouble you, because none of you want beer or whiskey or anything else that comes out of a saloon; but it troubles me because I see the mischief these agencies are doing in the town; and we have some visiting nurses working out in the town among the poor, and we have to take care of a whole lot of poor folks. Our doctors have a whole lot of business; we keep a doctor busy doing nothing else most of the time, but taking care of poor, sick people in the town here. We have a dispensary across the road where poor people in the town or any other town, where a poor man can come and get treatment, just as good as you get here. They get the same thorough examinations as people are getting who pay the highest prices here, and we find the more saloons there are, the more we have to do; the more poor people we have to treat, the more deserted wives and sick children, and starving little ones; so we want the saloon abolished. But there are other poisons besides alcoholic drinks. Tea and coffee are perhaps doing as much mischief as beer is doing. I won't say, as much mischief as whiskey is doing, but as much mischief as beer is doing. They are leading strings to the saloon; there is no doubt about that, because they

lead to intemperance because they break down the nerves, produce a state of the body in which a man feels he must have something to steady him. Many a man has said to me, "Doctor, I don't drink because I like it; I hate the stuff; it is nauseating; it makes me sick; I can hardly get it down; but I feel such unsteadiness of nerves I have to take something to steady me, I have to take something to brighten up my wits", and the man does it for that reason. Others smoke for the same reason.

11. Condiments,--mustard, pepper, peppersauce as well as tea and coffee are also poisons and ought to be wholly discarded. Common salt is not a necessary food; it is not a nutritious food; it is not needed in the body. The salt you have upon the table and shake into your food; the salt the cookputs in is not necessary. Investigations made by eminent French observers within the last five years have proven that beyond any possibility of controversy,--that the food naturally contains all the salt that the body requires. The amount the body requires per day is half of one dram. Just half of one dram,--thirty grains of salt are needed every day, because that amount of salt escapes from the body every day, passes out through the kidneys--thirty grains or half a dram of salt; but the food which we ordinarily take contains just that amount of salt. That is just what we need, and ~~we~~ just what we get in our food when we add nothing to it. So we do not need salt. Salt is a comparatively harmless condiment, a mineral substance which the body will tolerate better than almost any other. So we can take a little; we may add a little to the food, to some of the vegetables to give a little flavor; but train yourself up to eat less and less and less. That would be a rational proceeding, and that is what you all ought to do; but the man who eats half an ounce of salt, or two thirds of an ounce of salt, or, as some people do, a whole ounce of salt, actually, every twenty-four hours,--people who are doing that are getting ready for Bright's disease. The kidneys are being worn out. They are compelled to deal with so much mineral substance they are being worn out, and the consequence is the time will come early when the kidneys will be worn out

and will cease to eliminate salt, and the salt will accumulate in the body; then comes dropsy. That is the cause of dropsy--the swelling up of the feet and limbs--that is the cause of it. We have a man upstairs who came here about two weeks ago; he arrived here and he was swollen up enormously. I met him on the porch just ten days after he arrived here, and I said, "you do not look like the same man at all." "Why, no," he said, "I have lost fifty pounds, Doctor, fifty pounds in ten days." Just think of it! Isn't that enough? Now, he is doing very well. Some days that man lost as much as ten and twelve pounds. What was the cause of his trouble? Salt, chlorid of sodium. His kidneys has become diseased so that they were not able to eliminate more than a very little salt; they could not carry off an ounce of salt a day, nor half an ounce of salt a day. One tenth of an ounce of salt was all he could eliminate; so when he took more than that in his food it had to go somewhere, and it went out into his tissues, so his tissues are affected. It takes about 140 parts of water for each part of salt. The salt in the body has a density of 7 parts in 1000. One thousand divided by 7 would be 143,--143 parts of water for every part of salt. That is, when that man took into his body, then, half an ounce of salt, he had to add to it 71 ounces of water to dilute the salt, to hold it in solution. It went out into the tissues, it took water with it to hold it in solution; but the tissues won't tolerate more than 7 parts in 1000 of salt. Seven parts of salt to 1000 parts of water. Now, seventy-one ounces would be four pints and a half, so you see it was four pints and a half of water that that man had to take to dilute and to take care of the extra salt he was eating, which he was not able to eliminate. Now, then, we stopped feeding that man salt, cut the salt all off at once. Well, the water began to run away like a river, just a perfect torrent of water poured out of that man, sweating, sweating, and the kidneys pouring out the water, and the skin pouring out the water, so it went out at the rate of five, ten, or twelve pounds a day

and I suppose he must have lost 75 pounds by this time. I guess by this time he has got down to his normal weight. Now, you see how important it is to know that. The most important thing done for that man was to stop his salt.

Now, suppose here is a boy suffering from epilepsy. Stop his salt, and then you have done the best thing toward helping that boy to get well. A few years ago we thought that epilepsy was incurable generally. When I was over in Europe last year, I found in the leading hospitals of Europe people were being cured; the worst cases of epilepsy were being cured, and the principal thing done was to stop the chlorid of sodium. There was a small amount of medication, but the medication alone was not effective without that; but when the sale was discontinued and a little bromid of potash was given, a small dose, so small it could be tolerated for almost any length of time, but large enough so the paroxysm would be controlled. I was in a hospital at Lausanne, and Prof. Combe was showing me his cases. A little boy was brought in by his mother, and as he came in, the Doctor said to the mother, "Well, wie getes?", so she told him how the boy was getting along, and she said, the boy had not had a single paroxysm but one in a month, and the doctor said to me that this boy was having ten and twelve fits a day, and the little fellow looked as though he did not know anything. He looked as though he was an imbecile really. He was about five years old. He had had these paroxysms so constantly his mind was almost gone, apparently. The mother said to the doctor in my presence that the boy had had only one slight attack since the beginning of treatment a month before. As I said, it was a bad case, as bad a case as I ever saw. I came home, we adopted that method of treatment, and the success is simply wonderful. We do not usually take them into the institution, but take a case occasionally and put the patient in a cottage so the case is under control so there is never a public scene anywhere; and it is amazing, I was amazed myself to see what was accomplished, so I am sure chlorid of sodium is

doing an immense deal of harm in the large quantities in which it is used. I would not say to anybody that a little taste of salt is going to do any harm. I think a person could take twice as much, even, as the ordinary requirement, a dram or a dram and a half a day without any injury at all, and continue to do so, perhaps a whole life-time; but it is better to train one's self down to a small amount, and the smaller the amount the better, provided your appetite and your taste are fully satisfied and you can relish your food. I do not say you ought to cut the salt out so entirely you do not relish anything. I remember I tried it about forty years ago for a while, and I got along very well for several years without any salt at all. And for the last forty years or more I have not used much of any salt. I have eaten a little, perhaps, but at the present time it is practically excluded from my bill of fare. One gets in a little while to like his potato just as well without salt as with it. We never think of putting salt on apples any way. Why should we put salt on potatoes? It is really not at all necessary.

13. Food combinations should be such as to give the proper proportion of the several elements,--proteins, carbohydrates, and fats. Be careful about that. The important thing, however, is to masticate, to chew very thoroughly. The quantity should be adapted to the size of the person. A small man of my size does not need nearly so much food as a man twice as big. I weigh 140 pounds. A man that weighs 250 lbs. would require a good deal more food than I require; however, it is not altogether a matter of size; it is partly a matter of activity. The amount of work a person does regulates the amount of food. A person who is idle requires only about two thirds as much food as a man at work. A man engaged in very hard muscular work requires twice as much food as the average idle man. A man who is working excessively hard at some very extreme exertion requires two and a half times as much food as the man who is idle. The man who is staying in

bed, keeping still, does not need more than one third as much as the man engaged in doing hard work. So the quantity is very important, because if one eats more than he needs, the result will be, the extra quantity will all be converted into poisons.

15. Food must be well relished to be well digested. That is a hint to the cooks. Husbands sometimes get homesick and long for their mother's cooking when their wives do not know how to cook very well. That is one reason why they talk about mother's cooking. Did you ever hear of a man doing that? I heard a man telling once when his mother was visiting him, at the table he censured his wife because a certain article did not suit him exactly, and he said, "Now, then, Mother used to cook that entirely different. It used to taste good when mother cooked it; if you could only cook it as Mother did." It turned out his mother had gotten that particular meal. She was there visiting, and thought she would please her son by getting the dinner for him; so the change was in him rather than the cooking, you see. We lose our boyhood relish for things, then we think it was Mother's cooking, whereas it was due in part at least to the change in us. We have lost that keen zest and relish for things we once had. So it is very important, especially in serving invalids, that the appetite should be coddled a little, that we should minister to the sense of taste and that we should plan to please it. Here is a man whose stomach has become slow. Now you know the quickest way and the best way, and the most important of all ways of stimulating that stomach to increased activity, of getting it woke up and getting it to work,--the most important thing of all is that the food shall be inviting, and shall ~~be~~ have a fine, marked, distinct, and agreeable flavor. I think I ought to repeat that,--that all the medicine you can take, and all the treatment you can give, and everything else you can possibly do will not atone for the lack of that one thing. The most important thing of all is appetizing food. Now, why is that? Because the

most important part of the gastric juice is the appetite juice, and the appetite juice is that portion of the gastric juice that is made in the stomach, that is formed in the stomach before the food ever gets there at all; while the food is still in the mouth. Now, that seems impossible; but Prof. Pawlow has proven that by his experiments upon dogs, and I have got some appetite juice in my office that I am going to bring in here to show to you, that came from Pawlow's laboratory,--some gastric juice that was made in the stomach where food never had gone at all, when there was no food there at all. He has dogs fixed so food will enter the mouth,--but I will tell you about that next time. I will have a picture I can tell you about, and tell you about Pawlow's work, and his laboratory, and show you his picture. The food must be appetizing. It is of the highest importance that the food should be so well nourished that it will call forth not only the activities of the stomach, but of the pancreas, the liver and all the other glands that are involved in the process of digestion. If you don't have much gastric juice, you don't have much pancreatic juice either, because the gastric juice pours out into the small intestine, and a reflex influence is exerted upon the pancreas which causes the pancreas to pour out its juices; so you see this thing is like a row of bricks. If you had a row of bricks set up here about four inches apart, 100 miles long, then tip over the first brick, it will knock down the next one, and it the next one, and it the next, and the next and the next, until they will all go down. The different processes of digestion are like that. If we chew the food well, get all the flavor out of it, that sets the stomach to going, and the stomach gets all ready for it, so when the food gets down there, the gastric juice is all ready to digest it; there is just the right kind of gastric juice made for that particular kind of food. What a wonderful thing that is, isn't it!--that the sense of taste picks out the food, finds out what kind of food it is, sends notice down to the stomach from the brain that such and such a kind of food

is coming, and the stomach should make such and such a kind of gastric juice, to have it all ready ; and the stomach performs its duty. But suppose now you have got a slow stomach and a slow mouth; the man takes food, bolts it, takes it into his mouth and swallows it at once without stopping to masticate it at all; why then there is no gastric juice there prepared for it. The stomach has not had any notification of its coming so the stomach does not know what kind of gastric juice to make for that food, because the notice has to come through the mouth. The telephone arrangement is there in the mouth; there isn't any in the stomach; so when it goes into the stomach the stomach is not ready for it, and it is a wonder it ever digests at all. It is only because the mouth gets a little hint of what is in it that it accomplishes something--the stomach and the mouth; because the stomach endeavors to make some gastric juice, so some is made, and that is the only reason that you can worry through the digestion at all. If you have very little gastric juice, or poor gastric juice, or poor gastric digestion, you will have very poor pancreatic digestion, because the proper kind of pancreatic juice will not be formed; the proper kind of intestinal juice will not be formed; and the liver will not get its proper notice; so the whole thing goes wrong; it is because one bolts his food instead of taking time to thoroughly masticate and fletcherize it.

16. Cane sugar should be eaten only in small quantity, and the less the better. If you would leave it out entirely, it would be a great deal better. Why? Because cane sugar is not adapted to human beings. Cane sugar is intended for cows, but not for human beings. It is a kind of grass sugar. You find it in the sap of trees, and the juices of roots, but not to any considerable extent in fruits. Fruit sugar is the natural body sugar. The body makes a pound of maltose every day. This is converted into sugar ~~and~~ ^{the} ^{which} it is found in fruits--the same kind of sugar, in process of digestion, and then it is absorbed. When you eat fruits,

you find in them sugar already to be absorbed at once; it does not have to be digested at all; but when you eat cane sugar, it has to be digested, but we have not the right kind of digestive apparatus to deal with cane sugar. The human digestive apparatus is adapted to malt sugar; so when you put a lot of cane sugar on your oatmeal, for example, or in your coffee or caramel cereal, for example, that goes down into your stomach and stays there hour after hour, and it is several hours, possibly, before the digestion of that cane sugar begins at all; because the body is not accustomed to cane sugar; it is not expecting cane sugar; it is not ready for cane sugar, and when it finds it there, it has to wait some little time before the body can adapt itself to the presence of cane sugar and manufacture the ferment necessary for its digestion; so you see in the meantime the cane sugar is lying around there, making a ~~taxx~~ trouble and irritating the mucous membrane of the stomach, irritating the mucous membrane of the intestine, making troubles of various sorts which are no small matter; because as a consequence of this free use of cane sugar which is coming to be more and more common throughout the world--think of it, three and three tenths ounces of cane sugar for every human being in the United States every day, every day, nearly a quarter of a pound of cane sugar is used per capita in the United States every single day. Down in Italy it is only one tenth as much, and in Russia it is only one fifth as much; and there is no other country in the world where so much cane sugar is eaten except in England, and in England they eat four ounces per capita every day; no, it is 3.7 ounces, to be exact. Then cut out cane sugar. But you say, "What shall I eat?" You do not need to eat any sugar. Eat sweet fruits. If you must have something sweet, eat Meltose or malt honey. While you are here at the Sanitarium, you ought to get into the habit, and ~~xx xx~~ ~~xx xx~~ when you go home, keep it up. It is offered in gallon cans at a dollar and a half a gallon, so you can have it for family use. That is not very much more than you pay for ordinary syrup.

It is just about the same as you pay for a fine quality of bees' honey. It is not made on a very large scale yet, so it is somewhat expensive; but it pays to use these wholesome sugars in place of the cane sugar; it pays because it saves digestion. Cane sugar hinders gastric digestion, hinders the action of the pepsin, hinders the action of the other digestive fluids in the intestine; while malt sugar does not interfere with the process, so it goes straight on and the malt sugar is quickly absorbed and out of the way.

17. A sedentary life--look out for that. It tends to produce an inactive state of the bowels. If you kept a horse shut up in a stable, it would get ill health very soon. The horse must have exercise in order that his digestion shall be right and his appetite right, and that the horse should be kept in a wholesome state. A man or a woman shut up in a stall, whether that stall is an counting room or a parlor or a sitting room--the man or woman shut up in any kind of a stall suffers exactly the same kind of injury as the horse shut up in a stall. A man shut up in a stall in states prison is not very much worse off than many a millionaire who shuts himself up in an office. He is in prison just as much as the other man is, and suffers the same consequences. So if you have to live that kind of life because of your business, you must take care to do works of supererogation, if you please, to counteract the ill effects of sedentary life. And one thing that comes from it is inactivity of the bowels and slow digestion. So you must eat foods that will encourage the appetite, that will encourage good digestion. Take a little exercise every day also to help the intestinal activity along. Fresh vegetables, and sweet foods, and sour foods are particularly good. A couple of apples or oranges before breakfast, or a couple of oranges just before you go to bed at night may be necessary. When you take that food into your stomach, the acid of the food causes the stomach to contract, and it sets up a contracting impulse that travels all the way down the thirty feet of intestine, and that moves down

some of the foodstuffs and encourages the peristaltic movement which is too slow; and every time you take something into your stomach, it does that. So if you take a little fruit in the morning before breakfast, it helps get things to moving. If you take something just before you go to bed at night, it starts a peristaltic wave, which slowly works along all night, so in the morning the food residues have reached the lower part of the alimentary canal instead of being somewhere several feet higher up. That thing we have to consider is the fact that the food follows the order in which it is taken. The alimentary succession is continually maintained. The food that is taken first is ahead, and the food that is taken last is behind; so it goes along in the regular order, and does not get tangled up; and the purpose of taking a little fruit in the morning before breakfast, and at night before going to bed, is to start an extra peristaltic wave to help along the slow stomach, and the slow colon so that the rythmical movement of the bowels shall be maintained. Now it is better, and normal that the bowels should move after every meal. I am going to say that as often as I get a chance. This movement of the bowels once a week that some people are talking about, or once or twice a week, or even once a day, is an unnatural thing. The bowels ought to move after every meal, and that makes it impossible for the food to be left in the intestine long enough to undergo any extensive putrefaction; but when the food is left in the bowels day after day, perhaps rotting, rotting and putrefying, decomposing, spoiling and defiling the whole body, the blood, brain and nerves--every atom of the body,--it is no wonder people are neurasthenic; it is no wonder people can not sleep; it is no wonder people are depressed and lose their wits, and go to lunatic asylums; it is no wonder they get degenerations of the blood-vessels, and degenerations of the brain cells and nerves, and degenerated kidneys, and degenerated livers; for those colon poisons are the very worst poisons that the body ever has to deal with, except when it now and then becomes inoculated with some vile disease like typhoid

fever or small-pox or some other filthy malady. They are undoubtedly responsible for most of the paralyses and the chronic disorders that occur among human beings.

18. Raw food ought to be taken every day. Why? Because man's natural diet is raw, or uncooked. The natural diet of man is uncooked. There was no cookstove in the garden of Eden. Vegetables do not grow cooked. I must take that back. The natural food of man is already cooked when produced by the plant, or upon the trees. Nuts and fruits are already cooked. Fruits particularly are already cooked. Down in Mexico I stepped over to a stall in the market there, or the "markado" as they call it, and I asked for some fruit, and the woman tending the stand asked me whether I would have it hard or soft. She said, "Will you have dueros"--hard ones, "or cassida in el sol"--cooked in the sun,--whether I wanted hard, green, fruit, or fruit that was cooked in the sun. Now this reponing in the sun is a cooking process. It is more than that; it is a digestive process, for the food is not only cooked; the changes which take place in the oven and in the kettle,--those changes take place--the hydration of the starch; but it goes further; the process goes further and actually digests the starch. The starch is converted into sugar, it is made into fruit sugar; it is converted into the kind of sugar which is the very ultimate end, the very perfected end of the process of digestion of starch in the body--fruit sugar. It is ready then to be immediately absorbed. That is the reason why a little fruit is so refreshing; that is the reason why a little grapejuice or fruit juice of some kind, or a melon is so refreshing when you are weary, tired, and feel a little weak; it is immediately absorbed. When it is taken into the body, it is taken into the blood at once; it does not have to wait for any digestive process. That is the natural diet of man, and some such food ought to be taken into the body every day. Not turnips, carrots, raw wheat, or rye, or oatmeal, or any of that stuff. That is proper food for a

cow or a horse, but not for man. Some of our raw food faddists have gotten off the track. They say animals eat food raw, so man should do the same thing. It is all right for man to eat his food raw, but it is not right for a man to eat raw food that was intended for another kind of animal, with another kind of stomach. Now, there are some animals that can live on wood. They have gastric juice that will digest wood, so they get along first rate on a diet of dry wood; but man could not live on dry wood; neither could a horse; a horse can live on dry hay, grass, oats, corn,--raw uncooked, and man can not; but a man can take the corn or take the grass and cook it--the right kind of grass, asparagus, for instance, cook it and thrive on it; so with various kinds of leaves. He can thrive on such a diet, but not in an uncooked state; but the food prepared for man to eat in the raw state is already cooked; the fruits and the nuts which constitute the natural diet of man, because man is naturally frugivorous. Some raw or uncooked food must be taken at every meal. What kind? Fruits or nuts of some kind. The banana you can always get. Oranges you can almost always get. Apples or some other fruit are always obtainable. Cooked food has not the same value as raw, uncooked food. Uncooked, ripe, mellow fruit is a very important thing to be taken every single ~~man~~ day; take some every day. Perhaps you can not always get it. Well, you may have a little lettuce, or spinach when you can not get the other things. They are less desirable than fruits, less valuable; still they have a place and are of some value; so it is worth while to use them to some degree; but they are not so good for invalids as the other foods. You say, "I can not eat bananas." That is all nonsense. "But I can not eat apples." That is all nonsense too. You simply do not know how to eat them; you do not eat them right; don't know how to do it. You do not chew it enough. You say, "I always have eructations, sour stomach, when I eat apples." Now, let me tell you how to do it. Take that apple and scrape it; just scrape it with your knife; take it that way. The trouble is you just swallow it in chunks, and those lumps that go down into

your stomach, you can not digest any more than you can pebbles; because that apple is already digested, you see--can not be digested again. All it needs is simply to be crushed. If it were a digestible thing, it could be dissolved and digested in the stomach juices; but having been already digested, don't you see, the gastric juice can not melt it down; so fruit is a thing that disagrees with people more than almost anything else, if it is swallowed whole. Swallow a whole cherry and the stomach can not do anything at all with it. It has to pass right along just like a pebble of some kind; the stomach can not do a thing to it. There isn't anything in there the stomach can digest. It is already digested; it only needs to be crushed into pulp. If you are eating cherries, you must reject the skin as much as the stone. If you are eating a ripe apple, as I said, either chew it very thoroughly, so thoroughly that whenx you rub it against the roof of your mouth with your tongue you can not find the least little bit of anything in it. That is the way I judge my food, and I am inclined to think it is the natural way, and I have been coaching myself up to doing it; I have been teaching myself to do it. I only found out my tongue was doing it that way. After I have been chewing my food that way, I find the tongue is pushing the food up against the roof of the mouth, and the coarse particles are sort of separated out and come back to the sides, while the juicy part, the pulpy part slips down the middle of the tongue. There is a little funnel made whenx you push your tongue up to the roof of the mouth and make a little suction at the same time that pulls the liquid portion down into your throat, while the imperfectly chewed portion is left there on the tongue, and that is pushed out at the sides of the mouth and between the teeth to be ground a little more. It is very easy to prepare the banana. The banana is such a slippery thing it is very likely to get down somehow without proper chewing, very likely to be swallowed in lumps. So it is a good thing to put it through a colander and serve it in a pulp if you can not take it in the ordinary

way. Get a really ripe banana--the one that is getting brown on the outside,-- not a green one, or a nice, bright yellow banana, for that is not fit to be eaten at all; it is absolutely unfit to be eaten. The skin should be very dark. If it is black all over the whole length of the banana it will be then in really perfect condition to eat. That is the way they always eat them in Mexico and tropical countries. No one ever thinks of eating a banana there until it is black all over, or dark brown. Then it is ripe and luscious as a peach, and the starch is all converted into sugar, dextrine, flavoring materials, and it is ready to be eaten. It is cooked done, in other words; whereas the yellow banana, or the green banana is not done yet, is not cooked. Take a ripe banana, cut it up into pieces in a glass, mash it up a little with a fork or dessert spoon; then take a fork and churn it all up, and pretty soon you will be surprised to see that banana has become as light and feathery as the white of egg, almost; and in less than a minute you can convert the banana into nice, light banana puree, and it is all ready to be swallowed, to be eaten, and you can find here and there perhaps, a lump that would not go through the colander, but you can look out for this.

19. Avoid complicated dishes and great variety at a single meal. Don't go to these great banquets, or if you do, look out you do not eat much. Eat a decent meal before you go, and you won't want to indulge in all those things. That is the way I always do. When I go to a big banquet, I take care to get my dinner before I go. Then I have not got to eat any of their stuff that is unwholesome. They always bring you a little bread that you can nibble at and a glass of water. That is what I eat when I go to banquets--outside of the Sanitarium, I mean. I take a glass of water and bread, and I enjoy myself a great deal better afterwards, than I would if I ate the banquet. I have a clean conscience as well as a clean stomach.

20. Now, eat at regular hours. That is very important. Why? For two

reasons. First, if you eat breakfast, for instance, at seven o'clock, and your dinner at twelve o'clock, your regular hour, suppose you do not get your breakfast until nine o'clock; then when dinner time comes, it is time to go to dinner, and you think you must go to dinner. But there is that breakfast still in your stomach. You ate it only three hours ago, and there has not been time for it to be digested ~~y~~ it has not gotten out of your stomach, and you just surprise that poor stomach, you pounce down upon it with a big dinner when it has not yet gotten rid of the breakfast. I tell you, my friends, it is an insult, a crime to do it. You better go without your dinner, or you better go without your breakfast. A better way, perhaps, would be when you find you have lost your breakfast, or missed the regular time for it, at nine o'clock eat a very light breakfast; don't eat any bread and butter. Why? Because butter and bread stay a long time in the stomach; it takes a long while to get them out. They are about the slowest things for the stomach to get rid of,--are bread and butter. The butter sticks to the bread and the bread sticks to the butter, and they both stick to the stomach walls, and it takes them a long time to get out of the stomach.. They are about the slowest things to digest. Fat pork and roast goose, and deviled crabs, lobster, and other bedeviled things are about the only things that are worse. So I should say that the kind of breakfast for you to eat would be a ripe apple, a bunch of grapes, or a glass of yogurt with a little fruit, some sliced peaches with a little meltose on them. If you have not tried peaches that way, just try them. Dispense with cane sugar. Ask the waiter to bring you some sliced peaches or sliced bananas, and just pour your meltose right over the fruit, and you will find it is really better than cane sugar. You will be very much pleased with the results of that combination, I am sure. Take that for breakfast, if you like, then when dinner-time comes your stomach will be empty, it will be fresh, and ready for a good, substantial meal. Now, it does not do any harm to drop out a meal now and then, so far as the stomach is concerned, but it does do harm in another way. Your break-

fast has a double purpose. It is not only to accomplish something for the upper end of the alimentary canal, but it has something to do down at the other end of the alimentary canal. There are two capacious portions, two reservoirs in the alimentary canal, a dilated portion at each end; the stomach at one end, the upper end, and the colon at the lower end; then there is about twenty-five feet of small, narrow intestine between those two pouches--the stomach at the upper end and the colon at the lower end. Now when you put something into the stomach, the stomach sets up a peristaltic wave that travels down, and if it does not cause the colon to empty itself, it at least pushes along the food that was there before a few inches, so it is sent along towards its destination. Now, then, if you don't eat that breakfast, you see that peristaltic wave is lacking, and the foodstuffs down here in the cecum perhaps remain right there. They do not move, because they do not have the normal stimulus to move; then when dinner-time comes, the result is that they have been absorbing too long, up there too long a time, there has too much liquid been absorbed so it becomes so hard and dry it won't move along readily; and that is the beginning of stasis in the colon, of chronic constipation; it may start in just that thing--irregular meals. In eating meals close together, you double up the meals in the stomach, and that does harm. The stomach is not prepared for it; it is not prepared to pour out the necessary gastric juice; its glands are tired out, and it can not make gastric juice at that time efficiently, and you will have a bad result. You will have indigestion, perhaps, sour stomach, and the food will lie there, ferment and decay instead of digesting. On the other hand, the colon needs the stimulus that comes from the stomach, and it needs it regularly, rhythmically. For instance, if you missed your supper tonight, the bowels won't move tomorrow morning after breakfast as they ought to. If you missed your breakfast, the bowels won't move at all all day, perhaps, because that is the normal time; and they wait over until the next day, and the result is the absorption-

tion of a large amount of poisonous matter that ought to have been discharged out of the body.

21. The best meal plan is to eat twice a day. For sedentary people that is very important; for professional people it is a very important thing to adopt that plan. A man down in Pennsylvania some years ago wrote a book on the no-breakfast plan, and it did a lot of good. A great many people got a great deal of benefit from the no-breakfast plan; and a great many people asked me what I thought of it, and I said it is a splendid plan for people who eat supper, for people who eat supper haven't any preparation for breakfast; the stomach is jaded and tired out after eating that supper. People who eat six o'clock dinners haven't any business at all to eat breakfast; the stomach is in no condition for digesting breakfast; so whether you have breakfast, depends on whether or not you eat a hearty meal at night. If your principal meals are at noon or night, or if the principal meal of all is at night, with a lunch at noon and a light breakfast, then drop the breakfast out entirely. Or, better still, eat just a little fruit at night. A fruit supper is the most admirable plan,--a light breakfast, a good substantial meal for dinner, and a fruit luncheon at night is the best plan. That is, that comes as nearly as you can, perhaps, to the right plan when we conform to conventional usage; but the best plan of all would be this plan. When you arise in the morning eat a little fruit. That is, my opinion. When you arise in the morning eat a little fruit. It is better to have a little something perhaps, to refresh you; so eat a little fruit, or drink a little fruit juice; or you might take a glass of yogurt, if you like, but no cereals, no vegetables; no other more substantial things. Fruits are ~~all ready~~ already digested, you know. Eat a couple of oranges or apples, if you want, or a little stewed fruit--anything in the way of fruit that you want to eat. Then about ten o'clock have your breakfast; then about four or five o'clock, four o'clock perhaps, in the afternoon,

after you have done with your work, got through with your work by four o'clock,--then after four o'clock have your meal, a substantial meal for dinner. Then after dinner have some recreation, have some outdoor work if you are sedentary; go outdoors and exercise; work in the garden; walk, ride a bicycle, row, do something to get some outdoor work; then go to bed at nine or ten o'clock. I believe that would be an order of life which would be altogether the most wholesome. I would like to do that if I could get a chance, but I can not get a chance to do that, so--well, I don't know but I do come somewhere near it after all, for I don't eat any breakfast; I only eat twice a day. I eat a little fruit for breakfast, then I eat my dinner. I eat my dinner any time I can get it, between two o'clock and five; I sometimes don't get my dinner until six. I don't eat as regularly as I ought to. I am very sorry to say that, but it is because of the exigencies of my profession which do not allow me to. I belong to the fire department and have to go when the bell rings; so I don't get the opportunity to do what I would like to do, and I suffer some of the consequences. It is better to eat dinner later, after your heavy work is done, if you can get the opportunity.

22. Avoid iced foods and drinks. Why? Because they chill the stomach. Never take anything in the form of iced foods unless you have some disorder in which the stomach requires it. When you take cold food into the stomach, it is paralyzed, can make no gastric juice at all, and several hours will elapse before the stomach will be warmed up sufficient to digest. The same thing is true if you eat iced foods, and liquids with your meals. The process of digestion is paralyzed completely, because digestion requires 100° of temperature, body temperature, and iced water is only 32° , so you lower the temperature almost 70° when you drink iced water, and it takes several hours for the stomach to get warmed up again. The stomach you see not only gets chilled itself, but the whole contents of the stomach are chilled, and the stomach has to warm up its entire contents, for it can

can not be sent out of the stomach until it has been digested; so it just simply lies there for several hours. Beaumont in making observations upon the stomach of Alexis St. Martin found that three hours would elapse before the stomach resumed its normal temperature after taking two thirds of ~~an~~ a glass of ice water.

24. Chew every morsel until reduced to liquid in the mouth, rejecting and returning to the plate skins, seeds, and other tasteless woody residues. Thorough chewing develops appetite juice in the stomach and combats intestinal autointoxication, a most prolific cause of disease. That I think is a very good rule, but that does not mean you can reduce all food, because there are sometimes some coarse particles, some rubbish. When you are eating watermelon, for example, you can easily get the liquid out, but the pulp should go back upon your plate. When you get through eating watermelon, you ought to have almost as much on your plate as when you began, because the pulp is almost absolutely indigestible. A baby can eat watermelon juice. It is the watermelon pulp that is entirely objectionable, that makes trouble in the use of melons; so look out for that.

25. Dismiss work, worries, business cares and annoyances while eating, because worry will stop digestion. Prof. Cannon of Harvard University, making experiments upon a cat, had the cat eat some food that had bismuth in it; and when bismuth is put into the food, it is possible to look through the cat and see just where the dinner is. The food becomes visible to the X-ray. It is visible to the X-ray when it has bismuth in it; so he could look inside and see the cat's stomach, see right where it was, see the food, see the stomach working on the food, and the cat was purring; he was petting and stroking the cat a little, and the cat was purring, and the dinner was marching on glibly, but by and by, to change the program, he pinched the cat, made the cat a little angry, and she began to snap and growl; and digestion ceased instantly; the stomach seemed to be paralyzed, and the movement stopped; the food did not move a quarter of an inch; everything was

absolutely quiet in the stomach, showing that the digestive process ceased entirely under the influence of irritation; so you see you do not want to have anything irritating about at dinner-time. When your husband comes home to dinner, you don't want to be telling him all about the family troubles, and what the children have been doing, and the neighbors' children, and about the chickens getting in and eating up the vegetable garden, etc--the neighbors' chickens; you don't want to be telling any of those disagreeable things, or talking about disagreeable things. And the husbands don't want to scold their wives at the dinner table; but you want everything to be delightful at the dinner-table. It is a good thing to have some music around on that account to put the man in a proper state during the digestive process. I will tell you next time how music stimulates digestion.

28. Live as much as possible in the open air.

Look out for pickles and things of that sort, for they are absolutely indigestible. Sleep in the open air. If you come up to my house, you will see at the back side of the house some sleeping arrangements where the ladies of the family all sleep. They occupy those two stories, and we have our house arranged so we can all sleep outdoors and get the fresh air all the time. We go sleigh riding every night, all night long. We have a delightful time dreaming about the sleighbells, and get up in the morning feeling gay. One need not degenerate physically because his occupation is sedentary. He may take regular, systematic exercise and keep his muscles up in good condition. I don't boast at all of my athletic prowess, for I am not an athlete and never was, but I met today a laboring man, and I compared muscles with him, and I found I had a good deal more muscle than he had. He is a hard laboring man, but he has not worked very much; he has worked at light employment, but he has not taken any pains to exercise his muscles, and they have really degenerated. I am astonished very often to meet farmers that have not very much muscular development, because they let it all go

into their legs, and perhaps haven't been doing anything with their arms. Their legs are good, but they have poor arms. Their chests are not very well developed. A great many farmers break down physically because they do not observe the proper pose in sitting. You see a farmer on a load of wood, and he is always sitting there all doubled up just like a jackknife. You see a farmer sitting on a fence, or a log, or a load of hay, and he is all doubled up so his chest is brought near his knees. That relaxes the abdominal muscles, lets his shoulders fall down, and his chest is flat, and that produces a stagnant cesspool in his abdominal cavity. Exercise is necessary, and deep breathing is especially important because it aids digestion; and a man can sit at his desk answering letters, taking deep breaths all the time. I practice it every day when I am dictating to a stenographer, lying down, or walking about,--I take great, deep breaths, lift my chest up, pull my abdominal muscles in; so I take a little gymnastics all the time. Now, you are sometimes sitting in ~~axaka~~ church, and you say to yourself, "There is a window open; I am going to take cold"; you feel a draught coming right on the back of your neck. You say, "What shall I do? pretty soon I will be shivering." Just shiver before; that is all. The purpose of shivering is to cure the cold. If you shiver first, you won't get it. You can avoid it by making your muscles do a little work. Set your legs up tight, set the muscles of your arms up tight; set the muscles of the back of your neck up tight, and you won't take cold. All you have to do is to set these muscles up, make them stiff, and you can not take cold. If you are on a street car, or somewhere else where there is a little knife of cold air blowing upon your neck, you don't have to take cold; just set yourself against it, and you won't have it. All in the world you have to do is to contract that muscle; and that muscle when it is contracted, will go to work making heat so fast you can not chill that part; it will keep it warm. And at the same time, as I said, you can sit there in church, put your chest up high, take good, deep breaths, and then you won't go to sleep when the minister is dull. You

can take a little exercise there, perhaps; you can exercise your limbs, just contract and relax, and contract and relax the muscles of your legs, or the muscles of the back of your neck; the muscles may be exercised a little bit if there is a cold draught and you fear you are going to get cold, you can move your head up and down this way, don't you see, and that will make your muscles contract a little, and the minister will think you are approving of what he says, and it will encourage him. Be careful not to move your head the other way. In walking always hold the chest high. Carry the chest up always so as to walk on your toes. Carry your chest up. Trainers sometimes say, hold your neck against your collar. That is not a good idea. It is simply to carry your chest as far forward as you can. Then you will come straight up without coming forward. If you will let your chest go down, and you want to come up on your toes, you have got to come forward; but if you put your chest up so, you can come right straight up on your toes without swaying a particle; and one should always carry himself in that pose, with the chest well up. If the abdominal muscles are weak, strengthen them by lying down on the back and raising the legs, so you will strengthen these muscles. It is a good thing to wear an abdominal bandage around the lower part of the abdomen. When you get up in the morning, and when you go to bed at night, after every meal, and before every meal, cleanse your teeth.

Take a warm bath always at night before you go to bed. Take a short cold bath when you get up in the morning. You don't have to jump into a tubful of cold water. Wet a towel with cold water; bathe your face in cold water, rub it up and down the legs, across the chest, over the shoulders; then give yourself a good rub with a dry towel, and you get a real good effect. Gradually train yourself to it. You do not have to have a bath tub in order to get a good effect. If your hands and feet are cold after a bath, and you haven't any reaction, you should take some vigorous exercise to promote reaction.

The hands

The hands, nose and scalp also require sanitary attention. There is nothing better than a little nice castile soap with soft water. Sleep at least eight hours at night, one or two more, if you are neurasthenic, and an hour in the middle of the day if you are a bad one, and take a day off once every week or two. The surroundings at night should be quiet. If we have a great deal of noise when we are asleep, that noise will startle us even though we are asleep, and interfere with our slumber somewhat. The bed should be neither too hard nor too soft. Avoid feathers particularly. Avoid too much heating by too much clothing. A lady said to me the other day, "How can I put my baby to sleep outdoors? Won't it take cold?" I said, "You want to put your baby in a bag as the Indians do with their papposes. Make a thick warm bag, put the baby in it, tie a puckering string around its neck; have a nice, large hood for it, put it down over its head, button it on the back, and there you have got the baby; just leave a little hole for it to breathe through, and the baby can sleep outdoors and is just as safe as an Esquimau baby. That is a good way to sleep in the open air, good for big folks as well as little folks.

Make the weekly Sabbath a day of complete rest from work. That is hard for a professional man to do, but it is a necessary thing. We need that one day off; we need it to think about the higher ideals and the nobler things, and for our bodies to rest and our brains to rest and have a change of thought. Then it is a wholesome and a sanitary thing.

The clothing should be light and porous so the air can circulate through the clothing and come in contact with the body.

Don't worry. Mr. Horace Fletcher has invented the word "fearthought", and it is a good expression. Fearthought is not necessary; so don't cultivate it. If you do not cultivate it, you won't allow it to do you any harm. We should keep our minds open to wholesome things, and cheer ourselves up. By simply talking

good cheer, we can cheer ourselves up. If you feel melancholy, don't let anybody know it, but talk good cheer anyhow, and it will strike in, and we will get the benefit ourselves.

Do not become self-centered. To fix your mind upon yourself, becoming selfish and self-centered, is one of the most withering things; it is a thing that cultivates and encourages disease in the last degree.

Exercise self-control and constraint in all things. Self control is one of the most important elements in a successful life. The Bible says, you know, "a fool utters all his heart." The wisex man keepeth in until afterward. The fool lacks self-control. I was reading in the bible the other day something about how Saul played the fool. He was something more than that; he was a fool, and that is why he acted like a fool. He was not a wise man acting silly, but a fool doing exactly what a fool naturally does, or what an unwise man does. He had simply lost his power of self-control and restraint. If he had an impulse come upon him, he would throw a javelin at somebody, and he would reach the point, through lack of self-control, where he had absolutely no control at all of himself; then a man is really insane. ~~At last, he is~~ A neurasthenic ~~and~~ is on the way, on the road to that condition, where he has no control at all. That is the insane man. The neurasthenic has not full control; he has only partial control; but he can cultivate control, and that is one thing necessary to do to aid the neurasthenic in getting well, and to impede the progress of disease.

Take a vacation when you dream about your work. That means some portion of your brain has become tired out, worn out, too full of blood, so it remains active when you go to sleep. It is time for you to take rest and let your brain recover.

Discard tobacco, alcoholic beverages and other nerve foolers. They make you think you are better when you are not better; they make you think you

are comforted when you are not comforted; they make you think you have no trouble when you have lots of trouble; and they make you think you need not worry when you ought to be worrying just then, or at any rate getting the cause of the worry out of the way. They do not remove the cause, but simply cover things up.

Avoid nostrums and patent medicines. They are all foolers; none of them do what they are expected to do. The habitual use of any drug whatever is harmful. Prof. ~~Righ~~ Wright, who discovered the opsonic index told me in London last year, when I asked him what drug was there that would raise the opsonic index, that would increase vital resistance, he said, "There is no drug that increases vital resistance. Every drug known diminishes the opsonic index. Alcohol cuts it down tremendously; tobacco cuts it down tremendously. Here was a man some little time ago who had tuberculosis. He was examined for the tuberculo-opsonic index, and it was found it was zero; and in three weeks he was dead; absolutely had no resistance at all against that disease. The tubercle bacilli could go anywhere they liked, and they overran the body so fast that in three weeks he was dead of tuberculosis.

Do the things you find done here for inactive bowels. You ought to pick up a whole lot of information while you are here--a whole lot. ~~Ex~~ Do the best things. Get this little book, and read it, study it, and I think you will find it well worth while to give careful consideration to it.

Here is a little table showing how much our helpers ate on an average, some years ago, and they ate one ~~fifth~~ half the protein that was supposed to be necessary. We have made a study of our low protein people to find what the urine was, and some forty-six people were tested, and we found the poisons escaping through the urine were very much less than with ordinary people. On the ordinary diet the quantity is 1430; and on this low protein diet, the average is 1000. The amount of acid is 20, but on the low protein dietary, is only 9. The amount of

urea is 16, and on the low protein dietary only 6. That means, you see, that the kidneys have less than two thirds as much work to do in eliminating poisons on a low protein diet as they have on the ordinary diet. I want to tell you a word about these tests taken by Prof. Fisher some time ago; but I see it is after nine o'clock. Certainly you have most wonderful patients; I did not suppose it was nine o'clock yet, or I would not have kept you so long. I am going to tell you the rest of the story the next time; it is quite interesting,--the tests of endurance made by Prof. Fisher, of Yale University, who came here and tested a lot of our doctors and nurses and attendants, then went back to Yale and tested the athletes down at Yale, and he found the most surprising thing--that our sedentary men, our doctors and nurses here, that work indoors and were not in training, came out so far ahead you would not believe it; the best athletes they had at Yale, when it came to testing endurance,--well I will tell you about that, and explain these tables and some others next time.

v-9-11-8.

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Question Box Lecture in Sanitarium Parlor, Battle Creek, Mich.,

Thursday, September 24, 1908, at 8:00 P.M.,

by J. H. Kellogg, M. D.

Ques. Is there hope for a very bad hyperchlorhydriac?

Ans. Yes, there is hope. There is a great hope. In fact there is a great deal more hope than there is for a hypochlorhydriac who is very low down. You know when you have got too much speed you can put on the brakes, and it is a great deal easier to put on the brakes than it is to get up steam, isn't it? It is a great deal easier to slow down than to get up speed. It is a great deal easier because there are natural forces we can bring to bear to lessen pressure, to lessen force, to lessen energy, but to furnish steam, to furnish energy, that is quite another thing. Now if a person has the habit of making too much hydrochloric acid it is not a difficult thing to slow that stomach down, to train it down to do the proper amount of work, but when the stomach has lost its capacity to make hydrochloric acid, when the glands that secrete pepsin and the glands that make hydrochloric acid have undergone atrophic changes, and undergone degeneration so they disappear why then you see it is a hopeless kind of a case and is very often a difficult sort of a case. When a person's stomach does not make enough hydrochloric acid or enough pepsin it is always a difficult case, but when the power is entirely gone it cannot be restored, but when a person's stomach makes too much hydrochloric acid and too much pepsin it only requires the proper diet and proper management to restore the patient to the normal condition.

Q. Please enumerate the foods such as a person ought to eat.

A. Now it is better to name the food you ought not to eat than to name a few that you ought to eat, and then all the rest may be included. In the first place you ought not to eat any meat at all, or any kind of flesh food. Why?

There is a reason. I feel there is a good reason for everything I advise here from this floor. When I stand before this question box I feel that I am on the witness stand and must speak the truth and nothing but the truth. I am sorry I cannot always speak the ^{whole} truth: I do not always know the whole truth. Now why should a person who has too much acid in his stomach abstain from flesh food, a person whose stomach makes too much acid? For the reason that of all substances known flesh foods excite the stomach the most. They excite the stomach the most. How do we know that? From actual tests. Pawlaw, a great St. Petersburg bacteriologist--I know him personally, have been in his laboratory and have seen his experiments repeated. They were done for my special benefit so that I might see them. When I reached the laboratory Professor Pawlaw said to me, "Call on a certain day and everything shall be at your disposal," so I was on time and from that time on so long as I remained in St. Petersburg his laboratory and his assistants were at my command to do whatever I wished to have them do, and to repeat whatever experiments I wanted repeated. Each day we made out the program for the next day. The doctor would say, "What next?" "What shall we do for tomorrow?", so we would arrange the program for the next day and I would find all the assistants waiting for me in the morning to do whatever I wanted to see done. This was one experiment. Professor Pawlaw had a lot of dogs which he has performed operations on which make it possible to observe the internal operation of the body with a great degree of accuracy. Some three hundred years ago nobody knew anything at all about digestion. Nobody knew about digestion three hundred years ago, but one hundred years ago a fortunate accident occurred. I say it was a fortunate accident. It was really fortunate for the human race. Away up in the northern part of Michigan there was a Canadian

sailor who was working there in the capacity of a hunter at that time for the North American Fur Company. He was starting out to shoot ducks one time and in getting out of his canoe his gun, which was loaded with duck shot, was fired off within a few feet of his body and the full charge was received right on his stomach, coming from the side, and it carried away the front of his abdomen. A large place as big as the front of the hand was torn away from the abdomen^{mal} wall so that when he was brought to Doctor Beaumont, the surgeon of the post, or rather when the doctor was brought to see him, he found the man with a most terrific wound. Here was this poor fellow with the abdomen^{mal} wall torn away and the front portion of the wall of his stomach torn away and a portion of the chest cavity torn away so that he could look in and see the lungs and see the inside of his stomach, and the poor fellow seemed to have but a very few hours to live, but in spite of the very unfavorable outlook for the young man, he was of such a tough, hardy disposition that he made an excellent recovery, but he recovered with a hole in his stomach, with a window in it. The edges of the wall of the stomach grew fast to the edges of the skin. You see just what would happen. The edges of the stomach wall grew fast to the edges of the skin so that there was an opening direct into the stomach. He had a great deal of trouble because when he would eat his breakfast he would have hard work keeping his breakfast from getting away from him, so the doctor fixed up a kind of stopper for the window that he placed over it, and he always had to keep this in place after a meal to keep the food from escaping. The doctor saw here was a good chance for observation so he hired this man and kept him in his employ and observed him for three or four years, and made a great many observations, and these were the first scientific observations that were ever made on the subject of digestion. This man, Alexis St. Martin, was alive and living in Canada within my own

personal recollection, I think within twenty years. He was an old man of seventy eight years of age, but the window at that time was almost entirely closed up. It was just a minute little opening, but it was so much closed up that he was no longer available for experimentation, but he was with Doctor Beaumont for some length of time. He observed Alexis St Martin used to go off on a spree once in awhile and whenever he did when he came home *from one,* the doctor noticed that the inside of his stomach was inflamed. There were ulcerous patches on it, yet the man didn't know anything about it. There was no pain in the stomach at all, altho there were great ulcerations there, much congestion and irritation, but he knew nothing about it.) He was not conscious of it. I remember just at this moment some 32 or 33 years ago I was giving a talk on the effects of alcohol on the stomach, and I had a blackboard and a piece of chalk and made a picture of a drunkard's stomach and showed what happened to the stomach. I made a picture on the board of Alexis St. Martin's stomach as Doctor Beaumont showed it, and in the back of the audience I noticed a commotion or disturbance, and I noticed two or three men carrying out a man thru the back door. This man came up to see me after the lecture to apologize for what happed, for the distrubance, and I said, "What happened to you? what made you faint away?" He said, "Doctor, I used to be a drunkard and when I saw that picture on the board it just overwhelmed me. I wish every man that drinks whiskey could have that impression made upon him. I wish every man that drinks whiskey could see what the condition of his stomach is when alcohol goes into it; that irritated, ulcerated condition that occurs when this condition continues for several days." I tell you this not that I imagine any of you drink or are likely to drink, but for another reason. (Doctor Beaumont observed that when Alexis St. Martin took mustard pepper, pepper sauce, etc. into the stomach the very same thing happened

as when he took alcohol alone--as though he had been off on a spree in other words. Mustard, pepper, pepper sauce and other such things produce the same effect on the stomach as alcohol only they are much more irritating and so much more powerful in producing these bad effects. I was just upstairs seeing a patient, just came down a moment ago, with one of the doctors, and I found up there a man who had an enormous liver. We were talking over the probable causes of this condition and I suggested it was probably degeneration of the liver, due to wrong habits, but the doctor said he had never used any alcohol and never even used tobacco and so why should he have a degenerated liver, so I said, "Doctor, do you remember a book which Doctor Boix in Paris wrote a few years ago? He made a lot of experiments on dogs, rabbits and guinea pigs and he found that pepper had six times the power to make gin liver that gin has." Just remember that. Pepper has six times the power to make gin liver that gin has itself, and mustard and pepper and pepper sauce and all these hot, stinging, irritating, astringent, blistering things that people swallow along with their food, which people sometimes use to cover up and destroy the sweet and delicious flavors that nature puts into our food to make them attractive to us, are, all of them, extremely irritating, and they have a more stimulative effect on the liver than alcohol itself does, and Doctor Boix found that when he added to the rabbit's food some fecal matters from the colon of a mammal, a man, a horse, a cow or any other animal, the same kind of germs you are eating when you eat milk at your table, that is, raw milk, milk that has not been sterilized, you are taking a whole lot of these germs. Of course if the milk has been boiled the germs are dead, but the dead germs are almost as bad as the live germs, because he found when he took the poisons produced by these germs and mixed the colon poisons with the food, even after the germs were dead that the effect was, either from the germs or germ poisons to cause a degeneration of the liver: the same kind of degeneration

that alcohol produces. In other words auto-intoxication is the cause of the alcoholic degeneration of the liver, so there are plenty of reasons for enlargement of the liver and degeneration of the liver besides the use of alcohol. Now this is one of the things that it is important to take notice of. In cases of this sort that cause trouble with the liver we may see degenerations in every part of the body, maybe the result of the absorption of these dreadful poisons from the colon, and these poisons are produced by flesh foods more than by any other food; in fact flesh food is the real source of them. The man who has hyperacidity of the stomach must discard these poisons altogether. Now I am going to tell you some more about Pawlaw's experiments on his dogs. He had some dogs that he had operated upon so that they had windows in their stomachs just as Alexis St. Martin had a window in his stomach. Alexis St. Martin's window was made by an accident with a gun but the doctor fixed the dogs up with windows by surgical operations. Such a dog does not suffer nearly so much as Alexis St. Martin did because he goes to sleep with an anesthetic and feels all right and the next day has his dinner just as usual. He feeds the dog then different kinds of food. Here is a dog with a window in its stomach, with a door in its stomach so the juice will run out of the stomach. He gives the dog different foods, gives them bread and milk, and when he gives them bread the bread produces gastric juice with a great deal of pepsin and very little acid. When he gives him milk the stomach produces gastric juice with very little pepsin and very little acid. Bread produces gastric juice with a great deal of pepsin, with a great deal of digestive power. Milk produces gastric juice with little pepsin and little acid. Meat produces gastric juice that is extremely acid. The most highly acid gastric juice that can be produced at all is produced by feeding the dog meat. When the dog is fed milk the stomach produces

very little acid and pepsin, and we know that. We know that by actual experience, and we find the same thing true of human beings. The man who eats meat, his stomach gets into the habit of forming acid, and the more meat he eats the more acid is formed by his stomach. You say, "I cannot understand it because I always feel so much better when I eat meat, and it agrees with me better than anything else I can find. Now there is a good reason for that. The meat, while it provokes the formation of acid, at the same time it neutralizes the acid; that is, while a great deal of acid is formed it sucks it up, but the stomach makes more acid just the same.

Q. When the stomach has too much acid, has a person a desire for fruit juices or anything sour?

A. Sometimes, yes. Sometimes, because the acid of the fruit and the acid of the gastric juice havn't any relation at all. They are entirely different acids. The fruit acid cannot take the place of gastric acid at all. Fruit acid has the nature of sugar. It is of the nature of sugar and starch. That seems very curious doesn't it? but here is a little citric acid and here is some starch and here is some sugar. We can set fire to all of them and they will burn up. Citric acid will burn up. Starch will burn and sugar will burn: they will all burn. But now here is some hydrochloric acid, the acid of the gastric juice. You cannot burn that. It is a mineral substance you see, and won't burn, so there is no relation at all between vegetable acids and the acids of the stomach, but if a person's stomach is very sour and smarts and burns it may be sensitive to the mineral acids--the acid of the gastric juice--and also to vegetable acids. A person might have a craving for acids if the body needs acids even though the stomach makes too much acid. Now, as I said the gastric juice is neutralized by meat. For instance, here is some meat. We pour on that some muriatic acid: dilute muriatic acid and it will disappear. The meat will absorb the gastric juice the same as soda or any other kind of

alkali. It will combine with it and neutralize it, and it does the same thing in the stomach. Now when this occurs in the stomach, the stomach by having the acid absorbed in this way secretes more juice, more gastric acid is formed and more and more and more, but the meat sucks it up, neutralizes it, combines with it, so the person is for the time being relieved. Now let that person who has been accustomed to eating meat, and whose stomach is accustomed to making a large amount of gastric acid, let that person eat some bread, for example let him eat a little bread and he is in trouble right away, because the stomach makes a larger amount of acid, but the stomach does not neutralize it, so he is in trouble right away. Let this man whose stomach is accustomed to make such large amounts of acid drink a glass of milk, for example, and he is in trouble right away. Why? because that gastric acid curdles the milk, causes the milk to form large hard tough curds, so hard and so tough that they cannot digest in the stomach. They are a long, long time digesting, and in the meantime they ferment and decay and rot and the patient perhaps has a bilious attack or maybe it remains in the stomach a long time and he feels a heavy load there and by and by vomits up a whole lot of curds. That is what happens to the baby's stomach. (I used to recommend milk pretty often because I thought it was good, but I do not recommend it now. I used to use it myself, and I had a bad taste in my mouth and a coated tongue, and a headache all the time and didn't know what was the reason, and I didn't get over it until I stopped using milk. I said to a man one day, "You eat milk." I thought it was good for him. He didn't eat meat and I thought he needed protein. I thought he must have something to take the place of meat, and so I told him to eat milk, but, he said, "Doctor, I can't eat milk." I said, "How is that?" He said, "Oh, I had been out late one night and when I got home it was so late I didn't want to eat any supper and I was very tired and very hungry, so I thought I would drink some milk, so I drank half a pan of milk

and went to bed and slept all right until about three o'clock in the morning, then I woke up feeling very wretched and very miserable, and by and by I felt something tickling ~~in~~ my throat and I began to choke with something in my throat. I managed to get hold of it and I pulled out a solid rope of milk three yards long." Now that milk, you see, had formed an enormous, hard, tough curd in his stomach, and it was very lucky he got hold of it. Now this man then eats fruits and the fruits are acid, and the stomach pours out more acid, and the acids of the fruit and the acids in that man's stomach are acting together in that man's stomach and producing heartburn and a very painful distressing condition. The stomach is sour. There is a pain under the left shoulder blade and pain between the shoulders, headache, perhaps nervous headache, and the man has a very wretched time, so the poor man says, "What can I eat?" He cannot eat oatmeal mush and sugar--that is about the worst thing in the world you could eat anyway because oatmeal mush and sugar are not digested in the stomach because the sugar cannot digest anyway and the sugar interferes when it is present in the stomach, with the digestion of starch and the acid that is formed neutralizes the saliva and prevents the digestion of the starch and there is nothing there, or very little, to neutralize the acid and consequently it just lies there in the stomach, cannot digest, cannot get out, so the result is that it ferments and the poor man is wretched enough. Now, as I said, the man tries all the different cereals and they all sour on his stomach. They don't ferment. Generally they don't ferment so much as they simply lie there and the gastric juice being formed in abnormal quantities and not utilized because it cannot combine with the starch and it just lies there unabsorbed, so the stomach is irritated by the excessive amount of new hydrochloric acid or gastric acid, so he says, "Well, now I can't eat anything but meat. Meat just agrees with me," and he eats a piece of

kind of starchy foods. The butter protects the starch of the food you see because it hinders the stomach from making any acid, so the saliva cannot act upon the starch and digest it, but that does not mean griddle cakes, it doesn't mean doughnuts and it doesn't mean saratoga chips, it doesn't mean that kind of combination, because the fat that is burned in soaks the starch full and the gastric juice and the saliva cannot get at that starch to digest it. The saliva cannot digest the starch and the gastric juice cannot digest the protein which is linked with the starch, and so it is entirely indigestible. A starch granule with a film of fat around it, outside of it, is as thoroly protected from the action of saliva as the foot is protected from water inside of a well greased boot. The water you see cannot get thru the boot and the saliva cannot get thru the film of oil around the starch, so these fried cereals are about the most indigestible of anything you can eat.

Q. How long could one continue on two or three hours sleep per day working hard all the time?

A. Now that just depends on how tough he is. I should say it depended as much upon his ancestors as it did upon him. I should advise him, however, not to do it for it does not pay. It does not pay to go without sleep. One ought to sleep eight to ten hours every day. My regular rule is to sleep every minute I can get a chance to sleep. If I find I havn't anything else to do I immediately go to sleep. If I can get out of a job at any time I can always shut my eyes and take a nap. I can sleep and get a little bit ahead for the next time. When I get on board the cars I generally curl down in a seat and go to sleep and I am asleep inside of five minutes, and then after I have had a nap I wake up and go to work, but sometimes we are put on a stress where we cannot get the opportunity to sleep. I should say that the average person needs eight or nine hours of sleep, and it is not wise to strain your constitution or nerves by going without sleep if you can possibly get it.

Q. Would it be beneficial for a person with bronchitis to take cod liver oil in

A. the winter months?/ Only in the absence of any other fat. Cod liver oil is better than no fat at all, but it is the worst fat I know of. The principal difference between cod liver oil and any other kind of fat, as butter for example, is that cod liver oil is contaminated with rotten cod livers and that is the only difference. An eminent firm of chemists in London a few years ago made a careful study of cod liver oil and they found that the only peculiar properties of cod liver oil are the ptomains and poisons which are extracted from the cod livers, from which the oil is obtained.

Q. What causes the spots and dots which move and float before the eyes in an eccentric fashion when the eyes are slightly closed?

A. They are specks in the vitreous humor probably. Call and see Doctor Byington, and let him peek into your eye and see where they are. If these specks move along with the eye they are in the back part of the eye ball. If they move in the opposite direction they are in the front side of the eye. Sometimes when you move your eye this way you see the spots going the other way: then they are in the front of the eye ball. If they are in the back part of the eye ball they go the other way.

Q. Is there some special diet known that will rid one of colitis.

A. ~~Yes~~, live on the Battle Creek Sanitarium diet, cut out meats of all kinds and live on the low protein diet. Live outdoors, keep the bowels active and especially eat as much raw food as you can. Be sure the bowels are thoroly evacuated every day. A yogurt diet is especially important in such cases. This autointoxication of the colon, thru colon infection, is a most common malady, and it is responsible for more disease than any other one condition I know of.

Q. When one's general health is good and he sleeps well yet suffers most distressing and constant pain and pressure in and about the regions of the bowels, altho following careful diet, light baths, sun baths and water baths, what else can

one do to get rid of this special trouble?

A. It is probable that in this case there is a colitis. Probably this trouble is in the colon. It is more often there than anywhere else. Maybe it is due to distention of the small intestine with gas, and the proper thing is that the diet should be regulated to your exact condition. If there is a good deal of gas it may be there are fermentations there which cause the formation of gas, and carbonic acid gas is generated. In this case the patient should take a diet which would starve out these germs and should take in some instances antiseptics. The bowels must be thoroly evacuated as there is a condition of intestinal autointoxication goes along with it because there is retention of fecal matters, and there must be increased peristaltic activity.

Q. What is the best substitute for mother's milk?

A. The best substitute for mother's milk is lacnut, which is prepared from almonds and other nuts and malt honey. Malt sugar takes the place of the sugar of the milk, the fat of the nuts takes the place of the fat in the milk. The available casein which is in the nuts is more nearly like the casein in mother's milk than any substance that can be found in the world. It is much more like it than the casein of cow's milk. There is very little casein in mother's milk but a great deal of it in cow's milk. The casein in cow's milk forms large hard tough curds. Mother's milk does not form large hard, tough curds. The infant's stomach is not adapted to that kind of diet. These hard, tough curds are intended for a cud chewing animal that has four stomachs and has a long alimentary canal. It is intended for that sort of an animal and not for an animal with a simple stomach adapted to a different sort of diet. Lacnut is prepared for the special purpose of imitating mother's milk and it has in it those substances which are closely allied to the constituents of mother's milk, and in such proportion that when an ounce of lacnut is added to a half pint of water it gives exactly the proportions and composition of

mother's milk, and is so nearly like it that I dare say the chemist himself could scarcely tell the difference. It is, as I say, the best substitute for mother's milk which has been prepared to be substituted for mother's milk.

Q. Some people say that the Sanitarium diet has a tendency to produce an inactive state of the bowels. Is this true?

A. Now that is true if you have been accustomed to eating a great deal of rubbish, a great deal of beefsteak with the connective tissue, and a great deal of rubbish, a great deal of salads ~~xxxxxxx~~ and such things that contain a great deal of indigestible material and considerable amounts of pickles, which are altogether indigestible, which don't digest at all, and green olives and things of that sort. When one who has been accustomed to that kind of a diet comes to take a ~~selected~~ diet, with reference to its digestibility, its complete digestibility, when one comes to take a diet of that sort naturally there is less residue, so in such cases we sometimes find that there is a tendency toward inactivity, but on the other hand there are other things besides that rubbish which stimulates the action of the bowels. Acids stimulate bowel action, sweets stimulate bowel action and fats stimulate bowel action, so a person who drops off meat and drops off these other things, who has been accustomed to them, must take a large amount of fruit as a substitute; fruit acids and sweets and fats will stimulate the bowels. He should take a considerable amount of fat because this is stimulating to the bowels. Malt honey is a very stimulating substance. A couple of teaspoonfuls of malt honey will move the bowels of the infant almost as quick as castor oil. In the surgical ward when the bowels do not operate properly and laxatives do not produce the necessary movement of the bowels we introduce half a pint of malt honey with half a pint of hot water: we introduce that into the bowels and it never fails. It is the one remedy we resort to in extremely difficult cases, and we find it very useful.

Q. I have been troubled with stomach trouble the last seven years. I have a severe pain every morning about 5.30. Would like to know what is the trouble and what makes it come on me.

A. The symptoms given here are not quite sufficient to identify the disease, but since the question was written--it has been in the box several days--I have seen the gentleman who wrote the question and have made an examination, and found that particular pain which he suffered from was due to diseased condition of the colon. Many persons suffer from pains which they think to be in the stomach but which are really in the colon. Ask a man where his stomach is and he will generally put his hand down heresomewhere (indicating) but it is away up here (indicating). The upper portion of the stomach lies as high as the fourth rib. The stomach practically is all above the lower portion of the ribs. The lower portion of the stomach is two inches above the lower portion of the ribs. The stomach goes down only a couple of inches below the sternum. It is all up inside of the lower portion of the chest, so the stomach really lies here (indicating). A lady the other day said, "Oh, Doctor I have such a pain in my stomach," and she put her hand away down to her hip bone, and I am not so sure but what her stomach was there. I hunted around and found it was very low down but not quite so bad as that. In this case this gentleman thought it might be in the stomach, but it was really in the colon. He has catarrh of the colon and sore surfaces in the colon. I found that pain was closely connected with the movement of the bowels. It came just before or after the bowels moved. What are you going to do to cure it? It is not necessary to do anything because it will certainly get well. Suppose a man came to me and said, "Doctor, here is a raw surface where the skin has been rubbed off. Do you think you can cure it?" "Certainly not." "Well, doctor, can't you rub something on it to make it get well or heal it?"

"No, there is nothing that can be rubbed on to heal it."

"Will it get well then?" How would it ever get well if you can't put something on it to heal it?"

"Just let it alone, the body heals itself."

Suppose you saw a dog running around with a piece of skin rubbed off, you wouldn't be running after the dog to put something on to heal it. It gets well of itself. There is a healing power in the body that heals and restores and that power works on inside of the body just as well as on the outside. If you have got a sore place in the bowel or stomach it has just as good a chance to get well as a sore on the outside.

Q. Will the X-ray determine irregularities in the outline of the stomach and the bowels?

A. My friends the stomach is full of irregularities. It is not regular at all. It is not even at all. The stomach is all kinds of shapes. I never in the world saw two stomachs that looked alike. The stomach is not the shape you see it in the books. It has all kinds of irregularities. It hasn't perfectly rounded outlines exactly of a definite shape. The stomach is in all kinds of shapes. It is one shape one minute and the next minute it is another shape. The stomach is a live thing, and is all the time working and wriggling about like an angle worm. So with the intestines. They are not of regular shape. They are all kinds of shapes. They are twisting and wriggling about, turning, contracting, stretching and pulling about in all sorts of ways. If they are doing this work quietly and unobtrusively they are doing the work well.

Q. Does bismuth leave any bad injurious effects?

A. No, but if there is a growth in the stomach or bowels the administration of bismuth and the application of X-ray, examination by X-ray enables us to see just what the formation is, because the bismuth marks out the inside.

Q. Should one take a bath head first or feet first?

A. Head first always, but of course I don't mean you should always plunge in head first. The proper thing is to dip some water out of bowl and apply it to the head: bathe the head first and wet the hair thoroly. If you are getting into a full bath then get in feet second: head first and feet second. In other words bathe the head thoroly with cold water three or four times. Bathe it well three or four times, and thoroly, before getting into a cold bath.

Q. What causes skin tags and how can they be removed?

A. These are simply excrescences of the skin--superabundant growth. The way to remove them is to scrape them off. This is very easily done, and there is very little pain about it. A little cocaine may be applied or they may be frozen up so there is no pain at all.

Q. Kindly give us the approximate daily average weight of food you personally eat and name a dozen or two of foods you personally like to eat the best and deem most nutritious for those of good physical condition like yourself.

A. I don't know as I can say the exact quantity. Let me see if I can figure up what I have eaten today. I had half a small melon for breakfast and a couple of peaches and a small bowl of broth: that was my breakfast. I had for my dinner four rice biscuits and a slice of graham bread and a bit of watermelon, a bit of musk melon and a couple of small potatoes and some more peaches and malt honey. That is my ration for today. Oh yes, I ate a table-spoonful of almonds. It does not require so much food if one takes particular pains to chew it well. I ate a bowl of broth besides. I think I have given you a fair example of my daily ration. That is enough for me, but here is a man working out in the harvest field, working hard making hay, perhaps. He ought to eat twice as much as I am eating; or here is another man that is engaged in hard muscular activity. He ought to eat twice as much

as I am eating. I don't do a quarter of the hard work that that man does who is working on the farm or in the harvest field pitching hay and doing all sorts of things. He ought to eat twice, perhaps three times, as much as I am eating. It does not do him any harm I am sure to eat twice or three times as much as I eat, but the sedentary man who sits in his office all day, the average sedentary man does not need any more food than I require. The average brain worker requires a very small amount of food. The average brain worker does not use any more energy with his brain than the loafer does. He doesn't use any more energy from food than the loafer does. Experiments have been carefully made to test this out by the calorimeter at Middletown, Conn., by Doctor Atwater, the famous food expert. He tested this out. He put a man inside the calorimeter in such a way that he could test all the energy thrown off by his body and all the food that this man eat and he found when this man was loafing, doing nothing at all, he used just as much food energy as when he was studying just as hard as he could, doing just the hardest kind of mental work; working with his brain to the highest point of mental activity.

Q. What is the cause of saliva flowing from the mouth during sleep?

A. It is probably a reflex irritation of salivary glands, maybe because the mouth was open.

Q. What would you recommend for one who seems well but is sleepless at irregular intervals?

A. I would recommend that patient to get rid of that sleeplessness at irregular intervals. There are several causes of that condition, but the probable cause is intestinal autointoxication--a stasis of decaying foodstuffs in the intestine. I have seen a number of such cases very recently. All they require to get good sound sleep is to get the bowels thoroly cleaned out, to get the poisons removed from the blood and the irritation removed from the brain and the patients are all right.

Q. What is the harm in eating candy?

A. There is no harm at all if it is the right kind of candy, but candy made from cane sugar is harmful. ^{Cane} Can sugar is the thing that does the harm. ^{Cane} Can sugar is an irritant. A ten per cent solution of ^{cane} can sugar produces very decided irritation of the mucous membrane, so cane sugar should be avoided in the form of candy or in any other form. If, however, the candy is made of malt sugar it is quite another thing, because malt sugar is a natural food. All the starch we eat, which is about one pound a day, is converted into malt sugar or maltose. ^{which} Meltose_A is simply a solution of maltose, or malt sugar, is produced in this form, and health chocolates and health creams, and made from malt sugar rather than cane sugar. These have been prepared for the purpose of satisfying the candy tooth or the candy appetite, which have become very prodigious in this country.

Q. What is the best treatment for prolapsed stomach?

A. Now I suppose that the very best treatment for the prolapsed stomach is that it should be reversed: turned upside down so the stomach would fall up for a few years, but we cannot do that. We must do something more practical than that, and the next best thing is to fasten the stomach up in place by means of an abdominal supporter to hold it up so it won't have an opportunity to sag down. I recommend people with prolapsed stomachs to wear bands to support the bowels. When the colon becomes over weighted it drags down and pulls down the stomach because the colon and the stomach are attached together, so the colon generally is the real cause of the prolapsed stomach. When the colon falls down it has to take the stomach along with it, so by supporting the bowels from below this difficulty may be relieved. Then the abdominal muscles must be developed by exercise, by leg raising and various other

exercises given in the manual swedish movement department.

Q. Can one prevent nervous attacks by will power and determination?

A. Oh, yes, there is no doubt about that. I have seen that in a great number of cases. Almost every woman, in fact, knows she can have a nervous attack or not when she likes. I have known ladies to use nervous attacks now and then for special purposes: they found a demonstration of them was really advantageous: it was diplomatic. But men have nervous attacks as well as women, and when a person is brought into great strain and feels his nerves beginning to go to pieces if he simply lets himself go and thinks about it he may find himself in a very embarrassing situation, whereas if the will is vigorously set at work to combat that thing and to divert the mind to something else, the whole difficulty may be easily passed over.

Q. Will a sufficient force of self reliance overcome nervous disorders?

A. It will overcome some nervous disorders, and some it will not. If the nervous disorder is of a ^{psychic} ~~physic~~ character, if it is a ^{psychic} ~~physic~~ disorder, that is, if it is that portion of the nervous system which ^{is} under absolute control of the will then it may be overcome, but if the nervous disorder is due to organic change or some reflex disturbance from the stomach or bowels or some other cause then of course the will will not be able to control it entirely. It is only such nervous disorders ~~that~~ are under control of the will that can be controlled in that way.

Q. What causes lumbago and sciatica?

A. The most common cause is intestinal autointoxication. That is the only explanation that has ever been brought forward for the ordinary idiopathic lumbago or sciatica.

- Q. Which is best to drink in the morning, hot or cold water?
- A. That depends on what is the matter with you. If you have hypochlorhydria drink cold water: if you have hyperchlorhydria drink hot water, but not very much of it. Half a glass of hot water half an hour before breakfast. If you are a hypochlorhydriac sip half a glass of cold water, but don't take too much of it.
- Q. Don't you think it would be a good idea to have all the windows open in the inside gymnasium?
- A. yes, certainly.
- Q. Would it hurt to leave them open during the night?
- A. No, not if it didn't rain.
- Q. What causes a person to feel hungry after a good meal and taking pains to fletcherize very thoroly and giving a whole hour to the meal?
- A. Probably an excessive production of hydrochloric acid.
- Q. What is good for biliousness, and what is the cause?
- A. Biliousness is autointoxication. It is simply a state of poisoning from the food stuffs in the intestines which have been discharged from the body but have been retained for too long a time until putrifaction takes place, and the cure is to secure more rapid transition of the food substances thru the body and to avoid foods which decay easily, which means cutting down eggs to the smallest possible amount. Better not eat eggs at all. Any number of people will tell you eggs make them bilious; they have found it out by experience. Why? Because they undergo decay. Fragments of undigested eggs undergo decay and form poisons which cause this feeling of biliousness.
- Q. I have a stiff neck of three weeks duration. Have been doctoring it but can't remove it.
- A. I should think a fomentation and a heating compress, good thoro massage, the sinusoidal current, static electricity, a high frequency current, application

of a photophore and the arc light and galvanic current might perhaps be sufficient to remove that. If not there are several other things I know about that will help it.

Q. Please tell what you would do for a woman who has had asthma for years and has had it every day.

A. I should tell her she has got intestinal auto-intoxication, probably, and there are very few exceptions. I met a case a few days ago. A lady came here with asthma so bad she was nearly worn out with it. She had it night and day. It is wonderful what a change occurred in that woman in a week. The asthma practically disappeared, tho she had suffered with it for months, by the simple application of the Battle Creek Sanitarium dietary and simple treatment—just simply a wet cloth upon her chest covered with a dry flannel was really the thing that gave her almost complete relief. Poisons formed in the colon and taken into the blood and excreted thru the lungs irritate the mucous membrane of the lungs, causing a spasm of the lungs and the small air tubes so that when the air is taken in it cannot get out, and that is asthma.

Q. Owing to tenderness in the roots of my teeth, cannot press upon them while chewing.

A. Go to see the dentist and let him fix up those roots. The probability is that there is a little ulceration of the roots.

Q. What is the first symptom of kidney or Bright's Disease?

A. The first symptom is blood pressure. If you have a blood pressure of 140 you may be pretty sure you have kidney trouble. If they are not already diseased by the condition known as Bright's Disease they are getting old and ready for that condition. The pre-nephritic condition is present, as the French call it.

Q. What causes cracking at the base of the brain?

A. It is the slipping of a tendon or cartilage, or one cartilage passing over another.

Q. What is the meaning of intestinal autointoxication?

A. It is absorption of poisons from the intestines which have been produced by the decaying of foodstuffs.

Q. Is there much nourishment in grapes?

A. No not very much: about ten per cent.

Q. Does uric acid in the blood cause rheumatism?

A. I think it does not. I used to think it did, but now I think it does not. It is these products of putrifaction that cause rheumatism. It is these decaying poisons which come from decaying proteins and flesh foods, an excess of protein in any form in which it is eaten. It may come from nuts also.

Q. What causes a heavy feeling an hour and a half after eating, after fletcherizing thoroly?

A. Possibly over eating. Possibly an irritation of the mucous membrane of the stomach. It may be an excessive formation of gastric juice. The best remedy is to drink a little hot water and lay down and keep quiet after meals. Drink the hot water at the end of an hour and not immediately after meals unless it is necessary to do so.

Q. I have not used milk for years: I have not had headache for years, and

a. yet my doctor says I have autointoxication. How can this be? / I am not at all surprised. You have simply got an infected condition and have not gotten over it yet. You will have to have perhaps some special thoro-going treatment and will have to persevere for a long time before you get entirely rid of these infective organisms. It is not an easy thing to cure autointoxication.

It is an easy thing to improve the conditions: to remove some of the causes: but if the body has once become infected it is difficult to get rid of it. Suppose you have got a house full of red ants, is it an easy matter to get rid of them? or a house full of cockroaches or bed bugs, is it an easy matter to get rid of them? Some of you have had experience in trying to get rid of them. You could sweep your house clean, scrub it every few days, but in a few days they would be swarming out again because they multiply with such enormous rapidity. The same thing is true of these putrifactive organisms: they are multiplying in the alimentary canal all the while. There are seven square feet of surface in the alimentary canal and there are a great number of little pockets and folds and crannies and nooks in this tortuous canal where these germs are hiding. When one takes a laxative he weeds out a whole lot of them: gets rid of a whole lot of these bacteria, but still there are a few remaining behind and the first chance they get they will get into a mass of putrifying food and multiply with very great rapidity.) I am going to give you a little problem to figure on between now and next lecture night. A germ doubles every fifteen minutes. Now start out with one germ and double it every fifteen minutes for twenty four hours. Now you have one: in fifteen minutes it will be two: in another fifteen minutes it will be four: in forty five minutes it will be eight: in an hour it will be sixteen, and so on. Figure up and see how many it will be at the end of twenty four hours, doubling at that rate. It will be astonishing to see how many there are. You will say it is impossible, and of course it is impossible for this thing to happen in the body because the poisons produced by these germs kill them off. The poisons kill them and the foodstuff is used up, so their power of growth is limited, but we will see the next time how many germs you have got.

Q. Should a person eat when he feels bilious?

A. It may be just as well for him to eat, or perhaps he can get along without

eating. Perhaps he ought to stop eating. He may take apple juice, perhaps, or some other kind of fruit juice. It all depends on what he eats. He may eat all the watermelon he wants to, but should reject the pulp. He may eat plums, peaches pears or any kind of juicy acid fruit will do him no harm, but if he is nauseated he should eat nothing for a day or two, but if he is bilious and not nauseated it is perfectly harmless for him to eat fruit.

Q. Explain why a person with inactive bowels, very sluggish bowels, should never have a headache, such as my case.

A. Because he has an extra good liver and kidneys, and the poisons are carried out fast enough so the head is not irritated. Possibly you are not as sensitive as other people.

Q. Does flushing of the colon cause prolapse of the rectum and ultimately cause piles?

A. It may sometimes, especially when warm water is used continuously.

Q. What is best for pain in the bowels?

A. Heat or cold. Heat is the best thing for pain. Heat is the remedy for pain unless the pain is superficial pain and due to inflammation, and then cold is sometimes better. However, heat is sometimes best. Heat kills pain just the same as opium does. Opium relieves pain. It kills it somehow: nobody knows how. It affects the nerves somehow: so thru the nerves heat relieves pain, hence the heat kills pain.

Q. What do you think of the use of rectal dilators?

A. We have very little use for them. Once in a while a patient is benefited by them, but for the most part they are humbugs.

Q. What treatment will relieve lumbago?

A. A very hot bath. Fill the tub with about six inches of hot water, water at 112 degrees, then get into it, right down into it, or generally sitting in

it is sufficient, and then let some more of the water in and some more and more and more, until the legs look like boiled lobsters and the pain will generally disappear. Then have some water at 80 degrees poured over the body, and then go to bed. Repeat it in three hours: repeat it every three hours for a day or two or three days if necessary. Generally two or three treatments will relieve it.

Q. What is the best remedy for slow digestion?

A. Correction of the dietary. Eat digestible foods. Take pains to chew the food very thoroly. Live an active, outdoor life. A moist abdominal bandage and sometimes a fomentation applied once or twice a day are beneficial.

Q. Is it possible to permanently cure lumbago?

A. yes, the cause must be removed. very often it is due to intestinal auto-intoxication. Very often this pain in the back^{which} is thought to be lumbago, is due to a diseased colon. It is referred pain: pain that is reflected back when the trouble is not in the back at all, but really in the colon.

Q. Should bananas be scraped in order to be digestible?

A. Yes, if they are very stringy. If the outside of the banana is removed the fruit will be found to be digestible. The best way is to put it thru a colander: take a very ripe banana and put it thru a colander. Banana pulp prepared in this way is thoroly digestible. We are feeding this banana pulp to a lady over at East Hall who could not eat anything, and she has retained it on her stomach and is getting along well. We find it a very valuable remedy and perfectly harmless. We can feed it to a baby without any harm at all.

Q. Is it best to take a shower bath before a sun bath or afterwards or both?

A. Take the shower bath after the sun bath.

Q. What is arteriosclerosis? Is it physiological or pathological, or both?

A. It is a pathological condition, a diseased condition which comes on in old age, but old age is a diseased condition. The old man or woman is a person

whose arteries have become hardened, shrivelled up, so the tissues are no longer supplied with the proper amount of blood. The irrigation by the blood in proper amount is no longer carried forward, so the person dies really of starvation: the tissues starve: that is why the muscles shrink, the brain dries up, why he grows shorter of stature, because of the lack of blood supply to his tissues, so he dies. This is due, as Metchnikoff has shown, to the absorption of poisons from the colon, so the man who has the shortest colon is likely to have the longest life. Metchnikoff goes so far as to suggest that we would be better off if we could have our colons amputated, and Dr. Arbuthnot Lane, of London, has taken the cue and gone to work amputating colons, and he says he finds his patients a great deal better off without the colon than with it. I saw him do the operation when I was in London last year and he told me afterwards that the patient made a nice recovery. I saw several patients he had operated upon and I should think they had been actually resurrected from the dead almost. He told me they had been poor, emaciated, saffron-colored specimens when they came to him, and here they were in good health. One of them was a trained nurse, but she was sick. She would go to the doctors for help and get well and go to work for three or four weeks, and then get sick again, and it was due to nothing in the world but rottenness in the colon, and Doctor Lane said there was nothing in the world to do but remove the colon, so he removed the colon and attached the small intestine to the rectum. This patient had been six weeks since the operation and her skin had become white and clear and she looked like another person, and several months afterward he wrote a paper in which he gave a description of the patient and he said she was in good health. "Well!" you say, why don't you do it?" Because I find it is not necessary to do it. The whole difficulty with this lady was the absorption of the poisons into the blood from the decomposition and putrefaction taking place in the colon. If that patient didn't eat anything

that could rot: if that patient ate nothing at all that could undergo putrefaction: if that patient ate nothing at all that could rot in the colon there would be no poison formed there and she would be rid of the trouble, but she put things in the colon that did decay and rot and things that did not belong there. You know the house that has a bad smell in it: the proper thing to do is to destroy the house. That is the old Hebrew way of doing it. You know in the time of Moses if a house had mold on the wall and they rubbed it off and it came back again the whole house had to be burned or torn down and deposited on the rubbish heap outside the city, but all we can do is to cease to put putrescible materials into the colon and it will cure itself, but we must persevere for it may take two or three years to do it. A person who has once taken pains to regulate his diet by this method, to take antitoxic food, if he goes back once for a short time to the old way of diet he will discover right away that he is going down into a slough: the body is just contaminated: he gets his old habits and he gets his old bad taste in his mouth and a miserable feeling in his kidneys, and he discovers biliousness right away, and it will be a good thing for him to get away from the "flesh pots of Egypt" and to keep away, and to live on a diet of fruits and grains and cereals, and the things God intended us to eat.

Q. What is the cause of nausea after an enema?

A. Probably the cause is the absorption of poisons. The introduction of water into the colon dissolves the poisons and renders them easily soluble, so a great flood of poison is thrown into the blood, and that is the probable cause of the nausea.

Q. Believing that pears, cherries, prunes and figs are healthy, I eat them but suffer much discomfort in the bowels from them. Would you advise me to continue their use?

A. You should avoid the skins of these fruits. In eating prunes, for instance, be careful to exclude the skins. In eating pears swallow the pulp and exclude all

all the portions that cannot be rendered soluble.

Q. Do you believe in adjusting the spine for curvature and pain?

A. Yes, certainly, whenever the spine is out of adjustment adjust it. If it is dislocated it ought to be replaced, and certainly should be readjusted, but I will tell you what I don't believe in. I don't believe in fake adjustment of the spine. The osteopath operates this idea in such a way as to extort a great deal of money from his patrons on the barest pretense. The osteopath examines the patient and says, "Why, here is a vertebra out of place. Put your hand up here and see how it is out of place." Of course it is. That is the seventh cervical vertebra, ^{the} a vertebral prominens, and that is why it is called vertebral prominens: that is its name: prominent vertebra because it projects out above the rest. Everybody does not know that, so the osteopath has a chance to make a good deal out of it. "Now I must manipulate this and put it back in place. Now I put it back: you feel it there. It is back in place. Now ^{we} ~~you~~ must manipulate that day after day and by and by we will get it where it will stay in place." I can easily imagine an ignorant country boy going to an osteopathy school, studying there for a time, being taught these things they may look plausible to him and he may believe them, but when he has gotten out into practice and practiced two or three years and has had a chance to get actual practical experience himself, and to learn a few things and to see and to learn the things that have been taught him are downright humbuggery, I do not see how he can continue to be honest. I do not think there are very many honest osteopaths that have been long in the practice out of school. I think the majority of osteopaths are practicing humbug and fraud and are conscious of it. I think most of them have got themselves in the condition of someone I met in Chicago some years ago--a pickpocket. Our mission got ahold of him down there and he professed to be converted and they turned him over to me to find out whether he was converted or not. In the course of my talk with him

I discovered he was not. In a very short talk with him I asked him if he had ever felt bad, felt a smiting of conscience when he robbed a man--when he picked his pocket. "Why no", he said.

"Didn't you ever feel so?"

"No, I can't remember when I ever felt anything but delight when I had succeeded in picking a man's pocket or stolen something else from him in some way. I just felt glad that I succeeded."

"Now," I said, "I am very much surprised at that. It is an awful mean, contemptible thing." Why", I said

"Why," he said, "Everybody steals. You can go down here to a grocery man for a pound of sugar and every grocery man, if he thinks you don't know the price of sugar and thinks he can charge you a cent more than he ought to, he will. If you go down to a clothing store and a man is selling you a coat, if he thinks he can get a dollar or two or three dollars more than he ought to out of you for that coat he will do it. That is stealing just as much as anything else. I might as well put my hand into his pocket and get the money instead of letting him get the money by cheating me. It is all the same thing: everybody steals."

Now I think the osteopath has gotten himself into that same state of mind. He gradually works himself into that idea that anything he can get out of a patient, anything he can get from people, is all right, so this cult, if we may call it so--it certainly is not a science--has been making prodigious headway during the last few years. There is some good being done but an enormous amount of fakism is being carried on, which I cannot consider is anything else but dishonesty. If I should tell you what I know about the malpractice, about what patients have been subjected to, it would astonish you, it would horrify you. I have patients coming under my care every single day

who have been mistreated in a most horrible way by these charlatans, yet they have succeeded in getting legislatures to assist them to such a degree that it is almost impossible to prevent it. I think the best thing for me to do is to bring down from my library a book written by a graduate of this so called science, telling how to treat various disorders from this classical text book for students in osteopathy and read to you the method of treatment for various diseases, so you can see just the monstrous humbugery that is carried on.

Q. I have been here four weeks and am feeling much weaker than when I came. I am having pains and aches.

A. Probably a reconstruction process is going on but hasn't been completed yet. You don't need to be alarmed at all if you feel a little bad today because it is only to result to make you stronger tomorrow.

Q. Is biting the finger nails a nervous disease?

A. No, but a person who is nervous sometimes does this just as he does many other things. He is uneasy and has the habit of doing something all the time: he wriggles about, bites his finger nails, pulls out his hair and does various other things.

Q. Tell what causes erysipelas.

A. Germs.

Q. What diet should growing children from six to ten have?

A. An ordinary, wholesome, non-flesh dietary, with a moderate allowance of milk and cream and a reasonable amount of butter--fats enough to get satisfied in order to produce a proper sense of satiety. This is important because if there is not enough fat in the food this helps to lead to overeating.

Q. Give cause and remedy for falling out of the hair.

A. Germs growing on the scalp and getting down into the roots of the hair and destroying the vitality. This is the cause.

Q. I generally take my morning exercise on rising, before the bath.

A. It is a good thing to take a little exercise before the bath and some after the bath.

Q. If fish are not good food for man why did Christ eat fish?

A. I can't tell you. I find a great many things in the universe we cannot explain. Go out into the world, any of you: you can see that Divine Providence is doing things you cannot account for, which you cannot explain because you do not understand the whole situation. If we want to discuss that question we might say a good many things about it. Why did Christ eat fish? Perhaps he didn't eat them. We don't know anything about it. Certainly we cannot say that God has to eat or that Divinity has to subsist upon fish in order to get strength and energy: we cannot imagine that, so if Christ took fish he did not do it for necessary subsistence. If he took it as a divine personage it was only because of the customs of the people. He was not teaching dietetics: he was teaching ethics.

Q. How can one keep the hair from falling out?

A. Rubbing the scalp with cold water is a good plan: exposing the scalp to the air is a good plan.

Q. What causes hay fever?

A. Pollen in the air from various plants. There are thirty or forty plants which produce pollen which may irritate the ^{nose} ~~netes~~ and cause hay fever.

Q. Describe the road travelled by the food after it leaves the mouth and when it enters the bowels.

A. It takes the food seven ^{hours} to go from the stomach to the caecum. It remains ~~in the~~ in the ascending colon fourteen hours: that makes twenty-one hours: three hours more are occupied in the rest of the alimentary canal. The

Q. Can mucous colitis in the colon be cured?

A. Yes. A non-flesh, antitoxic diet, with laxative food substances, such as you find on our antitoxic diet list, which you can get from your doctor, are the best I know of to combat this condition.

Q. Can rupture be cured without an operation?

A. In some cases, but generally not.

Q. Will two glasses of liquid yogurt or apple juice taken at mealtime impair digestion?

A. No, it ought not to in an ordinary case.

Q. Can the dropping of mucus into the throat in case of catarrh be relieved or cured?

A. Yes, call upon Doctor Byington. I am sure he will succeed in curing or relieving you, and I am glad to tell you this condition, which ~~was~~ formally almost incurable, has come to be curable, because it is found in this condition there is always some diseased condition in the nose, perhaps in the upper part of the nose: there are some bones which sometimes become enlarged and obstruct the passage. These can be operated upon safely and easily with the newly invented instruments that have been devised. Operations can be performed that were not possible twenty five years ago. Our Doctor Byington is an expert in this work, and you should call to see him in this department.

Q. What does it indicate when there are 15% white cells and 95% red cells in the blood?

A. It indicates you are a little extra well, so you should not be in the least bit troubled about it. You have sufficient red cells and a little too many white cells, which cannot do you any possible harm, and may do you a little good.