

Question-Box-Lecture-at-the-Sanitarium-Parlor

Battle-Creek-Michigan

Monday, May 4, 1914 at 8 p. m.

by

J. H. Kellogg, M. D.

Q---How does the analysis of unpolished rice differ from that of polished rice, and which is better?

A---There is a misunderstanding about the polished and the unpolished rice. It is not the polishing of the rice that does the harm. The polishing of rice is a process by which the rice is mixed with a little talcum powder and a little glucose and is revolved about in a great drum and so acquires a polish on the outside. There is no particular harm in that because in washing the rice as everybody naturally does, the talcum powder is washed off and it doesn't do any harm. When I was traveling in the Orient some years ago, I noticed in the markets of Jerusalem that the rice had a red color, almost a brick red color and I inquired why this rice had that brick red color and was told it was mixed with clay. The taste of the people of the Orient, at least in Jerusalem, is that their rice shall be red when they buy it, but this is all very carefully washed off before they cook it, so it doesn't do a bit of harm. Now the thing that does the harm is the removal from the outside of the rice ~~byxxxxxxx~~ before it is polished. The removal of a thin layer of material which contains certain substances which are necessary for the body. Now just what these substances are is not really altogether known. No chemist has been able to determine the exact composition of these substances, but the Germans have recently given to these substances the name of vitamins and the same thing happens in relation to wheat as happens in relation to the rice. When the wheat is ground and the outside is removed, the bran is removed, there is something lost, something is removed from the grain that belongs to it and is necessary for complete nutrition. These vitamins are found to be absolutely necessary for the maintaining of a healthy nervous system and when an animal is fed upon ~~xxx~~ ordinary rice that has had the bran removed or upon fine wheat flour, bolted wheat flour or upon fine flour from which the bran has



been removed or corn flour or any other cereal from which the bran part has been removed, when an animal is fed upon such food, it gets a peculiar form of neuritis which is known as beri-beri and such an animal after a while dies. When pigeons are fed upon fine wheat flour or with this polished rice, so-called, I have explained that it makes no difference whether it is polished or not. The question is whether the bran is removed, and when pigeons are fed upon such rice or such wheat flour pretty soon they began to grow lame, to limp. They will stand on one foot instead of two feet and by and by the joints begin to swell and after a while they begin to show evidence of impairment of ability to fly. They do not fly but short distances and after awhile they are no longer able to fly at all. Then after awhile they simply lie down flat on the side in the cage and in a few days more they die. Now a most wonderful thing has been observed. An investigator who made a careful study of this subject observed that if he allowed his pigeons which had been on this diet which was lacking in the elements of nutrition, lacked the vitamins until they were nearly dead and seemed to be almost breathing their very last gasp, if he then gave them a simple extract, gave these animals an extract of rice bran with water, a sort of soup made out of this rice bran, in two or three days those pigeons which were nearly dead were hopping about as lively as ever and flying in the air and this experience has led to the conclusion that so-called neuritis will adapt diseases of various forms of <sup>the</sup> intercostal nerve and the nerves of the arms and the legs and various forms of nervous disease, including under the general head of neuritis, neuralgia, rheumatism of the nerves, etc. that these diseases may have an entirely different origin and be of entirely different character than what has been proposed because it is beyond belief that an animal that was suffering from serious organic disease could be cured in twenty-four or forty-eight hours by simply changing its diet. It seems there is something deeper in that subject than we have yet explored. Now you see then it is no worse for one to eat polished rice than it is for one to eat fine-flour bread when white bread is just as likely lacking in the element of nutrition as the polished rice. In my opinion it is really a very small matter. The proportion of rice that enters into the bill of fare is small. If one were living upon an exclusive diet of rice, it becomes then a very serious matter. If one were living upon an exclusive diet of fine flour, it becomes a very serious matter, but a slice or two of fine-flour bread or two or three heaping tablespoonfuls of boiled rice at a meal mixed



along with other food does not have any pernicious effect and the material loss is probably not so great as to be a very serious matter, but it is a serious matter when either of these articles is used as an exclusive article of diet. By taking plenty of potatoes and fresh vegetables, lettuce and fresh ~~xxx~~ fruits of various sorts, one can get an abundance of vitamins, all he needs and from the experience with pigeons, it appears it requires only a very small amount of vitamins to supply the body needs, but that small amount we must have. I should say that this question of polishing or not polishing is a matter of no consequence at all. We have in quite a number of states, laws against the selling of polished rice and the unpolished rice that is sold is in no way better than the polished rice. The real evil is in the removal of the bran from the rice. If you want to get the whole rice or if it contains all the elements that are necessary for body nutrition in the most perfect form, do not buy unpolished rice but call for brown rice. Brown rice is the thing you want. Brown rice is the whole rice. This brown rice can now be gotten in large cities and a number of firms in different parts of the country are selling the brown rice, so it can be obtained.

Q--What should be the proportion of protein in a child's diet and how should it differ from that of a grown person?

A--A child naturally needs a little more protein than a grown person. Yet the child does not need a large amount. The amount of protein that a baby gets is shown by the analysis of mother's milk by Dr. Rubner of Germany who has recently published something on this subject, also Dr. Taylor of Philadelphia who has published some very interesting remarks. I think these authors have proven that the proportion of protein furnished to the nursing baby which is one calorie per pound of body weight is an ample supply of protein, and that of course, is ~~the~~ high -protein diet, you see, because a baby is building up its body and needs a high protein diet, needs all the protein any human being ever can need. The largest proportion of protein that a person ever can require, he requires when he is building his body because his body is built up out of protein, the muscles particularly which constitute half the weight of the body. Now a baby requires one calorie per pound of body weight or half a gram per kilogram which is the same thing. Really nine-tenths of a calorie is the amount a baby requires to be exact but we will throw in one-tenth and call it one calorie. Now ~~xxx~~ an adult certainly cannot require any more



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than a baby and a child ten years old cannot require any more than a baby. As the child gets older and its body is more and more completely built the proportion of protein actually required is less but this must be taken in consideration to be absolutely fair in this discussion. Vegetable protein must be taken in slightly larger proportions than animal protein. Milk contains a protein every particle of which is appropriated by the body and utilized whereas, when one eats vegetable protein there is a certain proportion that is not used, probably 25 per cent. of the protein taken in vegetables right through, twenty-five per cent. of the protein we eat cannot be utilized in building the body. It ~~is~~<sup>has</sup> not just quite the right proportions of the acid amines as the chemist calls them so in taking one calorie per pound the adult who does not require probably than half the amount of protein the baby requires, in taking one calorie per pound of vegetable protein he is still getting all he needs and if a person weighs 150 pounds he needs 150 calories of protein. If he weighs 120 pounds he needs 120 calories. If a child weighs 40 pounds the child requires 40 calories of protein per day. This is a very important matter. The slight excess of protein one takes is not likely to do any harm. Now this is a very different thing from bills of fare which are ordinarily prescribed by some teachers of dietetics. The old idea was that protein furnished the force which was a source of energy to the body. We know better now. We know that fat and carbohydrates are the great sources of energy to the body. Starch, fat and sugar are the real sources of energy. They are the fuel. We cannot live without them, at least we must have fat and we must have carbohydrates. If we do not get it directly, why the body has to manufacture <sup>and</sup> it from the protein. The protein we require only for repair purposes. It is like the metal repair of the locomotive. The locomotive stops at every station and takes on some coal but it only stops once in two or three hundred miles to have ~~metal~~ metal repairs and to take on a supply of



brass, iron and other metal. Now protein is the metal repair of the body. It is not required for energy. Fat and starch, carbohydrates, they constitute the coal, the fuel of the body. This fact is very well settled now by all the physiologists so that I think there is really almost no discussion of the question. The question is how much protein does the body need. The old authorities said that we should have 400 to 600 calories of protein a day, the average man, but now we know the actual result of actual experimentation that adults can live very well on 100 or 150 calories of protein. Prof. Chittenden of Yale who has made very elaborate studies of this subject not only with human beings but with dogs, with healthy persons and sick people, Prof. Chittenden told me some little time ago that for three years he had been living on a diet which contains 124 calories per day of protein. Well, Prof. Chittenden is a man about my size, a small man so he does not require as much as a man who weighs twice as much would require, of course, but the proportion that he was taking is just about one calorie per pound for I imagine he weighed about 124 pounds. Personally, I do not eat quite as much as that. I think I eat about 100 to 125 calories per day and my weight is 140 pounds and I have been going on year after year for a good many years on this very low protein diet. In fact, I have been living on a very low protein diet for almost 50 years now. It only lacks a year or two of being 50 years that I have lived on a non-flesh dietary. I have not eaten a pound of meat in 48 years and in later years I have cut out eggs and milk and I find but with very great profit, gery great profit indeed. I got rid of headaches that I used to suffer more or less from. If I did not get sleep enough I had a rather severe headache and if I had a little overstrain in work I had headache too. Of course, I didn't stop work but still I was very uncomfortable and finally I had headaches nearly all the time. I reduced my protein still further by cutting out eggs and milk entirely and even discarded nuts almost altogether so at the present time my protein, the amount of protein I take is



certainly very small. It certainly must be less than 100 calories a great part of the time. You can easily figure up and see how much protein I have eaten ~~for~~ today for example. I had for my breakfast this morning an apple and a small potato and a handful of lettuce. That was my breakfast. I had for my dinner half a portion of soup and another handful of lettuce and half a cucumber and two potatoes and two slices of graham bread and a little olive oil with the lettuce and butter for the bread of course, and these are my rations for today but I live on a rather spare diet, certainly with a very small amount of protein. The most highly proteinacious substance I eat is bread and bread contains more protein than is really needed. It is rather a high protein food. I am dwelling a little on this point because the idea has gotten abroad in the world somehow that we must have meat, that we must have eggs, that we must have so-called rich foods, that we need these for strength and there are thousands of men you know that are going about with a great load upon their brains and are working under a tremendous~~ly~~ handicap because of this idea. A business man thinks he must have something strong to give him energy for his work and so he eats large beefsteaks for breakfast and a big beefsteak for dinner and the load of poisons that he floods his body with intoxicate him. I remember very well a judge of the supreme bench of Iowa who had a great deal of trouble. He couldn't do any work after dinner. He found a little vegetarian restaurant in Des Moines where there were some Battle Creek foods and began eating his meals there and after two or three weeks he said to the proprietor who told me of the circumstance, he said, "Do you know there is something very remarkable about your diet here. When I eat my dinners ~~ordinarily~~ here I can eat just as well in the afternoon as in the morning but when I eat an ordinary hotel dinner I cannot do a thing in the afternoon. I am dull and heavy and my brain is clouded so I simply cannot work but when I take my dinners here I can work." Now one ought not to feel



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dull and stupid and good for nothing after a meal. That is the way an anaconda feels when he swallows a sheep and goes off and lies down in a state of complete lethargy for six weeks perhaps and I see there are some people who act very much like an anaconda. A dog for instance eats a great big chunk of meat and then lies down behind the stove, goes to sleep and is in a state of stupor. These carnivorous animals generally do it. They are suffering from auto-intoxication. Prof. Distaso probably the greatest expert of the world on intestinal bacteria, formerly an assistant to Prof. Metchinkoff of the Pasteur Institute for many years and now professor of bacteriology in the Royal Institute of Public Health in London, Prof. Distaso made this remark to me a couple of years ago. "Why", he said, "Doctor, these English people are all intoxicated". He said, "They are every one of them suffering from intoxication. Look at their complexions. See the brown circles around their eyes, the dark brown spots on their hands. They are intoxicated, the whole of them." I said, "What about dogs? Dogs eat meat, don't they? Why isn't every dog on earth suffering from auto-intoxication?" He said, "He is. There isn't a bit of doubt about it." I said, "Well, but don't you eat beefsteak?" "No, indeed" he said. I said, "Doesn't your wife eat meat?" "No, indeed." "Don't you give it to your children?" "No, indeed. We don't want any of it in our house." He sent me awhile ago a picture of his boy, a most beautiful picture of a splendid specimen of a boy about four years old and he has never tasted meat. Prof. Distaso never heard of Battle Creek and he never heard of me until I was introduced to him by Dr. Lane of London so he had never been inoculated with Battle Creek ideas in any way but he had studied beefsteak in the laboratory and he had found the germs in beefsteak. He had studied the products of putrefaction. He had noticed the work and watched the work of Prof. Tissier, Dr. Tissier of the Pasteur Institute. Dr. Tissier in the last ten years has been making a very elaborate study of this subject and here is one experiment he made. He went to the butchershop or the slaughter-



house and with his little vials, test tubes with which he collected specimens he obtained a specimen of the flesh of an animal as quick as he could get it after the animal was killed, took that flesh and put it in his little bottles with the greatest care. He took this flesh home and in every single instance the flesh putrefied when it was sealed up tight and put away for a little while and all the different germs of putrefaction were to be found in that flesh. They were all in the flesh you see. It didn't have to be inoculated. He took specimens from an animal the moment it was killed and sealed it up tight in the bottle and kept it a few weeks. Then he describes <sup>all</sup> the horrible germs of putrefaction which he found, germs which you find in a dead rat, germs you would find in a dead cow rotting in a fence corner or in the dead rat that has gotten hidden that has died under the floor some place and makes the whole house uninhabitable. Those very germs were there in the flesh of the animal in the freshest state that he could possibly obtain it. He states this in one of his papers on the subject. Well the result was that Prof. Tissier discarded meat from his dietary and I had a letter from him not long ago and he said for ten years he had prescribed for his patients no meat, cut it all out and he said, "no meat" and he told me he had treated over ten thousand people by this plan and with wonderful results. He stopped the use of meat. Why? Why? Because the meat contains the kind of germs that make us old, the kind of germs that promote putrefaction and if you want to be young and to keep youthful, if we do not want to be encouraging old age we don't want to cultivate senility, if we want to cultivate the opposite condition we must take a diet that will cultivate this condition so Dr. Tissier treats his patients with friendly germs. That is why we give you Yogurt cheese in the dining room and Yogurt Buttermilk and why we have the Yogurt Tablets. We also have a preparation that some of you know something about that is called Tissane. Tissane is named after Prof. Tissier of the Pasteur Institute. His name is Tissier so we call this



Tissane and this Tissane contains the friendly germs discovered by Metchnikoff or the bacillus Bulgaricus, not discovered by him but exploited by him and the bacillus bifidus which was discovered by Prof. Tissier. The value of both these germs was discovered by Tissier and Metchnikoff simply exploited the idea, published it to the world but the real discoverer was Prof. Tissier and also the more newly discovered germ, the glucobacter, a germ which produces sugar in the colon, converts starch into sugar and feeds the bacillus Bulgaricus and the bacillus bifidus and so enables them to make acids which antagonize the growth of putrefactive organisms. We have these things to cultivate the friendly germs. It is like getting the weeds out of your flower garden. It is to cease to sow the seeds of weeds, thistles and things of that sort and plant flowers instead.

Q. What will cure a callous place on the bottom of my foot?

A. I think a surgeon can cure that. It is possible that it may be cured in some other way. We have a mixture of salicylic acid with collodium which is sometimes painted on a place of that kind. It is possible to get rid of the callous by taking a piece of buckskin three or four thicknesses of buckskin and cutting a hole out having a little ring outside and putting this around the callous so as to take all the pressure off the callous. If we take all the pressure off it will get well of itself after a while.

Q. What causes the hands to swell when walking? Is it a condition that can be cured?

A. Well, I think this <sup>is</sup> not a very common condition. The hands and feet sometimes swell when one is in the upright position because the heart is a little weak.

Q. The chemical reaction on examination of the excretion shows alkalinity 40, dominant bacteria, Welches, the proteus vulgaris and streptococcus pyogenes. What condition does this indicate?

A. It indicates rather a bad flora because the flora ought to



be neutral or acid. Those are weeds, those germs are weeds all of them. Welche's bacillus is one of the worst germs we know anything about. Sometime ago a man visited a circus. He knew that this circus had a menagerie and that they had on exhibition there a lion which he used to own and was well acquainted with. He stepped into see his lion, his old friend. He found the cage and the lion was asleep. He put his hand in the cage, touched the animal and before he could get his hand out the animal had seized his arm and crushed it completely. The animal had not had time to recognize him and the taste of blood I suppose infuriated him and he clung to the man's arm until a hot iron was put into its mouth. The man's arm was so completely crushed that he was taken to the hospital and the arm was amputated but in a few days he was dead and his whole body was swelled up enormously as though ~~it~~ the skin has been inflated with a very foul smelling gas. On examination of this man's tissues they were found to be completely filled with a pure culture of Welche's bacillus. Dr. Welch of Johns Hopkins University discovered this germ, at least he was the first one that described it although I think the germ was first encountered in our own laboratory. We had here, about twenty years ago, employed a young man who was trained in the Pasteur Institute, Dr. Pakuin to organize our laboratory, our physiologic laboratory for us and he was here about a year. One day he came to me and said, "I have found a wonderful germ, a germ that manufactures an enormous quantity of gas" and he continued his experiment for some time with this germ and it certainly was a wonderful germ. I never saw anything like it before, the quantity of gas it would produce and I am satisfied from the description as I look back upon it that it was Welche's bacillus which a few years later was discovered by Professor Welch and in this particular case this man was killed by the poisons produced by this germ. This germ not only produces a great amount of gas but produces very deadly poisons. A few drops of



a liquid culture of this germ injected into a rabbit will kill the rabbit or ~~the~~ a guinea pig, will destroy its life in a very few minutes. These experiments were made at Urbana, Ills., at the laboratory of the University of Illinois. The bacteriologist who made the experiment told me of his observation. Welche's bacillus is a very unfriendly germ. Now this patient asks what does it indicate when Welche's bacillus is the dominant organism.

A. It indicates that your body is being just flooded with poisons produced by this horrible germ. When gases are formed in the intestine in considerable quantities that is almost a sudden indication of the presence of this germ. It is important to get rid of it. An antitoxic diet and antitoxic ferments increased activity of the bowels will enable a person to get rid of this unfriendly germ. After you have been here a few weeks more and have another specimen examined it will probably show, the chances of ten to one at least that it will show that Welch's bacillus has disappeared. Welch's bacillus <sup>does</sup> ~~is~~ not like the Sanitarium bill of fare and if it doesn't like our diet and it disappears when it cannot get ~~in~~ any dead piece to feed upon but it is very fond of oysters and fried chicken and bologna sausage and all that sort of thing. Welch's bacillus is very fond of all these dead things. That is why the lion innoculated the man with this germ. The lion's mouth was smeared with Welch's bacillus. it had acquired from the meat upon which it had been fed. All butchers' meat contains Welch's bacillus. Whenever you eat a bit of very tender steak you are simply swallowing the Welch's bacillus by the million or by the billion. The presence of this germ is one of the causes of putrefaction of meat. Now the proteus vulgaris is another germ that is very common indeed in adults. That is the germ that kills babies in the summer time. When babies die during the summer, die from summer complaint, from bowel trouble, it is this proteus vulgaris in about half the cases. It is one of the deadliest germs that prevails



in the summer time among children. until the babies have acquired the ability to resist it. If you have got the proteus vulgaris it is during to you exactly what it does to the baby. It is flooding your body with poisons but you are strong and able to resist these poisons but you do not want these poisons to deal with. We want to be using our liver power and kidney power and vitality for other purposes. We want to be using these bodily energies to prolong our lives, to enjoy life with, to do useful work. We don't want all our energy to be exhausted in fighting the poisons produced by these miserable germs. That is a very poor way for one to spend his energies. Now the streptococcus pyogenes, that is a pus-producing germ. That is a kind of germ that produces suppuration and this person probably is suffering from colitis. Welch's bacillus, proteus vulgaris and the streptococcus pyogenes, all of these germs will produce colitis and when colitis is present we find these germs in abundance. I have answered this question somewhat at length because I imagine the question will be of interest to quite a number here. It is a very common thing to find ~~in our~~ when patients come here all of these unfriendly germs are present in large numbers. After a few days they will be found to be less. If I were a patient of this institution I should insist upon having an examination of the excretion every single week because I should want to know whether I was making real progress or not. The great thing for you to accomplish while you are here is to get establish a new flora, to get rid of the old germs that are making the trouble, that make the high blood pressure and the Bright's disease and these brown spots on your hands and making your arteries hard and make the diabetes and the nervousness and the insomnia. Nearly all the chronic troubles you are suffering from are due to poisons produced by these bad intestinal bacteria and the greatest thing we can do for you here in this institution is to help you to get rid of them. The treatment given in the bathroom is not of very much gain. It is of value but it is not of so very much account. The thing that is of



greatest importance to you, I want you to know that I speak this from the bottom of my heart and you can readily see that I am not speaking it in the financial interest of the institution. The thing of greatest importance to you is to get your diet corrected. The thing you get up in the dining room is the thing that is doing you the most good and it is a thing you can do at home just as well as you can do it here. You may do it better than we do it here. I was down in St. Louis some little time ago and had two or three hours to wait for a train so I ran up to the Simmons Hardware Company to meet ~~my~~<sup>our</sup> friend, Mr. W. D. Simmons. Simmons was here six years ago. He came here a nervous wreck. I don't mean he was insane but was just simply a business man who supposed he was awfully overworked and just about at the end of his rope and had really got to the point where he could not do business with any comfort at all. Well he it was unfortunate for other folks as well. I happened to know that from one of his foremen who was here and he sent him up here to learn our way of living. "Why", he said, "Mr. Simmons was so nervous we just didn't know what he was going to do to us any minute. We were scared half to death when we saw him coming around." Now Mr. Simmons came here and spend five weeks with us here. He didn't stay long enough to get well but he felt a good deal better. He said, "I know this is the right thing." He sent for his wife and children, had them all come up here, had his wife go down to the cooking school and learn to cook and had his children here to get the habit of eating wholesome food. before he went home and when he went home his wife established the Battle Creek Sanitarium regimen in his home. When I called on him it was three years after he was here. He said, "I wish I could take you up to my house. We do it better than you do it at BattleCreek." He said, "My wife is a better cook than you have up there and we do it better than you do it at Battle Creek." That is the important thing for you to get while you are here is to get held-of your appetite changed to an appetite for simple, natural food, to get rid of



the appetite for mustard, pepper, peppersauce, ginger, horseradish and all those miserable, hot stinging, burning, blistering things and to get rid of the appetite for tea, coffee, tobacco, wine, beer and all those things and get yourselves on a natural healthy basis. Then when you go home you won't have any trouble about finding enough to eat. You won't have any difficulty in getting plenty of good wholesome food. You can always find enough at the market of green wholesome thing to supply your table because you will be satisfied with simple things. Why, I was on a car sometime ago, hadn't had a chance to get my breakfast, was too much in a hurry to eat dinner and I took a little lunch along with me. I was answering letters and eating a lunch at the same time and somebody touched me on my shoulder. I looked up and it was a Doctor I had known for a good many years, hadn't met him for some time, a professor in a medical college and he said, "Now I caught you at it", he said. "I have been thinking for a good many years that I would just like some time to catch you eating, when you didn't know it and see what you were eating and I have been standing here for a few minutes taking an inventory and it looks to me as though you didn't have much of anything to eat." He said, "you are eating some dry bread." It was breakfast toast. "Then you have some nuts and some apples." I would like to know where your dinner is." "Well", I said, "It is all here. Bread is the staff of life, isn't it? Here are some nuts. That is the beefsteak and butter. Then <sup>here</sup> are some apples and that is the pie and the dessert, don't you see. I have got the whole meal here." "Well", he said, "It doesn't look very inviting to me." "Well", I said, "You don't know how sweet this breakfast toast is." "Oh, its sweet, is it? he said, and he took a little piece and put it in his mouth and chewed it up so I passed him a piece to try. He tasted it and said, "Well I can't see any taste at all in it." I said, "Of course not. You've been up there in the dining car blistering yourself with pepper, peppersauce, mustard and things of that sort." He said, "How did you know." I said,



I know it by the looks of your nose." He said, "The fact is I have been doing just that. I like something that gives my palate a twist. You haven't stopped to think that a thing that twists the palate keeps right on twisting in your stomach and gives your liver a twist and your nerves a twist and your brain a twist, twists your kidneys and one of these days it will wring your neck and that will be the end of you." "Well," he said, "Dr. Kellogg I believe you are right. I really believe you are right. I am coming up to Battle Creek some of these days and I am going to stop there a week or two if you will let me and learn how to live." Well he came here and I think he got a few points though he didn't stay long enough to get inoculated and get really converted. That is the important thing to be done for you while you are here, my friends, to get you converted, transformed, to get your tastes changed so that when you go home you will go right on living this simple life. It is a good thing to have a few of these foods for convenience but we are not dependent upon them. We do not eat any protose at our house; there is so much protein in it. We eat granose biscuit. We like it better than ordinary bread but it is not necessary. Flake foods are convenient but they are not essential. You can take ordinary graham bread and toast it in an oven and it is just as good zwieback as you can buy, as anything you can get in the way of bread or as anything you can get in the market, everything that is essential and you can get it the market everything that is essential. Now ~~a~~-<sup>my</sup>meat diet is almost entirely made up of fruits, <sup>and</sup>vegetables. The potato is my staple. It is better than bread, better than cereals because it has in it a large supply of these

I was telling you about a little while ago and it contains a large amount of alkaline substances which dissolve uric acid and carry it off and keep it from accumulating in the body so we have all the other green vegetables, the lettuce, the carrots and the greens of every sort. They are the things to make up the great bulk of the diet. These hearty concentrated things that people make so much use of are all more or less objectionable and absolutely quite unnecessary.



Q. How do you estimate the number of square feet of surface on a person's body?

A. Well, that is a problem which has been studied for a long, long time and it was never solved until a man invented a very ingenious little means of discovering the surface. He took a man, covered him all over with adhesive plaster, just had rubber adhesive plaster two inches wide and had it in strips of a definite length and covered that man all over with rubber adhesive plaster; then noticed how much he had used, don't you see and in that way he found just what that man's skin surface was and another man fixed up a kind of ruler like a printers' ruler and kept on working that around the body and



and they printed a tint on the body and at the same time there was a counter that told just how many times it turned around. This wheel was just half an inch wide and he rolled this wheel all around the name until he had covered the name all over and by that means the exact surface was determined. So it became possible after a while to make a formula by means of which having a man's weight, a man of average proportions, it was possible to determine the surface of his body from this weight and this formula is now used. It is not absolutely accurate as applied to children and adults because the proportions of the body change somewhat, but it is really a very practical~~x~~ formula after all. It was by this means in part and by means of experiments made by Rubner and others in which the surface of the body was actually determined that these tables were made that you find in the Sanitarium diet list.

Q--How many calories should a child weighing eighteen pounds take daily?

A--Well, such a child ought to have not less than fifty calories per kilogram of body weight. We will say 25 calories to the pound of body weight. For each pound, the child needs about 25 calories. Must have that much as a minimum. For growth, the child needs more than that. Such a child ought to have about six or eight hundred calories a day.

Q--What is the treatment of gouty eczema?

A--It the first place it is to get rid of the infectious bacteria of the colon. Change the intestinal flora. That is the thing that is necessary first of all. The bowels must be made to act more frequently, at least, three or four times a day and the diet must be strictly antitoxic. Dr. Bulkley of New York has for the last twenty-five years been experimenting with different foods and he finds that by putting the patient upon an almost exclusive diet of rice for a week or ten days, almost all skin disease will disappear. He has tried this in many cases and with wonderful success. It is an antitoxic diet, you see. Here, in our observations, we do not find that the rice diet is necessary. We find that our antitoxic diet is just as effective as the rice diet. In fact, we think a little more so, especially as a more laxative diet helps the bowel activity.

Q-- What is the formula for Dr. Bulkley's skin cream.



A--I will write it here on the blackboard so you can see it. It is such a very useful thing I will be glad to have everyone of you have it. This is the formula: Linolein 1 gram, boroglycerid 2 drams, cold cream made with white vaselin instead of lard 6 drams. Now if there is irritation, if there is smarting or burning of the skin such as many people have in cold or dry weather, especially when bathing in hard water, a great many people find themselves troubled burning and itching of the skin. When the skin is rough there will be little pimples formed around the roots of the hair and this trouble is entirely due to chapping of the skin. It is not an eruption that comes from impurities of the blood but it is simply a chapping of the skin. The removal of the oil of the skin or excessive dryness of the air causes the cracking of the skin. Fine microscopic cracks which expose the ends of the nerve to the air and that is the cause of the trouble. In such a case as that, add to this formula 5 drops of carbolic acid to the ounce. If that is not quite effective then add still ten grains of menthol. This preparation is an exceedingly useful one. We use it whenever we have troubles of that kind and I have met a good many people I have given this formula to and they have been made immensely happy by getting rid of the trouble which had been of great annoyance.

Q--What, in your opinion, is the cause of lymphatic leukemia?

A--The cause is a flooding of the body with toxins from the intestines.

Q--When one has a bad case of ingrowing toenails, do you think it pays to have it cut out?

A--Well each case is an individual case. Generally the principal thing is to have a part of the nail removed. Sometimes it is necessary to have a little portion of the soft tissue adjacent to the nail removed. This can be done with cocaine at very little inconvenience and a radical cure effected.

Q--In taking the morning bath, is it better to exercise before or after the bath?

A--Both before and after. If you really want to enjoy that cold morning bath, go out for a walk or a run until you get into a perspiration. Then you come in and take a bath in water at about 80 degrees first, then take it right straight from the pipe and you will find you really have a love for that cold water and a long for it and you will get a splendid reaction afterwards. Then take a little walk afterwards and you



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will get the maximum benefit to be gotten from the cold bath. You will say, "Well I am too weak to do that. I can't take such vigorous exercise to make perspiration." Then the best way for you to do is to take not a very cold bath but a bath in water at a temperature of about 80 degrees. Then after taking the bath go back to bed again until you warm up thoroughly and if you are quite feeble and the cold water seems to be a shock to you, then take a cold air bath, exposing the whole skin to the air and rubbing the skin a little and the moment you begin to feel just a little chilly, get back into bed and remain there until you get warmed up. On a real cold frosty morning if you sleep with the windows wide open, the cold air bath is quite an effective bath and is really practically quite as good as a cold bath.

Q--In a recent lecture you said that ten percent. of the people who have typhoid fever are carriers of the germ, carry it for some little time afterwards?

A--They carry it for some little time afterwards and probably about one per cent. carry it for a long time.

Q--How can one tell a germ carrier from a non-germ carrier?

A--Every person who has ~~had~~ typhoid fever should be kept under observation and the urine and feces should be examined for the typhoid fever germ until it has entirely disappeared. This is a very important thing and ought to be done and the same thing is true of persons who have had pneumonia or diphtheria. There should be an examination of the sputum until these germs have disappeared.

Q--Is there a good preparation of the bacillus Bulgaricus that can be taken with good results when Yogurt cannot be obtained? Are the Park-Davis Company tablets reliable?

A--~~Their~~ Their tablets are not Bulgaricus but simply the ordinary sour milk germ. Parke-Davis Company's tablets are just exactly what you would get if you go into the pantry and get some sour milk, a little curd out of some milk that had stood until it is soured and put that into some fresh milk and let it stand over night and it sours. That is exactly what Parke-Davis' does. It is simply a sour-milk tablet and sours milk. It is a good tablet but is a sour milk only and does not contain the bacillus Bulgaricus.

Q--In a case of heart disease, when the pulse drops from seventy to forty and remains at the latter rate but otherwise the patient seems fairly well, what is



the significance?

A--Such a case ought to be examined by the electrocardiograph. Ask your doctor to let you go down to Room 101 and see Dr. Mortensen at half past eleven in the morning and he will have a tracing made which will show the exact work the heart is doing. Now a heart that drops from seventy to forty may have intermediate beats that are so small that you cannot feel them with the finger, but the electrocardiograph will show them.

Q--Is malt honey ~~xxxxxxx~~ and butter which have a sour taste apparently due to fermentation a valuable food for a dyspeptic?

A--I hardly believe that malt honey with a sour taste is served on our tables. If the malt honey has a sour taste, it certainly should not be eaten because it must be slightly fermented. Malt honey isn't any more likely to ferment than molasses ~~xxxxxx~~ syrup or any other syrupy preparation of this sort. It is possible that such a thing might be found as malt honey with an acid flavor, but certainly it would be a very rare thing. I don't remember to have ever seen any myself.

Q--Some author tells us that if a person has tuberculosis of the lungs the lungs would be injured by deep breathing.

A--That might be true if there was an ulcerated process going on in the lung, but the full use of the lungs, deep breathing is one of the best of all means of preventing tuberculosis, not an absolute certain method, but it is a good one. As I say, it is not absolutely certain, because some years ago a man called upon a specialist in Vienna, consulting him about his lungs. The specialist found he had tuberculosis in one lung and he said to him, "You ought to learn to play some wind instrument." The man said, "I am a cornet player now." He was a professional cornet player and yet he had tuberculosis in spite of it.

Q--How can ulcer of the stomach or duodenum be cured without operation?

A--Nearly all these ulcers are curable without operation. Only a very small proportion of gastric ulcers ~~are~~ <sup>of</sup> duodunal ulcers require operation. The thing necessary is to remove the cause. Now I am quite convinced that the principal cause of ulcer of the stomach and of ulcer of the duodenum is stasis of the small intestine. Now



that does not mean much to you, so I am going to make a little drawing here to explain it. Stasis in the ileum. Suppose this is the cecum and this is the ordinary shape of the colon. Here is the cecum, the transverse colon, the descending colon, the pelvic colon, the rectum. Now here is the stomach. Here is the ileum, the small intestine just this shape only it is much longer. It is coiled in this way. Here is a little valve. The stomach is the kitchen of the body, the small intestine here is the dining room and the colon is the filth receptacle or the cesspool, if you please and this little valve is lid of the cesspool, of the garbage box. The waste material comes down from the stomach in the small intestine and passes through this valve, but it cannot go back normally. Sometimes the colon is stretched so. I operated upon two cases today and had a case yesterday in which the colon was very much stretched, so much stretched here that the ileum had become chronical. The opening of the intestine here had become chronical. It had been stretched so wide that the valve was destroyed. The consequence was, the fecal matter passed right along up here into the intestine and a day or two ago, I was operating upon a case in which this fecal matter had passed along up into the intestine until it had reached the gall bladder and fifteen gall stones were found here in the gall bladder as a result of this infection which traveled up and got into the gall bladder. Sometimes it goes into the liver. Now when there is ulcer of the duodenum according to Dr. Lane's view, and I think he is right about it, the condition is the result of ~~the~~ infection or stasis. It is an infection that results from the backing up of fecal matters into the small intestine and the stasis here which causes a long contact or stagnation of this putrefying material and these ~~xx~~ virulent germs with the mucus membrane until finally an erosion occurs. Now if we increase the activity of the intestines so as to cause the material to pass through rapidly, then there is no time for putrefaction. Then these ulcers will heal. Of course, for radical cure it is necessary to have the valve repaired and it is not such a very difficult thing, it is very easily done by simply folding the membrane in something after that fashion so we can make a valve which is just as good as the original apparently.

Q--In case of fever just starting with dull pains in the head, what is the best thing to do?

A--That depends upon the cause of the fever. Many times these fevers are due to the accumulation of material in the colon and thorough ~~xxx~~ emptying of the colon



by the aid of an enema, taking a vigorous sweat with a long neutral bath afterwards will very often stop a fever at the beginning if not a specific fever. But if it is small pox, measles, typhoid fever or some other infection, it is not going to be cured in that way. Then you have got to go through the course of the disease until ~~Naturaxsan~~ natural immunity has been established through the efforts of the body. You cannot cure an infectious fever. You cannot cut it short by any simple bath or a simple measure of that kind but I may say that if you are going to have typhoid fever, if you do have it, be sure to have it treated on a modern plan. Don't let anybody treat you on the old-fashioned milk and whiskey diet plan. Be put into a tub and stay there until your temperature comes down. Drink water by the gallon. Drink a gallon of water a day. If you don't do another thing but live upon fruit juice and drink a gallon of liquid of some kind a day, if you don't do another thing than that when you have got typhoid ~~fever~~ fever, your chances for getting well will be first class. The old-fashioned method with dealing with those cases is being rapidly abandoned by the profession everywhere. The hydriatic method of treating these cases is attended by exceedingly small mortality. For instance, an eminent German physician has collected these statistics of a thousand cases, he and his colleagues, a thousand cases of typhoid fever in succession without one single death. Now you know the ordinary mortality is anywhere from sixteen to thirty per cent. so it is worth while to know that the modern methods of dealing with these cases by flooding the patient with water, water inside and water outside that this method gives one almost absolute certainty of recovery if the method is assiduously employed, whereas, the old method gives at least one chance out of four to die



Q. Can one eat too coarse a diet?

A. Of course. If one should try to live on sawdust or shavings and things of that kind it would be too coarse but one is not likely to do that. Any wholesome food that you can relish is not likely to be too coarse. Cases are very rare indeed in which a coarse diet does any harm. If you have been eating coarse food, vegetables, fruit or anything of that sort, if it is really doing the stomach harm, the stomach will reject it right away by vomiting. You need not have any fear whatever that it is going to cause hemorrhoids or irritate the appendix or anything of that sort. If there is any trouble at all it would be an acutely inflamed stomach and the stomach will reject it right away. If it gets by the stomach it won't do any harm anywhere.

Q. Are the waters at Carlsbad good for dyspepsia and nervous exhaustion?

A. No, there isn't any water that is ~~curative~~ curative. Ordinary water is good. If you need water, if you need a drink, if you need a bath but the specific virtues of these waters consist only in imagination.

Q. Indol 3 X, Acidity 92, 163, what does that mean?

A. You ask your doctor about that. That fact is, however, it means auto~~intoxication~~ intoxication pretty bad and a very high degree of acidity. It means you are on the road to Bright's disease by and by maybe quite a long ways off but just suddenly coming by and by if you don't change that condition because when the urine is too acid the blood is too acid and when the blood is too acid the kidneys are exposed to a constant action of an acid irritating <sup>substance</sup> which by and by dissolves the kidney structure, then a little albumen begins to appear in the urine ~~because~~ <sup>because</sup> the kidney itself is being dissolved and then after a while there will appear casts and then the kidney is falling to pieces and fragments of the kidney are being carried away and that is all due to the presence of an abnormal amount of acid so



it is very important to keep the acid down. How will you do it? By water drinking, by the avoidance of meat which raises the acid up very high and especially by the large use of fresh vegetables and fruits, using potatoes instead of bread.

Q. Can dates and maltose be eaten in cases of hyperpepsia?

A. Moderately. After you get better eat as much as you want to.

Q. What causes arteriosclerosis and in persons who never used tobacco, alcoholic drinks or have been meat eaters?

A. Inactivity of the bowels, tea, coffee, constipation are causes. Constipation doubtless is the most important of all causes. The use of tea and coffee is harmful as well as the use of tobacco. Lead from lead pipes will produce hardening of the arteries. Certain specific diseases will produce the same condition.

Q. Is it likely to be anything serious when a person has almost constant pain in the left side of the abdomen?

A. The probability is that pain is due to chronic colitis. It is more often due to that condition than to any other cause. The chances are about five to one that this pain in the left side is due to chronic colitis which is more common in the descending and pelvic colons in this part of the colon. That is where colitis is nearly always found. It sometimes gets over here and sometimes gets into the cecum but in the pelvic colon and the descending colon this is really the favorite seat of colitis and the pains from which people suffer from pain in the side and pain in the back are more often due to this cause than to any other. It is the usual cause.

Q. Is there an anaesthetic that can be given to a person who has an athletic heart in case a long and serious operation should be necessary? If so, what is it?

A. Yes, such a person can use novocain. Not very long ago I had a lady here who had a blood pressure of 200, an elderly lady who was



70 years old who had a bad appendix that had to be removed and a very bad ileocecal valve that had to be repaired. One grain of novocain injected under the skin at different stages of the operation enabled us to do this operation without giving her any pain. She complained a little bit at the last when we were closing up the skin as the affect of the local anaesthetic somewhat disappeared. We just had a very pleasant ~~visit~~ visit all the time during that operation, told stories, cracked jokes and just had a nice time. The lady was a woman who had a good deal of courage of course, was not nervous and she suffered no pain so she made the very best of the situation. I performed this same operation in another case with a very small amount of novocain. I have frequently removed a thyroid gland and sometime ago removed a thyroid gland as big as my fist with just a little novocain injected under the skin and the patient suffered really very little pain. Almost any operation now days can be done when it is really necessary that it should be done even when they cannot give either chloroform, or laughing gas. <sup>A</sup>The local anaesthetic may be injected into a nerve trunk and then all the parts to which that nerve is distributed will be completely anesthetized and absolutely painless so that with our modern methods it is very seldom that an operation that is really required ~~and~~ cannot be done.

Q. Is a bad case of colitis curable~~d~~ by fomentations and baths alone?

A. No indeed. We have got to get rid of the germs and many other things must be done. Fomentations and baths are good but they are not the whole thing by any means.

Q. Several persons wish to know how to get rid of dandruff.

A. It is not always easy to do. It is one of the consequences of autointoxication so that is the place where to begin. The thing to do is to get the bowels right, to get the diet right and to improve the condition of the whole body. Persons who suffer greatly from dandruff very often have dry skin and on investigation if the person is over 40



years of age we frequently find the thyroid gland is diminishing. It is wasting away, has become insufficient. It does not do its work properly so it must be stimulated to increase activity. Such persons are sometimes benefited by the use of dried thyroid for sometime while the body is building up and the function of the thyroid gland is being re-established but local applications are also useful and exposing the skin to the sunlight is an excellent thing. The application of the actinic ray or the arc light to the whole scalp so as to sunburn the scalp and produce a real sunburn which will produce in many cases a rapid cure.

A

Q. ~~The~~ medium stout built lady of 40 years drops to sleep whenever she sits down. She says she is perfectly well, eats what she likes and has no pain. What probably causes her to go to sleep?

A. An ~~an~~ anemic condition of the brain. In sitting down the abdominal muscles are relaxed and the blood runs away here into the abdomen so there is not blood enough to keep the brain going. If this lady is very anxious to keep awake all she has to do is to sit right up straight, lift the chest up very high, pull in the abdominal muscles, take deep breaths and that will keep the blood up in the brain and ~~relieve~~ relieve the trouble. However, I should say that very obese patients sometimes get into a position where they are really anemic. They do not have blood enough to keep the brain going. I remember we had a patient here some years ago, a man who weighed 375 pounds. He came in the front door. / and the next day after arriving here he came in at the ~~ix~~ front door and the wind was blowing so he backed up against the door to push the door shut and in that short interval he was occupied shutting the door he fell asleep and dropped down upon his knees in the lobby. He stepped up the desk and called for his key and the clerk turned around to the box to get his key and when he looked back the poor man had fallen over the desk fast asleep. Sitting in my office I asked him his name and in taking his history he told me his name and before I could ask him the next question he was sound asleep in his chair and snoring away and had to be awakened. Now this gentlemen



when his weight was reduced and his heart sufficiently improved, in the course of two or three weeks was as wide awake as anybody in the house. This is a special trouble that obese patients suffer somewhat from.

Q. Is there any objection to ice cream prepared in the home under sanitary conditions?

A. There is no particular objection to ice cream if you will treat it properly. In the first place the cream which is used must be fresh sterilized so as to make sure that there are no tyrotoxicon germs in it. That is what makes trouble with ice cream. Then in the second place when the ice cream is eaten it must be well fletcherized. Don't forget that. Chew the ice cream, take it in small bits, shew it well and it won't do any particular harm if it is taken at meal time but should never be taken between meals.

Q. How can dilatation of the stomach be cured?

A. It is a very difficult thing to cure except by operation. There are certain things ~~xxx~~ that are very beneficial. A person who has dilatation of the stomach should take small quantities of food. He may eat frequently, if necessary, but he must take very small quantities of liquid. Such persons are very prone to take too large quantities of liquid and also too much of solids and the reason why is somewhat technical and I will have to make a little diagram to show you. Water is not absorbed from the stomach so when one takes a drink he doesn't get any benefit from the water until after it has passed out of the stomach. If one is thirsty and drinks, I have known people to keep on drinking glass after glass full of water and the thirst seemed to be not at all assuaged, did not seem to be satisfied by drinking until after drinking several glasses of water. The reason is that the stomach is very much propped. This is the normal condition of the modern stomach. Here is the pylorus. Here is the gallbladder emptying here. Now sometimes in these dilated stomachs the stomach comes away down here. Now when the



stomach is of a normal shape, when a person drinks water it flows out pretty soon, flows out of the stomach but when there is just a ~~max~~ patch of a dilated stomach then when a person takes a glass of water it is down there and it can't get out and he has to drink another and another, perhaps another glass before it gets up high enough in the stomach to begin to run out and he doesn't get any relief from thirst until the water runs over and passes out into the small intestine where it is absorbed so persons who have prolapsed and dilated stomachs are likely to take a very large amount of water and food because they do not feel any great inconvenience from it. Sometimes there are people who sit down at the table and eat two or three dozen eggs, half a dozen pies or ten or twelve pounds of beefsteak. Such persons must have enormously dilated stomachs. The thing for such a person to do is-~~to~~ after taking a glass of water is to lie down upon the <sup>right</sup> ~~left~~ side and allow that water to <sup>toward</sup> run over over here ~~from~~ the pylorus and run out. That tips the pitcher over you see so the water has a chance to get where it can be absorbed.

Q. Will insomnia once cured return if the patient takes good care of himself?

A. Not if he keeps right on doing the things that made him sleep. He will continue to sleep. Insomnia sometimes gets to be a habit and when the habit is broken it has to be cultivated again before it will return. When a person has once gotten rid of insomnia he doesn't need to have it again because he knows how he got rid of it.

Q. Will a person past 45 get well without treatment when the X-ray shows one or two small spots in the stomach?

A. If they are ulcers the probability is they will get worse unless he changes his habits and removes the cause. by changing his habits of diet.

Q. What is the cause and cure for a cecum which dilates giving pain in the ~~gxax~~ groin?



A. The thing that is most important of all in these cases is to avoid large meals and to produce frequent action of the bowels and keep the bowels empty. Now when a person has a dilated stomach you can see if he eats a large meal the cecum will be distended with this large meal but if the food is taken in small quantities, perhaps four meals a day instead of two, taken in small quantities then the small amount of food as it comes along to the cecum will be passed on before the next installment comes so the cecum will not be over distended or over loaded. Then if the diet is managed in such a way that it is stimulating to the bowels, in other words that is laxative, the bowels will be kept empty and the cecum will not be over distended.

Q. How do you account for one person being full blooded and fleshy and another being pale but both enjoying good health?

A. Many people seem to enjoy good health when they are really not in good health. That is one thing to be said about it but another thing to be said about is that people who have very thick skin are very likely to be pale while persons with thin skin are likely to show more color because the blood vessels show through and the changes in circulation of the skin are more apparent.

Q. Are eggs, new milk or cream good for a person who secretes an excess of hydrochloric acid?

A. In general, they are well tolerated.

Q. What course of treatment would you give for erysipelas and pneumonia?

A. There is no specific treatment for either erysipelas or pneumonia. A person who has acute erysipelas must stay in bed, drink large quantities of water, the skin should be painted over with some antiseptic preparation, ichthyol is very useful for this purpose and tincture of iodine may be used and other remedies are highly useful for this purpose but the most important thing of all is to keep the condition



patient flooded with water to carry off the poisons which are produced by the infecting germs and nature in a few days will effect a cure.

Q. Is paraline a similar preparation to Para-Lax?

A. I am not familiar with paraline. From the sound of the name one would think it was.

Q. Is soda a good thing to take for sour stomach?

A. It is better to take the soda than to have the sour stomach but the continuous use of soda is damaging.

Q. What would be better to do, walk or take a nap after eating?

A. In general, it is bad for one to lie down and sleep after eating but if you suffer pain after eating, then lie down and keep quiet but do not go to sleep.

Q. Are the seeds of figs and raisins irritating to the intestine? Answer. No.

A. I have reached the very bottom of the box and now I will let you go. I thank you for your attention.

END.



Question Box Lecture at the Sanitarium Parlor, Battle Creek, Michigan,

Thursday, May 14, 1914

at 8:00 P. M.

by

J. H. Kellogg, M. D.

I am glad to be with you again. I have been away for a few days and was very homesick to get home. The first thing when I got home I met a gentleman who had been stopping here for a day or two and he said, "Doctor, I think you have got the best looking lot of sick folks here I ever saw in my life." That is the way I feel. When I go away I want to get home again. I suppose you would like to know a little of what I went away for. I never go away from home except on some very important or necessary errand. I never go away for pleasure or for a vacation. I don't remember to ever have had but about three weeks' vacation in my whole life time. I hardly think I have had that; I think about two weeks all put together. I went away a little while last winter to write a book or two and to read a lot of books that I didn't have time to read at home, some books that were very hard to read, nevertheless were very important to read, books on metabolism, some very abstruse books, scientific books and I wanted you to have the benefit of them and there is no way I could give you the benefit of recent knowledge without going to the very bottom of it myself so I read through several great ponderous volumes; put in every minute of my time reading, dictating and writing for your benefit, not for mine, though I got some good out of it too and I was very much surprised to find how all the new discoveries of physiology, bacteriology, physiologic chemistry, metabolism that have any relation whatever to the



things we are doing here at Battle Creek support these principles and fall right into harmony with the things we are trying to do. I met a little while ago a very distinguished, scientific friend of mine who lives in New England, sometimes comes here and she said, "Professor so and so told me that you had a sort of scientific smell, that you smell things out before you have got the scientific proof of them." Well, I remembered then having had a conversation with this gentleman once. He said to me, "Doctor, how in the world did you ever get the Battle Creek Sanitarium on such a wonderfully, scientific foundation and so long before you had all the proof?" He said, "Now I can understand because we have bacteriology and we have physiology and physiologic chemistry and so many new discoveries that I see you have a good, scientific foundation on which to stand but you didn't have all of that thirty-five or forty years ago. How did you manage to get the thing right?" Well, I told him I knew this thing to be right away back there because it had the right smell and I said to him then, "Now we don't judge proof by logic. We don't judge proof by reason. We recognize proof by the flavor of it." Now isn't that so? You find a poor, ignorant man that believes certain things. He feels that those things are true. He knows they are true because he feels it so and you may argue with him and prove to him that he is absolutely mistaken and he doesn't take a bit of stock in your argument. Your logic may be as sound as possible but after all he knows the thing is sound. He knows it is right and you cannot dislodge him from his position. Now I don't deserve a thing for that discovery at all because that lesson was taught to me by a very interesting man and I think I will tell you how I became acquainted with this interesting man. About twenty years ago it occurred to me that these things we have here at Battle Creek are so good that they ought to prove themselves to be food for boys and girls. It was about thirty-five years ago so Mrs. Kellogg and I began taking boys and girls into our home. We said, "We will try this



experiment on ourselves and take in some boys and girls that have no chance for themselves at all, take them into our home and bring them up in the same way that we live and see what the results will be. That was about thirty years ago. A few years afterwards we found things going on very well in our home. Our little folks were thriving on the low protein diet and hygienic feed, no~~x~~ meat, etc. , and it occurred to me that if these principles were so good for us that they ought to be good for the children who are away down at the bottom of the scale and I got it into my head that it would be an awfully good thing to have a health mission, a sort of clean up mission down there in Chicago so World's Fair year I went to Chicago, went to the chief of police, told him I would like to have him tell me where I could find the wickedest and dirtiest spot in Chicago, that I was going to start a mission there and going to put in a bath. He asked me what kind of a mission. I told him I was going to put in some bath tubs and a laundry. That was to be my mission. I said, "It is no use at all to give a man a bath and make him clean and then have him put on those ~~fix~~ dirty clothes again and it isn't much use to wash his clothes and leave him dirty so I said a laundry and a bath house is the right combination and that was the first free bath house in Chicago. There was another bath house right near Harrison. The father of the present mayer started a movement and there were some free baths put in some-time afterwards, one or two but that was severly years afterwards. We had the first free bath. When I opened my little bath house there there was not a place in all Chicago that a man could get a free bath anywhere in the world excepting to fall into the Lake. He couldn't go in voluntarily but had to fall/<sup>in</sup>by accident. Actually I saw men washing their hands in the filthy water of a gutter. There was no other place they could get a chance to wash their hands and get the grime and smoke and dirt of the city of Chicago off their hands and faces . Well I got a ~~basement~~<sup>basement</sup> down in the



heart of Chicago. The chief of police said to me that anywhere within a block of the Harrison Street Police Station will be the right place for you so I finally found a basement, the only place I could get that was not occupied by a saloon or a gambling den and opened up our bathhouse and our laundry. It was very hard to get patrons. You haven't the slightest idea what a great time we had to get somebody to come and use our bath house. We had some nurses come there and they were there a whole week without a patron and they didn't know what to do. They finally conceived the idea of how to do it. They went out and hired some news boys to come in and have some baths and these news boys felt so jelly after having a good clean up that they went out onto the street and every old drunk and dirty tramp that came along they steered him to our bath house so we very soon got started. Well among the poor fellows we picked up down there was one man who was recognized as the meanest and the dirtiest and the most absolutely worthless man in Chicago. His name was Curly. That was what they called him. His black hair had not been combed for years. It was curly and all matted together and he was one of the filthiest looking objects I ever saw. One day I met him. That was about six weeks after the World's Fair closed when the great panic broke out and there were about 20,000 men starving on the streets of Chicago. I had a lunch counter added to the mission and sold books containing 100 tickets for a bowl of soup and some bread for a dollar, each ticket good for a dinner. Gamblers came <sup>around</sup> and used to buy up these books ~~tickets~~ by the hundreds to give to men who were broke in their dens so we had a good lively patronage of broken down gamblers, jail birds, people just out of prison and we had a motely crowd there. We used to have feed fifteen hundred to three thousand people a day. Every Sunday of my life I spent in Chicago for seven years down among these folks trying to see what I could do for them, trying to apply Battle Creek Ideas to the people of the slums of Chicago and we spend one hundred thousand dollars



there. I was one day standing on a platform a little higher than this talking to seven or eight men who were eating their dinner of bean, soup and bread and while I was doing this, this man Curley came up and reached out his hand and said, "Doctor, will you please give me a bowl of soup? and I am nearly starved. I have not had a thing to eat since day before yesterday morning. I put my hands in my pocket, got a copper, bought him a bowl of soup and gave him some bread and he started away and he came back and he said, "Say Doc, I want to whisper something to you" so I got down and he said, "Say Doc, I prayed this morning for the first time in my life. I told God if he would send me something to eat today I would not steal." This man had spent half of his life time in prison for years. He was a cut throat. He used to hide in a little hole in the wall and jump out and put a knife into a man for fifty cents. He said, "I prayed this morning. I told God I would not steal if he would give me something to eat" and now he said "My prayer is answered and I am going to be a Christian. I know there is a God when my prayer is answered. I have something to eat and I am going to be a Christian." It is a strange thing but he turned over a new leaf and has been a Christian ever since and has been working hard with the volunteers of America and has charge of a big mission in Los Angeles. He has reformed thousands of men. He could not read or write. He hadn't had a chance to learn and couldn't do anything intellectual. He is forty-five years old. He said his mother tended the saloon that his father kept and carried him around and fed him beer. They treated him so badly that when he was nine years old he ran away and joined Ferepaughs circus and got his education there, learned how to ride bareback and do some tricks and was a bantam weight pugilist as he was a small man and so he went on until he got to be such--a--

~~\*\*\*\*\*~~drunkard



Until he became to be such a horrible drunkard he could not keep steady on a horses's back any more and degenerated to such a degree that he could not make a success in boxing so he had to give that up and he got down into the gutter and became a thief and a cut throat and a horrible criminal, the meanest and the most despicable man in Chicago. That was his reputation. Well he was a horrible looking man. I will never forget how his face looked when he came up there and asked me for that bowl of soup. His hair was sticking out through the crown of his hat which didn't have any top to it, and his toes were sticking out through his old shoes, and he was dirty and filthy as he could be, covered with vermin. When he reached up his hands for a bowl of soup, his clothing was in such tatters that the rags fell down to his shoulders and it was a naked dirty arm reaching up there for that ~~humbk~~ bowl of soup. He was a most miserable looking object, his face all covered over with blotches and he had a great big red nose, a rum blossom of most prodigious proportion. I didn't see anything more of that man for three years. Three years afterwards I met a man at the train just as I was boarding the train to come home about 11 o'clock Sunday night, and he said, "Doctor, there is a man over on the west side that you ought to see." I happened to be going along last night and I saw a sign out "Mission" and I dropped in and there was a man up there on the platform talking, a fine looking fellow and he had a great big audience before him and he was conducting a wonderfully successful meeting and he said, "A bowl of soup that Dr. Kellogg gave me saved my soul. I think you had better look him up for certainly something happened to him." A week or two afterwards when I was in Chicago and went into my office I found this man there talking. I didn't know who he was; he didn't know me, but having finished talking, he came up and looked at me curiously and said, "Haven't I seen you before? What is your name?" He received my hand and nearly wrung it off when I told him what my name was. "Why, Dr. Kellogg," he said, "that bowl of soup you gave me saved my soul." Well as I say, we spent one hundred thousand dollars in Chicago and did not see very much fruit always, but I said, if this man is really saved, certainly it is well worth while so I watched him and took quite an interest in him. Some little time afterwards, I saw he was holding on, making good. His real name was Tom Mackey. Perhaps some of you have heard him talk sometime. I said, "Mackey



you ought to come up to Battle Creek." I gave him a ticket to come up here and I was interested in him to see if I couldn't do something for him to help him get rid of those blotches on his face. I said, "By the way, Mackey, what do you eat?" I didn't like to have a man get upon the platform and say "Dr. Kellogg saved my soul" with a bowl of soup". I didn't like that kind of a specimen looking as he did. I said, "Mackey, what do you eat?" He said, "I will tell you. When I get hungry I just go into a restaurant and say, 'Look here, bring me something to eat quick,' and the waiter brings me something. If its a beefsteak I eat that. If its yellow ~~dog~~ I eat that. I just eat anything that comes along." I said, "You come up to Battle Creek and I want to have a talk with you about eating. I think eating has something to do with piety." He came up here and spent three weeks. I didn't say anything to him about diet and as he was just going away, I said, "Now Mackey, come into my office. I want to talk with you a few minutes to talk over the question of diet." He said, "Doctor, look here. You don't need to say a word to me, I am converted already. I am never going to eat any more meat as long as I live." "Well," I said, "let us talk it over a little." He said, "I don't need to hear any talks at all. I know it is right because it tastes right." Now that man had found his natural taste. His had already lost his appetite for tobacco and whiskey and before long he had lost his appetite for beefsteak. In six months you would not have known that man. All those blotches had disappeared from his face. The rum blossom was gone and he was really a handsome looking man and I wouldn't be ashamed at all to introduce him to any of you today. He was really a nice looking gentleman. That was almost twenty years ago now. No it was seventeen years ago. I mention that so you will see what happened to a man when he makes a radical change in his life. I am going to tell you something more. That man said something to me one day which struck very deep into me. I was taking down to Chicago, some nurses and other students who were helping me about the work around there in the back streets and lanes of Chicago. I was very well acquainted at one time with a good many of the crooks in Chicago and I never got off the train and went down the streets that I didn't meet all kinds of crooked fellows that would catch me by the hand and say, "Good Morning! Dr. Kellogg," and I felt really



embarrassed one day when a poor fellow who was half drunk that I had given a bowl of soup to at the Mission saw me passing by and it was in ~~xxxxxx~~ presidential year and he took off his hat and nominated me for president and gave me three big cheers and I got around the corner as quick as I possibly could. Well I had a number of students with me and I introduced Mr. Mackey to them. And when we were alone, he looked up to me with a most pathetic look in his face and said, "Oh doctor, Oh doctor! if I had only had a background like those young men, those clean sweet young men. Just think of it, doctor! just think of it! forty-five years of crime behind me. Just think of it! Oh why didn't somebody tell me before." Why I tell you, my friends, that took hold of me very deeply from that poor fellow who never had a chance, who was born over a saloon, taught to drink by his own mother, educated in a circus and grew up in the slums, never had had any contact before in all his life with what we call "Christian civilization". He had only been down in the grime, down in the dreggs and dirt and there are thousands there today, just thousands that haven't any chance at all and it is the most awful thing in our country is that very thing. Well I find it very difficult to tear myself away from an effort to do what I could to help those poor fellows and I was glad to see a good many of them were helped. We kept the mission alive in the midst of the jungle in Chicago for a great many years, for twenty years and it is still going on though I have not the time to give attention to it that I used to; but this man Mackey was an ignorant man, but he went to work and learned to read, went to Moody's Institute, got an education in the Bible and became really a very efficient evangelist. If he were here standing on this platform, he could talk to you for an hour in a way that would interest everyone of you and secure your most undivided attention. He was really a man of a good deal of natural wit, but the thing I started out to tell you about was that this man discovered that the Battle Creek Sanitarium idea was right because it had the right taste and it has the right smell and it has the right feeling when you get hold of it. Now the reason for that is simply because it is based on natural principles. Some of us were educated wrkong . I was in my childhood and I presume some of you were. We were educated with the idea that everything in the natural world was all ~~xx~~ wrong; that the "old Harry" had somehow got hold of egerytthing that is natural of everything that is in the world pretty



nearly that has all got into the hands of the devil and he is running things pretty much to suit himself and the Almighty only has thing his way just once in <sup>great</sup> a while. Now you know I think that is an error. In fact, I am glad I got away from that notion a good while ago. I rebelled against it as soon as I began to think for myself. I thoroughly believe that the things that are natural are divinely implanted instincts and the things that we call natural are not natural to a very large degree but they are prevertions of the natural things that are really natural and sweet and good and wholesome. That ~~they are instincts~~ <sup>they are instincts</sup> planted in us to lead us right. Why are we thirsty? So that we will drink water. Why are we hungry? So that we will eat food when we need it. Why do we get sleepy? and tired? So that we will cease work and can end activity and give our bodies a chance for recuperation and repair. Now those are physical instincts. Why do we have pain? To warn us not to do the things that are injurious to us. Pain is one of our very best friends and so with the intellectual world and the moral world. Things that are evil are really repugnant to the really natural man; but I am not going to say that there any really thoroughly natural men. We inherit so much perversion that we may find it pretty hard to find what the real true normal standard is; but certain it is in my mind if we can only find the normal way, the natural way, that will be the right way. So I told this professor who asked me the question he did, that the principles we adopted here, I adopted myself almost fifty years ago and have tried to square my life with them to find out what is natural, what is natural for a man to eat, what is natural for him in relation to exercise and in relation to sleep and to follow those great natural laws because these laws are biologic laws. Now that is what ~~xxx~~ we do for a cat, a ~~dog~~ dog or a chicken. We feed them the food which is natural for them. We give them conditions of life that are natural for them; but man has undertaken to set aside all these natural laws and to say, "I am going to eat everything that everything else does; I am going to eat just what I please; I am going to <sup>treat</sup> ~~keep~~ my body in such a way as to get the most fan out of it; I am going to do what I like; I am going to eat what tickles my palate; going to treat my body as an instrument of pleasure and get out of it just as much pleasure as I possibly can without regard to the interests of the body itself." Now that is what the average man does; that is the way he behaves toward himself. He does not consider "now what is good for my body and for me; what is natural food; what is the natural right



conduct; what is right living; what is really right and proper living; but how can I have the most pleasure and the most enjoyment "a great many people think, but a great many more people think "I must do just as my father did and as my grandfather did. What he did was good enough for him and it is good enough for me." There are a great many people living according to that rule, the rule of precedence and I want to say to you, my friends, there isn't anything that stands so much in the world's progress in this world as established usage and established opinion. They have always stood in the way of progress and there has got to be somebody who ~~can~~ dares to break away from precedence, from sanction, if you please, to get away from these things that are regarded as conventional and the unconventional things and do something different and the only guiding star that I can see anywhere, looking all about the cosmic sky if you please, the only guiding star I can find is natural law. We cannot believe that the natural law relating to man can be anything but what is for his ~~benefit~~ best good no matter how that law has been developed, no matter whether it was established by some creative power away back in the past somewhere which I don't believe or whether it is the outgrowth of evolutionary principles as Haeckel thinks which I don't believe either no matter what it is. How this law has come to be it must somehow or other be the right thing. So the all important thing is to find out what is right living, what is normal for man. Now I have been down to Washington on account of my interest in this problem. There were three things that called me to Washington, that took me away from home for a few days and it takes a big magnet to draw me away from this place. First, the meeting of the National Association for the Study and Prevention of Tuberculosis. Now I talked to you a little bit about that the other night. It is one of the biggest problems before the American people for here is a disease that is killing 150,000 people in the United States every year, wiping out a whole big city, one disease. One-tenth of all the people who die in this ~~six~~ country, die of tuberculosis. I suppose there are not three people in this room tonight that have not had a touch of tuberculosis, that have not been bitten by this monster, that has not got some scars in their bodies of tubercular infection. That is the observation that is made in post mortum examinations. It is scarcely possible to find a person thirty years of age that has not the marks of tubercular disease in



his body. Probably at least one out of every three persons in this room have had tuberculosis in the lungs and the X-ray examination will show the scars of it there. I did not know that I had had any tuberculosis but the X-ray showed it to be there. I had it. I am glad I have not got it now but I certainly had it because the marks are there, the scars are there and I can look back in my experience and remember a time when I had a bad cough when I was a mere boy. I think I was then about fifteen and I was very poor and thin and pale and everybody said I was going to run into consumption, but I ran out of it fortunately, everybody said I was going to die but I didn't, so I am here. That was forty years ago so I have hopes of living a while longer yet. So you see this almost a universal disease. In public schools in many cases, 90% of all the children are found with tubercular glands under the jaw. The time has come when we have got to raise <sup>and</sup> fight this monster. We are making almost no progress so far and I am ashamed to say that our state of Michigan here is one of the backward states, did ~~an~~ almost nothing for the state to fight this thing. The same is true of almost every other state.



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We are making almost no progress so far and I am ashamed to say the State of Michigan here is one of the backward states doing almost nothing for the state to fight this thing. The same is true of almost every other state and this was a meeting of men who were interested in this problem and working at it. It was held at the New Willard Hotel in Washington and there was a large gathering there. There were two divisions of the Congress there, one devoted to the purely scientific side of the question and the other devoted to the social side of the question. Everybody who had studied this question had become convinced that we have got to give attention to the social side and that we must have somebody besides doctors studying this problem. It has become apparent to everyone who has investigated the matter at all that business men have got to become interested, that they have got to become interested from a business standpoint and see that we cannot afford to allow our country to be destroyed in this way by a disease that is absolutely and perfectly and completely controllable. Now if we did not know what were the causes of tuberculosis, if we did not know what to do to prevent it, to-prevent-it it would be another question. We would not be responsible but we know all about it. We know exactly what are the causes of tuberculosis. We know exactly how if you have <sup>not got</sup> the disease to prevent it and if you have it to care for it and the cure and prevention is easy if we begin in time. We can prevent it invariably. We can just as certainly prevent tuberculosis as the sun is shining, almost. Tuberculosis is the highest disease. If we lived out of doors all the time we would not have tuberculosis. We would not have any such thing as tuberculosis. <sup>There</sup> ~~It~~ wouldn't be any such thing. If we lived in tents we wouldn't have tuberculosis because tuberculosis is a disease that cannot tolerate the light and fresh air. These germs of tuberculosis grow in darkness and in unhealthy places. They won't thrive out in the sunlight. Why, take the most robust tubercular germ you ever discovered or that anybody ever



met with and expose that germ to the direct rays of the sun for fifteen minutes and it is dead. It is dead. It cannot live in the sunlight so the sunlight and the fresh air are the complete and perfect antidotes for tuberculosis. If we could get all the people of the United States to sleeping out of doors and giving a little attention to the ventilation of their homes and sleep outdoors at night or have their windows wide open, if they would give attention to ventilation they would soon come to the point where they could not stand the stuffy air of the rooms in which they undertake to live in in working hours or waking hours. If they should had the privilege of breathing pure, fresh air all night they simply could not endure the smell of the unhealthy atmosphere in which most people live. If we could get the whole population to sleeping this way, in fresh air, all night, we would pretty soon reduce the mortality from tuberculosis to a very small figure but unfortunately while we talk about it and people understand it and know all about it they pay no attention to it. I have a boy at Mr. Moody's school at Mt. Hermon, Mass., so I ran over from New York to spend Sunday with him and I saw one very good thing over there in that school. They have some 800 boys/<sup>in winter</sup>and between four and five hundred boys at the present time . It is a splendid school. It runs the year round and that is a good thing for boys need to be kept busy the whole year. I found one of the rules of the school is that every boy must sleep with his window open in the very coldest weather and several times during the night an officer walks around every building outside and looks at every window and if there is a window that is shut he goes inside and opens that window. The boys are not allowed to sleep with closed windows. They are required to sleep with their windows open. We ought to have a law to that effect. We ought to have a law to apply to every house or a policeman to go through every town watching up and down every street looking at the windows of sleeping rooms and knocking at panes of glass to give fresh air when the windows are closed. What a criminally stupid



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thing it is to shut ourselves away from this great life giving fresh air of Nature. We have no right to suffocate ourselves, to inoculate ourselves with disease, to compel ourselves to die prematurely by forcing ourselves to breathe impure, unclean, germ laden air. We must feel that there is responsibility for us. Now another thing a thing we ought to do is to begin with our public schools and see that the public schools are held outdoors and the windows are wide open if it is possible to do so. We have open air schools now, you know, for tuberculous children, children who have lumps under their jaws and even ~~who are~~ children who have evidence of tuberculosis. They are put into open air schools and it is discovered that these children in the open air schools thrive not only physically but mentally, that they get away ahead of the boys and girls shut up in the hot, dry and debilitating atmosphere of the ordinary school room. Now my friends, when you go home ~~start~~ start a campaign in your town about this thing. Get in touch with this National Association for the Study and Prevention of Tuberculosis. Pennsylvania is getting ~~walked~~ walked up. Down in Pennsylvania they have established dispensaries in more than 100 different places so that there are dispensaries accessible and everybody who wants to have his lungs examined can go to that dispensary and be examined at state expense. In North Carolina the State Board of Health has gone a step further. They have got the legislature of that little state to appropriate a sum of money sufficient to establish dispensaries in all the leading cities of North Carolina under the charge of able physicians and any man who wants to get an examination can go there and be examined for half price and if he is too poor to pay the half price he can get the examination for nothing not only for tuberculosis but he can have a complete physical examination. Every state ought to care enough for its human property, we will say, it ought to care enough for its human assets represented in human lives, to look after them. Down in



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Indiana, Dr. Hurty wrote a story a while ago about a case that actually happened down there. A man had some pigs and these pigs began to show some sign of getting sick and he wrote to the capital, to the secretary of state and told him his pigs were sick and some of them dying and asked him for help. Well, now what happened? Immediately there came down a state officer who examined those pigs, to feel their pulses and look at their tongues and see what was the matter with them. They investigated those pigs, found what was the trouble and told the man how to stop it, gave him the remedies and the pigs were saved. Now then after while this man got sick himself. He began to have a cough, got thin, emaciated and he wrote to the same officer and said, "I am sick myself. What shall I do." Well, what did he do about it? What did the state do about it? Simply wrote him they could not do anything. There was nothing to do for there was no money appropriation for anything for a sick man and the poor fellow died of tuberculosis and his wife got it and died and half a dozen children were thrown upon the community without a penny to support them because the state did not take interest enough in the welfare of its citizens. They had interests and money to pay for saving pigs but not a penny for saving babies boy and girls, and men and women and that is the situation in this whole United States. Now we want to get aroused on this question, my friends, get waked up, get stirred up and as I look around here and see the large number of responsible intelligent looking men and women here, I know that you are bearing large responsibilities in your home, that you are merchants, lawyers, perhaps some of you doctors and clergymen and occupy important ~~positions~~ positions and have influence in your communities, I wish every one of you might when you go home carry with you a message to your community upon this very question of the responsibility of the community toward the general health of the whole and the welfare of the whole of the race. Well I was going to have a question box here and here



I have been giving a lecture on other subjects telling you what I went down to Washington for. We had a very interesting meeting of the American Association and there was another thing that interested me down there and that was the meeting of the Life Extension Institute. Now that is something new to you perhaps, but it is a very interesting new departure, the Life Extension Institute. Prof. Irving Fisher of Yale and some friend of his--I won't mention all of them but I know some of them got together and organized an association which they call, the Life Extension Institute. The purpose of this Institute is to examine men and women once a year or as often as they need to be examined and give them a thorough examination, then tell them how to live, how to keep well and how to extend their lives and it has already received a commission from quite a number of the large Insurance Companies to examine their policy holders. For instance, the Metropolitan Life Insurance Company, the largest life insurance company in the world, has turned over one hundred and fifty thousand of its policy holders to this institute to be examined every year and the Metropolitan pays for that examination and notifies the policy holders that they are entitled to examinations free. All they have to do is to call upon the doctor. The name of the doctor in his vicinity is sent to him and he may call on the doctor and the doctor examines him. This institute has already got to work and they had the first meeting of the Hygiene Reference Board of which I have the honor to be a member and when I met with this Board, I found myself in very good company. There was General Gorgas, the Surgeon General of the United States Army and Surgeon-General Blue of the Health Department of the Government and Dr. Alexander Graham Bell, Dr. Fisk, Dr. Hoffman, the great statistician and about fifteen or twenty more men of some distinction. I was the least distinguished person there I think and we had a most interesting time in receiving the report from the medical director, Dr. Fisk. Dr. Fisk told about the examination he had just made of one of the largest financial concerns in New York City; one of the great banking associations there whose name is very familiar to everyone of you. There were four hundred and forty-one clerks in this establishment. These men had an average age of twenty-six years and they were all supposed to be in good health. They were all well enough, at least, to smoke cigarettes, cigars, drink cocktails, etc. and these men were carefully examined by the experts of the Life Extension Institute and how many men out of the whole four hundred and forty-one do you think were found that had no



impairment of any sort? Eight, eight out of four hundred and forty-one young men of an average of twenty-six years of age, all supposed to be healthy. There were only eight of the whole four-hundred and forty-one that did not show some impairment. Of course, the impairment of the large proportion was comparatively slight, not sufficient certainly to prevent their getting life insurance, but ninety-seven showed evidence of kidney disease; ninety-seven showed albumin or some other distinct evidence of disease of the kidneys; ninety-seven out of four hundred and forty one, nearly twenty-five per cent. One hundred and four showed marked evidence of heart or blood vessel disease, high blood pressure and other symptoms of heart disease and kidney disease. So about one-third of the entire number had either heart or kidney disease or both. Think of that, my friends! And it is no wonder for all these men smoke. Every one of them I dare say would have declared that it didn't do them any harm at all to smoke. If it had hurt him, he would quit, of course. All of them would testify that cigarette smoking did not do them a bit of harm. Yet that is what the examination showed. I believe the same result will be found in any financial concern in the whole United States because this was one of the high toned financial institutions of New York and one of the very best in the city and they were very careful about the men which they selected, and that is the reason why they employed the Life Extension Institute to give an examination to their men because they are so particular. They want only healthy, vigorous young men in their business. Well you can imagine it was an eye opener to those men and I would not be surprised if some of them stopped smoking cigarettes and cigars. Now the purpose of this Life Extension Institute is not only to examine people but to make a careful statistical study and by means of questionnaires and in other words, to make a thorough scientific study of the question of what is right living. What are the optimum conditions of health? What should a man eat? How should he behave toward himself in order to live the best, most efficient and the longest life. Now we are going to know something in the course of ten years that we do not know now. It ~~is~~ was very interesting while ~~was~~ Prof. Fisher was talking, mentioning some of the problems we were going to study and one of the problems was the question of tobacco using. There was a very distinguished gentleman sitting back there smoking a cigar just that moment and when Prof. Fisher said



tobacco, down came that cigar and it did not appear again. You know, he hadn't thought of it at all. He became ashamed just that moment of having the cigar in his mouth. As a scientific man, he knew it was out of place. Another man, a very distinguished New York doctor I noticed just the moment before, a tremendous volume of blue smoke coming out of his nostrils. He had just swallowed a portion of his cigarette and I noticed that smoke stopped to. That was the last portion of smoke I saw during the whole evening. Then I awakened up to see the importance of this thing. The rules that have been adopted by the Life Extension Bureau are practically identical with the rules given in our little booklet here, "The Simple Life in a Nutshell". I have endeavored to boil down and put into that booklet what I believed to be the proper rules for health. They are practically identical with those rules. They are shaded off just a little bit because of the hardness of their hearts. Prof. Fisher does not say in these rules, "You must not eat any meat at all," but he says, "Eat as little as possible." And a man that has got any sense, he notes that sort of hint and he ought to know enough to go the rest of the way. So with the other point, tea and coffee and so forth, they are put down among the poisons and the effects of poisons in general is clearly outlined. Now the thing that interested me was that this distinguished body of scientific men including Dr. Welch of Baltimore who is a member of the Board. Not one single protest was raised against these stringent rules. Not a man said a word against the avoiding of tobacco, alcohol, tea, coffee or limiting the use of meat, eggs and things of that sort. Not a single word of protest was raised. I expected there would be a great discussion and I was armed to the teeth so to speak to defend these simple life principles, but there was not a living soul that had a word to say against them. Everybody knows these days, every scientific man knows that these principles of simple living are sound, that they are fundamentally right and if they are not quite able themselves to come up to the standard which they recognize it is only because of the weakness of the flesh and of the force of habit and of the influence of surroundings. I have been very much interested as I met four New York Gentlemen all of them smokers. No one of them was not a smoker and told me how that one of their number in a recent meeting of the Life Insurance men had read an article showing the evil



effects of alcohol and how it shortened life and lessened life expectancy to a great degree and they told how after he had finished reading a very able and interesting paper and lit a cigarette and smoked it and smoked another one, then got out a long cigar and the gentleman said to me, "We were all laughing at him." I know the gentleman pretty well and I am going to tell him he made a laughing stock of himself by smoking cigarettes and cigars in public or anywhere. They knew that he knew that tobacco was as bad for him as alcohol was. He discouraged the use of alcohol and yet he was making a drunkard of himself with tobacco smoke. It is the same kind of thing as all scientific men know. Men do not stop smoking when they know better. It is simply from force of habit. I know a good many men who want to stop but do not know how. They stop smoking and feel so wretched and miserable and receive no sympathy from others who smoke. I was talking to quite a distinguished doctor sometime ago when he was smoking. He said, "I am so cross and ugly when I don't smoke that my wife can't live with me," so that is the way some of these poor smokers feel. Now they don't know that if they could take a neutral bath and cut out beefsteaks and get a little more fresh air, play a game of long tennis or golf or something and get a good sweat to get rid of that nicotine, they do not know that in three or four days they would begin to get back to their old natural selves again and their wives would find them a good deal sweeter without the nicotine than with it. We have still got this question box here but there is just one more thing I was going to tell you about, that we had a meeting of the Executive Committee of the Race Betterment Conference and the committee voted to hold another Conference at Battle Creek in January, 1915 from the second to the fourth of January, 1915 beginning the next day after New Years and we hope to have a larger and better Conference than we had last January. There is great interest in it I hope that we have started here in that Conference, a ~~xx xxxxxx~~ wave of interest in race betterment that is going to keep right on growing until it gets to be a great tidal wave that will make its influence ~~xxx~~ felt in every community and some of the best men in the country are interested in it.

Q--What do you consider the best baths for obesity?

A--Any sort of bath that will make you sweat. And why? Because it burns up the fat and wears it out. I am going to tell you a little story to illustrate



that. A man told me while I was in Washington of a friend of his that knew a man who owned the cow that holds the record for quantity of milk given in one week and he said I will tell you how he did it." My friend knows who he was. He was there and saw just how he did it. He got that cow just as fat as he could get her, then when the test week came, he wrapped her up in five blankets, three of them rubber blankets, then he said, the milk just poured out and the fat was converted into milk. The cow was heated to such a degree she had to get rid of that fat and it just poured out in milk and that is the way he did it. So you see the dairymen are catching onto these ideas of reducing obesity, the method of getting rid of fat. Raising the temperature of the body always reduces and burns up fat, but we have to be careful not to go too far for it burns up the muscles also; so we have to look out and not carry the thing too far. A short sweating bath followed by a cold bath. The cold also stimulates the burning up of fat. That is the reason why the farmers are learning these days to take better care of their cattle and pigs, to shut them up and keep them warm in winter instead of letting them run out into the cold winds and open sheds. They found they fed them more fodder that did not accumulate. They must keep them warm. When they fatten those Strausburg<sup>geese</sup> ~~hens~~, you know, they shut them up in a warm room without a hot stove and the geese have their eyelids sowed together so they cannot get worried about things going on and sometimes they nail their feet to planks and put them away on long planks, upon shelves and once in three hours they take them down and have a little syringe and fill that and then fill them brimful of cornmeal mush and that is the way they go on until they get really ~~x~~ fat and they get very very fat and their livers undergo fatty degeneration and those fatty livers are made into that delicacy that is served to you on the hotel table as pate de foi gras. They cover up this horrible atrocity by a french name you know.

Q--Please suggest treatment for a little toe that was bruised and probably fractured by being stepped on by a horse some four weeks ago? The toe continues sore and painful when walking.

A--Now I should think the first thing is to have an X-ray examination of that toe and see whether the bones were broken or simply the soft tissues bruised. That is a very important thing. If the bones were broken and the joints damaged, rest is the only thing for a cure. Probably an X-ray examination is the thing. We do not have



to guess about broken bones any more. Doctors used to guess a great deal; used to have a great many from our practice, but now the doctor examines the bone and every broken bone should be examined by the X-ray. Then after it has been set, it should be examined again to see whether it was set right or not. It is a very easy thing to do. There is an X-ray apparatus almost everywhere now.

Q--What causes boils?

A--Germs.

Q--Give a remedy for a boy's feet which ~~are~~ perspire profusely.

A--The boy probably is suffering from auto-intoxication. The most important thing is to make the bowels move three times a day. Give him plenty of bran mash, the same as you do horses, cows and pigs. The boys need the more bran mash, more coarse vegetable food. Human beings are naturally coarse ~~feeders~~ <sup>feeders</sup>. Please put that right down into your memory, my friends, that we are naturally coarse feeders. We are not adapted to a concentrated diet, but to a coarse diet. Not so coarse as that of a cow or a dromedary or a giraffe by any means, but we are comparatively coarse feeders, such as the higher apes for example who live on tender shoots, lettuce and tender buds and soft grains that are not yet quite ripe. By and by when the sweet corn season comes, when you go out into your garden and get some sweet corn, take an ear to the breakfast table pull off the husk and eat it right there at the table without having it cooked a bit. Put a little salt or butter on it if you want to and I think you will like it pretty well without anything on it at all as I do. You will be astonished to see how much ~~more~~ sweeter and more delicate the corn is without cooking than after cooking. Cooking takes out a whole lot of the sugar and makes it hard to digest and really spoils it. Monkeys are very fond of sweet corn. They will rob corn fields around Cape Town in South Africa I am told by people in that country very frequently.

Q--What objections are there to the habitual use of the enema if other methods fail?

A--If other methods fail, that is the proper thing to do. It is necessary, however, to use it in a proper way. If the enema must be used habitually, be careful not to use very hot enema. The relax the bowels and make trouble, but use the enema at a



temperature of about 80 degrees then the bowel is improved instead of being damaged by the frequent use of water in this way.

Q--Can an ulcerated stomach be cured without operation?

A--Yes most of them are cured without operation but not all. There are certain circumstances that occur that require operation always. Now if the ulcer is up here, it generally gets well quite easily because the food comes around the greater curvature, passes around this way and does not come in contact with it, but if the ulcer is down here, the food remains down here and all passes over it and it is a much more difficult thing to cure. It is necessary for the person under those circumstances to take a very small amount of food, bran food and food that does not stimulate the stomach to make acid; but if the ulcer forms here, forms a callous ~~fixum~~ as it often does and swells up like that, it may close the pylorus almost entirely or completely and I have more than once found it closed in that way. Then an operation is necessary. It is necessary also in some other conditions. When the ulcer forms here, perhaps, and after awhile gets well, a cicatrix is formed and that cicatrix contracts and so draws the stomach up like that. It contracts just like purse string. When the ulcer happens to be right here at the pylorus, sometimes when the ulcer is just below the pylorus it will contract in that way and almost entirely close the passage. I have to operate on two patients tomorrow in just that condition. I operated to day on a similar case and there is a patient I am to operate on tomorrow, the food remains in this man's stomach three days and it isn't all gone then. So it is necessary to get down to the point where probably the opening out of his stomach is not bigger than a straw. He has suffered from ulcer for several years. Had hyperacidity then pain, then finally had gotten to this condition where he ~~xxxxxxx~~ vomits blood, showing that there is ulcer there. These ulcers very often degenerate into cancers. ~~The~~ A poor man was here just last week who had ulcer of the stomach for years and finally ~~he~~ it had to come an enormous cancer that occupied just about that much of his stomach. There was just a little space for food to get through and this poor man has gone beyond all help. He can be made comfortable by making an opening into the intestine below the stomach and that probably will give him some relief, but only for a few months. So as a case of ulcer is not curable(?) All cases should be carefully studied with ~~the~~ bismuth meal and the X-ray so as to find out not only whether there is ulcer but where the ulcer is. The X-ray will



will tell with a great degree of certainty whether ulcer is present and where the ulcer is and just how much damage it is doing and just whether operation is required or not, so we do not have to work in uncertainty as we did years ago. We don't have to guess at things but we can get positive definite accurate information which is of the greatest value to us.

Q--Do you recommend malted milk?

A--Malted milk is good mostly because there is not very much milk in it. It is most gruel. Malted milk is about three-fourths flour gruel and the rest is milk that has been partly skimmed. I imagine that there is a butter factory there around that region where the malted milk comes from. Now I cannot prove that but the analysis of malted milk as shown by the report of the United States Government does not show fat enough for the amount of protein that is present. There is more casein in proportion to the amount of fat present than there ought to be for whole milk, so I think as I said, malted milk is good because it does not contain so very much milk. It is mostly gruel. Bread and milk however, are just about as good I think. Certainly porridge made from flour and milk is just exactly as good as malted milk.

Q--Could a vegetarian home or boarding house be made to pay its way in a city like Chicago?

A--Yes I think it could if it was managed right, but it would have to be managed most admirably to make it succeed anywhere. There is an increasing number of people who want to live healthfully, hygienically. ~~They~~<sup>We</sup> have something like four thousand old patients in Chicago. There are four thousand people in Chicago who have been patients here at the Battle Creek Sanitarium and I think ~~as~~ among them, all, there must be probably enough to support one good boarding house, at least, if it were managed well.

Q--Are the sugars found in dates and figs the same as cane sugar?

A--The sugar of dates is the same as cane sugar, but the sugar of figs is fruit sugar, not cane sugar; but the sugar found in raisins and other sweet fruits.

Q--A neurasthenic patient past fifty years of age has had three attacks some weeks apart following overeating in some instances. The blood pressure is 138.

A--That patient is suffering from vasomotor disturbance. His vasomotor centers are disturbed. That is a common thing. Neurasthenics often suffer~~ing~~



from flushing of the face and rushing of blood to the head because the vasomotor centers are disturbed. These are the centers which control the blood vessels. They are closely associated with this great mass of sympathetic nerve matter, called the "abdominal brain" and located close to the stomach and in neurasthenia, these nerve centers are all more or less disturbed.

Q--What is the electric incandescent cabinet especially good for?

A--For making a person sweat and it is the best and quickest way of getting up a perspiration. If you have neglected to obey the injunction of the Almighty to earn your bread by the sweat of your brow, if you do not do that, you have got to sweat some other way. That is all there is about it. If you dodge this sweating in your effort to obtain a livelihood, then you have got to compensate for it in some way. I did not discover that, I learned it from the laplanders. I had been up in northern Russia close to the region of the laplanders and in Scandinavia away up in northern Sweden and I found the custom prevalent there that also prevails in Lapland. When a young man gets married, the first thing he does is to build a little hut that is to be the sweat house, and he and his wife move into this hut and by and by they build a bigger house in front of it and then the little one becomes the sweat house. Then once every week in the winter time when they don't have warm weather enough to make them perspire freely, every once a week they go into this sweat house, heat some stones very hot, pour water over the hot stones and fill the hut with steam. In St. Petersburg that is the only kind of Russian bath you can get. I took a bath of that sort when I was there a few years ago. When they get almost parboiled they run out and roll in the snow then go back and sweat again. In that ~~way~~ way they compensate for the sweating which they miss because of cold weather.



Q. Please tell us the object of those treatments, electricity, etc., given at 4:00 o'clock in the South Corridor at 102.

A. The purpose of these treatments which are also given in Dr. Martin's office is to stimulate the paralyzed bowel. The reason many people suffer from inactivity of the bowels is because the bowels have become inactive, dilated until it is nearly paralyzed and the normal sensibility has been lost but the purpose of the treatment is to recover this normal sensibility to restore the bowels to their normal condition in this regard. Another purpose is to change the flora of the intestine which we can do by changing the diet and administering the friendly germs of various sorts, Bulgarian bacillus, bacillus bifidus and glucobacter by mouth but there is twenty-five feet between the mouth and the colon and to facilitate a change it is found an advantage to introduce these cultures directly into the colon so the colon is flooded with them and in that way immediately there is a change of the flora from putrefactive unfriendly flora producing ammonia ptomaines and horrible poisons to an acid-forming flora which is entirely harmless.

Q. I am losing weight fast. Hot malted nuts have been prescribed for me.

A. The hot malted nuts are good. if you eat enough of them. It agrees better with some people than malted milk. Malted milk contains a larger amount of fat, hence is a little richer and a little heavier food than malted milk. On the other hand some people cannot digest the casein of malted milk and can digest the vegetable casein of malted nuts.

Q. Are raw onions good food?

A. They are certainly not very wholesome, likely to disagree with a great many people. They may be taken in very minute quantities as a flavor for soups or something of that sort probably without any injury but the essential oil of the onion is irritating.

Q. Why is rice constipating?



A. Because it is completely digested leaving no residue. That is the reason.

A. Is a well ripened banana eaten raw considered good food for children?

Q. It is capital for children but it is very important the children should chew it well. If the child can be taught to chew the food thoroughly, reduce it to complete pulp then it is one of the most easily digestible foods but in giving bananas to children on account of the probability that the children will neglect to masticate them, they should be put through a colander or mashed with a knife or spoon and then beaten up. You will be astonished to see how quickly the banana can be converted into a frothy liquid very much like the white of an egg. Cut up the banana in a tumbler, mash it with a fork, beat it with a spoon and in one minute's time you could not imagine it had ever been solid because it is simply a frothy liquid which is very palatable and easily assimilated.

Q. In the rice cure is no other food used for seven days?

A. Rice with a moderate amount of bread or some other food but rice is the main article of diet. However, as I say we do not find this rice diet ~~ner~~ especially essential but the antitoxic cure or the antitoxic diet is preferable, especially a laxative diet.

Q. Is there any nourishment in bran?

A. Yes, there is some nourishment because the bran is not all Adhering to the cellulose of bran there is also some ~~neur~~ protein so the bran is to some degree nourishing. About half its weight is real nutriment. The other half is simply bulk.

Q. Should the skins of apples be eaten?

A. Personally I prefer to leave the apple skin on the plate. It has no nourishment, is rather uncomfortable to deal with and there is no particular advantage in eating it.



Q. Should one eat the pulp of ~~suga~~ oranges?

A. You can if you like. It won't do any harm unless you have a stricture in your pylorus.

Q. I have reduced my blood pressure several points by taking treatment here. Would an electric light bath cabinet in my house keep it reduced?

A. The electric light bath is an excellent thing for reducing high blood pressure. Persons who have high blood pressure or a tendency to Bright's disease or who suffer from diabetes or obesity might very well patronize an electric light bath three or four times a week. I have an electric light bath cabinet in my bedroom and I think it would be very fine and a very good thing to have in every house. The electric light bath comes nearest to the Sanitarium equipment of anything I know of. It is the most convenient way of getting  $\frac{1}{2}$  a hot bath. One can sweat in four or five minutes in one of these baths. Then a cold bath taken immediately afterwards is a splendid tonic. If one wants to reduce weight or eliminate he simply sweats ten or fifteen minutes or twenty minutes. If one wants a tonic effect he remains in the bath until he begins to perspire and then the skin is prepared for the application of cold water and one enjoys the cold bath and can react quickly and thoroughly to it whereas if one takes a cold bath without the hot bath first, he may not react well and may not enjoy the bath.

Q. Is the wax of ordinary honey fit for food?

A. No. Wax is not food at all.

I have reached the bottom of the box. I hope you are all enjoying this delightful fresh air out of doors. We are going to have some delightful weather in Michigan this summer and I hope some of you will make up your minds to stay all summer with us. Now you say that is ridiculous, the idea of staying all summer. I was talking with a lady about that last night. A lady asked me to look at her record and I found her blood pressure 200 and she said, "Doctor, how long should I stay here? Can you help me?" I said,



"certainly. Your arteries are not chalky yet. You came here just at the right time and we can help you." "Well, how long should I stay?" "Well, it just depends upon how much you want to be helped." She said, "As much as I can". "Well," I said, "You ought to stay six months then." "Six months? my," she said. "Well," I said, "Look here. Do you know what high blood pressure means, what arteriosclerosis means? Why, it means your house is afire. Your house is going to burn up if you don't put the fire out." I had a call sometime ago from a distinguished gentleman and discovered his blood pressure was 210 and he came here to find out how to live and what to eat and what to do. He said, "Doctor, I know what this means. I am a physician myself and I know this means a funeral in two or three years if I don't attend to it." I said, "You better stay right here and attend to it." He stayed four days and he thought he found out just what to do and said he would go home and take care of himself and he went home and in just eighteen months I saw a little note in the paper that ~~surgeon~~ surgeon general O'Reilly is dead. He didn't need to die then. He could have lived along and enjoyed life as he ought to have done but he couldn't spare the time to get well. Now high blood pressure is a serious thing my friends. When one has gotten high blood pressure he has is right square up against the real thing as they sometimes say. He has got <sup>a</sup> ~~te-~~the living reality to deal with. He has got a monster about him. He has just got to make up his mind to make it his business, for some months at least, in fact, for the rest of his life, to fight that enemy. It is assailing him and it is going to certainly work his ruin if he does not get the start of it. This lady said, "Oh, six months. I don't see how I can ever <sup>spend</sup> ~~make~~ the time for six months." Now, I said, "Look here, suppose there was a sentence pronounced upon you. Suppose you had your choice to have your head cut off at the end of two years or to go to jail and be put in solitary confinement for six months and then live ten years. What would you ~~stay~~ say about it." "Oh," she said, I would go to prison before I would have my head cut off in two years. I would stand it for six months, I think." "Now",



I said, "Do you think you would be more crippled to stay here six months or to spend six months in solitary confinement in Sing Sing or some other respectable prison?" "Well", she said, "I believe I will try it." She took another view of it, you see. Why, it isn't a serious hardship to spend a few months in rehabilitating a body that has been broken down by long years of neglect under the conditions that one enjoys here at the Sanitarium. I have often wished there was a Battle Creek Sanitarium somewhere where I could go when I get kind of tired once in a while. If there was one I would go there just as sure as the world but the places I go to I get homesick. I like to come home and am willing to stand it with all the hard work. Now my friends, we don't do this thing seriously enough. Why, people that are all broken down, have albumin in the urine, blood pressure way up to 200, heart disease, kidney disease, blood vessel disease, have not a sound fiber in their bodies hardly and not a sound organ in their bodies, come here and say, "Well, Doctor, I have got three weeks off and I think I can spare about three weeks, possibly four, and I want you to put me in good condition." Why, my friends it is preposterous. If you had broken down an old family horse, you would at least give him a summer to recreate in; you would send him out to pasture, let him practice right living for a while and get away from your per-versions. That is exactly what you have got to do and you have got to find time. It takes three or four months to raise a crop of corn, doesn't it and you cannot expect to raise a body almost from the brink of the grave up to youthfulness, up to the height of ordinary health and vigor and joyous life; you cannot expect to do that in less time than it would take to raise a bushel of corn. Now I tell you we have got to make a business matter of this thing so I hope some of you at least will make up your minds to stay all summer and I believe it is the most delightful summer you ever had in your brief life. We are going to have a reunion here this summer. We did last summer. We will have the gymnasium packed full of friends who have come back to tell how well they are. They won't all do it but we will have an audience that will fill the gymnasium and we will have several hundred of our good friends who have been here before who will rise up and tell how much



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good the Battle Creek idea has done them during the years they have been trying it out and finding it better and better and better and better every day, good living according to right principles. I thank you for your attention.

END.



Question-Box-Lecture-at-the-Sanitarium-Parlor

Battle-Creek-Michigan

Thursday-May-21-1914-at-8-p-m

by

J. H. Kellogg, M. D.

Q--Do the adrenal glands control the pressure of the blood?

A--They do to some degree. The adrenal glands are little glands situated on top of the kidneys and these glands produce an excretion called "adrenalin." Adrenalin is a substance which when a very minute quantity of it is put into the blood raises the blood pressure quickly by exciting the heart and by contracting the small blood vessels. Now this substance is produced only when the glands are in a normal and healthy condition and it is very useful not only in controlling the blood pressure but also it is a wonderful aid in combating poisons. It is an oxy-basis as the chemist calls it. The adrenalin when present in the blood and in the body stimulates the poison-destroying processes of the body so it is a highly useful substance. When a person has degeneration of these glands as sometimes occurs, we see the effects of it in the accumulation of brown spots upon the skin. These glands have also another function. Besides making adrenalin, they also destroy poisonous coloring matter, poisonous pigment--pigment of a poisonous character. These pigments are formed in the colon. They are formed by the putrefaction of protein, by the ~~putrefaction~~ putrefaction of meat. To come right down to the facts in the case, they are produced by the putrefaction of sausage and ham and oysters and Beefsteak and mutton chops and fried chicken and things of that sort,--all kinds of meat things. But a very interesting discovery was made a few years ago by Dr. Combe of Lausanne, Switzerland and that is: that these coloring matters cannot be formed from vegetable protein. That is, the protein that is found in wheat and vegetables of various sorts will not produce these coloring pigments. So when you have brown spots scattered around on your hands and a ginger complexion, that means that you have had putrefying material in your intestine which has been absorbed, putrefying flesh of some kind that has been absorbed and deposited there. Now so long as the super-renal capsuls, the little glands



attached to the kidneys are able to destroy the pigment, then there is no harm done. That is, you do not feel the harm at least, but when these glands begin to degenerate then they are no longer able to destroy the pigment. It accululates in the body, it is deposited in the skin and you begin to get dark brown ~~xxxxxxx~~ circles around your eyes and a muddy complexion and after awhile you get deposits of brown spots ~~xx~~ about the hands and about other parts of the body. Now I suppose the question is arising in your mind this moment for I see several people looking very anxiously, ratherly slyly at their hands, so I suppose the question is arising in the minds of some of you, "Can the leper change his spots?" This is a very old question. Yes, the leper can change his spots. At any rate he can get them changed. It is not necessary that the skin should be removed in order to get rid of those spots. What is necessary is to get rid of the poisons that make the spots. When the super-renal capsuls are worn out completely, then there is no hope, of course, and then you die. That is what happens to a person who is suffering from Addison's disease or what is sometimes called "the bronze disease." When these glands degenerate entirely or are destroyed by tuberculosis or sometimes happens, then a person becomes colored all over with a color like these brown spots on their hands and that is Addison's disease and that is a hopeless malady. Nobody was ever cured of it, although life can sometimes be prolonged by administering to such persons the adrenalin prepared from the super-renal glands of other animals. Now what are your going to do them? Where is the hope then of changing these spots? It rests in the fact that so long as you are ~~xxxxxx~~<sup>alive</sup>, your super-renal capsuls are still able to do business to some extent. Now you know you could not disinfect the whole back yard with a teaspoonful of chlorid of lime. You need a larger amount than that. You could not cleanse a whole sewer with a few drops of carbolic acid, but suppose now you kept the sewer so clean that it did not require any disinfecting at all. Then you see if you only had a few drops of carbolic acid, it would be sufficient to give it a healthy smell and to keep things wholesome. If you had nothing unclean in your backyard, a teaspoonful of chlorid of lime would be just as good as a ton, wouldn't it, ~~if~~<sup>if</sup> your backyard was clean. So the super-renal capsuls if they have been worn out in dealing with putrefying material until this putrefying stuff is accumulating in the body and the brown pigment, Brenz catakin(?) is what the chemists call it, is accumulated and deposited in spots and you are getting these signs of old age hung out upon the surface



of your body. If you reach that point, what is the thing to do. Why, don't you see, the thing to do is not simply to sit down and say, "Well, I am getting old and I might as well surrender. My time is up I guess." That is not the thing to do at all. The thing to do is to say, "I am going to challenge 'old father Time' and I am going to make him take a few steps backward. I am going to make a little splint and get ahead of him. I am going to extend my life to the very longest limit. That is the thing to do." Old father Time, old age ~~and~~ are things to be fought and if we fight old age we can hold it at bay for a long time. I am preparing to write a book, the title of which will be, "Holding Old Age at Bay." Old age is an enemy that we can fight off and these brown spots are the advertisement of old age. He is arriving and is right close at the door and we have just got to hurry up and get away from him. Now what is the thing to do? The thing to do is to stop flooding the body with poisons, don't you see. Those super-renal capsuls are able to do some work yet. They cannot do all the work you have been demanding of them, but you have got to stop demanding it of them and give them an easy time. Suppose you have a horse that has been pulling a dray or a street car in Chicago or New York for day after day, month after month and year after year until he has nothing but a bag of bones that can hardly stagger on his feet. What would you do with such a horse? Sometimes he is sent up to the cannery to be put into tin cans and sent all over the country, but sometimes they send him out to the country to pasture and in the course of six months, then they bring him back to town, have an auction sale, and ~~he~~ the horse comes back as slick and plump and can prance about a little and really looks like another horse.



You see the horse is not dead and although you have got some brown spots you still may have kidney power enough to take care of a small amount of poisons for 25 years but you see a whole flood of poisons might carry you off at any time because you might overwhelm the kidneys so they would have more work than they could possibly do and you would have acute indigestion and inflammation or Bright's disease and away you would go. If you have got some brown spots that means you have got to begin to do work of super-irrigation. When I was down in Mexico a good many years ago I met a medical missionary down there and he was telling me of some of his experiences. He told me how he carried a man through typhoid fever. He was sick for several weeks, nearly died and he thought that he had saved his life but he said, "I didn't get a bit of credit for it. Three months afterwards I met this man; he came to me again for treatment and he had some awfully great sores on his knees. The bones were actually sticking out in sight and there were some terrible great ulcers with bones in sight <sup>in</sup> the middle of the ulcers and I said to him, "For pity sake, what have you been doing?" "Well," he said, "You know I had typhoid fever." "Yes." "Well," he said, "When I had typhoid fever I promised the virgin, Guadalupe, that if she would heal me that I would go all the way to her shrine on my knees and he said I have just got back. I have been three months" so he said the virgin, Guadalupe, got the credit it and he didn't get any credit, didn't even get any pay so he thought it was hardly fair. It wasn't very much satisfaction in doing medical work in Mexico. Now going all that forty miles <sup>and</sup> back on his knees that journey that man had taken was a work of super-irrigation. He did that to be extra good, don't you see. He didn't have to do that, of course. One has to be honest. One has to be straight forward to obey the moral law but that was a work he didn't have to do. That was an extra work you see of piety, supposed to be so that is a work of super-irrigation. Our Catholic friends know all about that. Some of you perhaps are better informed than I am on the subject. We might have a diversity of opinion as to the value of super-irrigation from a religious standpoint but I know that works of super-irrigation are of tremendous



value from a physical standpoint. A man who has been sinning against himself, abusing his body by overloading it far beyond what there is any necessity for doing, what his natural requirements are, that man can do himself a vast deal of good by doing works of super-irrigation. Let me show you a few ways. For instance, here is a man who has lived indoors all the time, hovered over a desk, got his chest flattened and his lungs are collapsed and he has no power to take a deep free breath and to expand his lungs. By and by he gets tuberculosis, the result of bad air, the result of living indoors. Tuberculosis is a house disease. Now that man says, "Well, now then what shall I do?" He goes to the doctor and the doctor says he must move out of doors. I remember some time ago a man called on me, this was about twenty-five or thirty years ago, and he said to me, "Doctor, what shall I do?" I said, "You have got to go up." "Oh," he said, "You don't mean I am going to die?" "No", I said, "I don't mean that but I mean you have got to go up high, you have got to go a mile higher right up into the air and stay there." He said, "Why how in the world am I going to get up there. I cannot afford to run a balloon, to rent a balloon." I said, "The easiest way to do it would be to move out to Colorado which is just a mile high and live on those mountain tops, 5,000 feet above the sea and you go out there and live in the open air." A man don't have to live all the time in the open air to enjoy good health but when a man has got tuberculosis he has to works of super-irrigation. He has to go outdoors and live there all the time. Professor Fisher, the Professor of Political Economy at the Yale University, a very able man and who is at the head of the Committee of One Hundred and who is taking the lead in a number of very important movements in this country, Professor Fisher told me that when he had tuberculosis some ten or twelve years ago, and had to go out to Colorado and spend two or three years, that when he had tuberculosis and went outdoors for ten hours he didn't get any better. When he stayed out of doors for twelve hours he didn't get any better. When he stayed out of doors fifteen hours he didn't see very much benefit from it that



he was particularly better. He never saw a particle of improvement until he stayed out of doors eighteen hours out of the twenty-four and when he stayed outdoors in the open air eighteen hours <sup>out</sup> of the twenty-four day and night, summer and winter, then he began to improve, began to get well. Now that was a work of super-irrigation. Now that is what everyone of you have got to do, not to stay out doors necessarily eighteen hours but you have got to do works of super-irrigation. Some of you have come here I suppose with the feeling in your mind, "Well now I haven't been taking just the proper fare of myself, I haven't been eating just right; I know it. I haven't been taking exercise enough. I know that. I haven't been taking sweating baths and morning cold baths and doing other things I ought to do for my health as I ought to do. I have neglected myself in various ways. I haven't paid much attention to stopping to chew my food. I have been smoking too much. I have been drinking a little. I have been taking tea and coffee, etc. I have been eating lots of mustard, pepper, pepper-sauce, ginger, horseradish, spiced pickles and other things that burn and sting and blister as they go down my throat. I have abused myself and now I am coming here to Battle Creek and I am going do penance" and I expect some of you have the expectation that before you get away you will buy an indulgence. The last time I was in Mexico I heard there was a church that had acquired the right in Guadalajara to sell indulgences away back two hundred years ago. They needed to make an improvement in the church so they got from the Pope a dispensation that permitted them to sell indulgences. In those days, two hundred years ago, it was not considered an improper thing and if one studies into the theory of the indulgence it is not so bad as it sounds though it is not a popular thing, I believe, at the present time even in Catholic countries but they got a right to sell indulgences and they have been selling indulgences ever since so I went around and I bought an indulgence for fifty cents and the indulgence permitted me, if I remember right, to tell lies if I wanted to, if it was not convenient to tell the truth and to steal a little, not too big a sum but just



small pibfering and to do a few other things that I considered it was not proper for me to do. I have got that indulgence up at home. I have not used it. This is not the kind of a country where it would be safe to trust to that sort of belief and I am not certain whether it is really current in Mexico but I bought the indulgence and I have a paper which authorizes me to do what I was telling you about. It is a plenary indulgence. Now some of you, as I have said, have come here to Battle Creek with the idea that you are going to get a kind of indulgence, going to do penance, that you are going to atone for all your sins and when you go home you are going to have a nice good old time again the way you used to do. I want to tell you the bottom will drop out of that plan just as soon as you undertake to carry it out. I have seen that tried a good many times. I remember a man who was a very prominent real estate dealer in Iowa, a business partner of Ex-secretary Kerwood, Secretary of the Treasury about that time. This gentleman was quite a prominent man of an Iowa city, Mr. T. J. Cox. Mr. Cox came here and got well. He was pretty bad off when he came, a terrible dyspeptic and a neurasthenic and at the end of three months he went home quite well and when he went home I said, "Now, Mr. Cox, no more cigars remember; no more cigars, no more beefsteaks. You have got to take care of yourself." Well, when he had been gone three weeks he wrote me back, "Doctor Kellogg, I am so well I can eat a big beefsteak for breakfast and another one for dinner and I can smoke half a dozen good <sup>strong</sup> cigars and I am just feeling fine." I wrote him back that he was dangerously well, that he would be back here in less than six months but in four months he was back here again and he stayed four or five months with us that time, got well again, apparently, went home and after about a year he backslid again. His partner in business smoked and all his friends smoked and they gradually got him to smoking again so he was back again and that man in the course of about twenty-five years, during which he was coming here off and on, not quite so long as that perhaps but about twenty-years, in the course of twenty years he was travelling back between Iowa and this institution and he and his wife together, for sometimes he was so bad his wife had to come with him to



help us manage him, he and his wife together spent seven and a half years here in this institution and it was not necessary for him to spend a minute more than the first three months. When he had gotten well once he ought to have stayed well but instead of that he just went home, went back to the old ways and got the old consequences. You see when one is suffering as I suppose almost everyone of you is suffering one way or another, when one is suffering from a chronic malady of any sort it is the result of certain causes that have been in operation. Now those causes are to be found almost without exception in our daily habits, in our daily life; not enough fresh air, not enough exercise, too much protein, too little fat, too little carbohydrates, not enough fresh things, fresh foods, not sufficiently frequent bowel action, not enough sleep, too much worry perhaps or giving way to temper or some other thing. There is something wrong in our daily conduct. It may be the atmosphere of the rooms in which we live and work is not good. It may be you do not have enough of the out of doors. There is some cause. There may be a combination of causes. There generally is. Now we have got to correct those conditions. If we go back to the old conditions we will have the old consequences and they will come quick. When you get pretty well you think you are well but you are not well in the sense you were once well. There is not a single one of you who ever going to get well in the sense in which you were once. The man who comes here is like a drowning man. He comes here sick and distressed. He has been trying a great many things perhaps without getting relief. He is like a man that is away down deep in the water. We bring him up and by and by we see the top of his head and then his eyes but he don't feel a bit better with the top of his head out of water than he did at the bottom because his nose is still under water but by and by we get him up so that his nose is above water. Then he can breathe the fresh air again and he begins to think, "I am all right, I feel all right." Now I feel first rate and so he wants to go home. We get his head out of water and he ~~knows~~ knows he is all right because he is entirely free and can breathe just as well as ever he could and he feels fine,



thinks he is perfectly well but he is not well. His feet are down there in the mud yet. He is almost submerged. It would only take a little bit of a pull, just a little storm to raise a little whif and the waves will roll over his head and he will be submerged again and feeling just as bad as ever. Now my friends, when you go home you have this sea of bad habits to wrestle with. You have the conditions of an overloaded civilized life in almost every home. You have those things to contend with and you have got to make up your mind to build up a wall against those things. You have got to do just exactly what the Jews did when they went back from Babylon to Jerusalem. The first thing they did was to build a wall. Every man built over against his own house. That is exactly what you have got to do to build up a wall of right habits, to protect you against these encroachments of disease which are the result of the wrong habits that have been stopping your vitality, eating up your strength, making you prematurely old. My friends, disease is the most serious thing you have to consider. I am discussing with you this moment what you can do when you get home. Probably there is not one person here but what can be gotten up where he can feel perhaps almost as well as he ever did but how long are you going to enjoy that good health. Not long after you go home because you have only gotten your nose out of water. It is still down deep in the mire. Your feet are right down there in the same place you have just been drawn out of. I remember when I was on Lake Okechobee a few weeks ago in Florida we had quite an interesting experience, not quite so bad as the newspapers portray for Mrs. Kellogg did not get dropped into the mud as one of the newspaper reports said. <sup>There</sup> ~~They~~ did not any of us get into the mud except the cook who was standing on the end of the boat one day and there were some waves, a little wind and he lost his balance and he went plunging over and he went right down into the mud and he went down so deep into the mud that we had to get hold of him and pull him away to get him out. Now I thought to myself as I saw that man coming up all covered over with grime that is very much the situation of a great many of the sick people we have to deal with. The thing is after you have once got out to keep out. We never can get you entirely out.



Why, here is a man who has got high blood pressure. Why is his blood pressure high? Because poisons have been circulating in his blood. What are these poisons? The worst of all are colon poisons that come from inactivity of the bowels. That is the reason these patients are helped more by getting their bowels to act three times a day than by anything else we can do for them. It is best of all. Everything else we could do would not compare in value with that one thing of getting the bowels to moving three or four times a day. Why? You say it is unnatural. I don't think it is. I think it is natural. But suppose it is unnatural. It is a thing that has become a physiologic necessity, a sort of work of super-irrigation, if you please, to reduce the amount of poisons below the quantity of poisons that a healthy man is able to deal with because this man has lost his power to deal with poisons and they are flooding his body and now we have got to get rid of the poisons and keep the bowels just as clean as possible, keep the skin clean and keep the air we breathe clean. We must keep the teeth clean and the mouth clean and suppress every possible source of poison because this man has lost his power to deal with poison. Now what can be thought of such a man that would smoke deliberately and put poison into his blood when the blood pressure is too high or the woman who would drink tea or coffee just because she feels a little exhilaration afterward and wants to be in a sort of stimulated <sup>state of</sup> mind to entertain company or something of that kind, wants to draw care for a minute. What would you think of a woman who would take tea and coffee, alcohol or any other poison when the blood pressure is up, when old age is already knocking at the door and the big brown spots are on his hands and brown ~~maxilla~~ circles around his eyes to show that old age has begun his work. I say my friends we have got to resolve to put all these things away and when you go home to establish a new regimen, a new state of ~~maxilla~~ habits, to set a mark for yourself that you are going to live up to that standard. Benjamin Franklin, when he was a boy, that is why he came to be a great man, why he accomplished so much good in the world. When



he was a boy he thought the matter over deliberately and laid down for himself certain rules that he was going to follow and he proposed to live a perfect life to guard every word he spoke and every act and to live exactly in accordance with the best he knew. That is a splendid thing for anybody to do but you have got to do better than that my friends. You have got to do works of super-irrigation. You have got to take more outdoor life than is really necessary to keep a person in ordinary health. You have got to take more ways to avoid extra fatigue, to avoid worry, to avoid over-eating and loading anything upon your body which is ought not to carry. You have got to give yourself extra care. You have got to do works of super-irrigation, in other words.

Q. It is wise to exercise in the march directly after eating?

A. Yes, one should not run too fast, should not get excited or over heated and should not take violent exercise. For a person in ordinary health the exercise in our march is so slight it can be taken at any time but if you have a weak heart, if you have high blood pressure, if you have are very feeble, if you get out of breath very quickly, then you would not want to take the most active part of the march. The moment you find yourself getting a little short of breath drop out and each day you can go a little further until you get strong enough to do the whole thing.

Q. In what condition would you expect to find a nervous person who for treatment was shut in from fresh air and sunshine for three months?

A. Well, I should say the most important thing of all for a person who is a chronic invalid, in a feeble state, is to get into the fresh air or get the fresh air in where the patient is. The patient might be put into a room and have fresh air just as soon as outdoors air.

Q. Kindly suggest to patients not to talk about their ailments at the table.

A. A young man came to me sometime ago who had Bright's disease. He was almost a crazy looking young fellow and he come to me one day and he said, "Oh, Doctor, I wish you would keep these old ladies away



from me." "Why", I said, "What is the matter?" "Why," he said, "They all come around sympathizing with me every day and say, "Oh, I am so sorry for you young man, you look so sick." "Why," he said, "They scare me to death. They make me think I am going to die tomorrow and I wish you would keep these nice old ladies away from me." I hardly knew what to do. I didn't like to put a sign on him so the only thing to do was to quarantine him. We couldn't quarantine the old ladies so we had to quarantine him to get him away from his sympathizers. The best thing to do with your palsies is to forget them. Now when a man makes provision for his family here is a man worrying about his family and he has got a wife and three or four boys and girls and they need to be educated. His wife needs to be provided for. He has not property enough to support them and that man worries about it. By and by he thinks about taking out life insurance. He goes and gets his life insured for a hundred thousand dollars, he has income enough to pay the premium year by year, he has income sufficient to pay that and now he stops worrying, don't you see. He has got his life insured and he knows he has got a sum there that will take care of his wife and children. He doesn't need to worry about that any more. That is what life insurance is for. It is a comforter/<sup>to</sup> the business man. Now <sup>what</sup> would be the sense of a man worrying about dying, afraid he was going to die and leave his family without anything to take care of them but he has got his life insured. Now my friends, that is your situation. You have had an interview with a doctor and your doctor has said to you, "We can help you." Now my friends, you can bank on that. When a Battle Creek Sanitarium doctor says to you, "You can be helped, we can help you, you can be relieved," you can be just as sure of it as that the sun is shining. Of course, we must expect a few acts of providence as they say in some legal documents ~~that~~ about accidents, but we are not considering accidents now but from a human standpoint you may just believe you are just as certain to get well as the sun is shining. By getting well, of course, I use the word "well" in a qualified sense, I mean to get substantially well, comfortably well, usefully



well, well enough so you can keep well if you take proper care of yourself, that is, if you keep right on doing the things that make you well. Now, don't you see that it is foolish to think about your sickness any more, very unwise to talk about it because that keeps it right in your mind all the time. I recall a man who came here 37 or 38 years ago. I remember him as well as though it was yesterday. He used to come around and catch me in my office, in the halls, everywhere and see tell me where his breakfast was. He would meet me about an hour after breakfast and say, "Doctor, my breakfast lies right here just like a stone. I don't believe it has moved any inch and then in a couple of hours he would come around and feel his breakfast over here; later it would be over there and he would follow his breakfast all around through the convulsions, turnings, and twistings of the small intestine and could put his finger right on it any minute. Now that I sent that poor fellow home. I tried to get his mind off his dinner and I couldn't do it. I didn't have time to sit down with him and entertain him and amuse him all the while and we didn't have such an interesting program in those days or so many able assistants as I have now. I was the only doctor in the whole concern but fortunately we had only twenty patients so it wasn't quite so bad as it would be now but this gentleman I simply had to send him home because he not only made himself miserable but he made the patients miserable and made me miserable and I sent him home partly on my own account to tell the truth. I didn't think it was possible to tolerate him any longer. Why, the stomach gets into a state of stage fright when you keep it right out in public all the time. The process of digestion is ~~XXXXXXXXXX~~ a sort of an alchemy, don't you know. It is a thing that has to be done in secret. The stomach is used to carrying on its work in a quiet way, unobserved and unobtrusive so don't let anybody know it has arrived. It does its work in a very careful, sly way out of sight. Now when a man says, "Now I wonder if that breakfast is going to agree with me; I ate some lettuce



for breakfast and I wonder if it is going to agree well with some potatoes I ate, why he begins to speculate with all those different things. Why, the poor stomach gets, as I said, into a state of stage fright and when he brings the thing right out into public and talks about it it is enough to scare any self-respecting stomach and to paralyze it to be treated in that way. We ought not talk about our ailments. It is a disgraceful thing to do. When one tells what an ~~awful~~ awful stomach he has got that means what an awful glutton he has been, don't you know, what a terrible glutton he has been, how shamefully he has mistreated that stomach. That is what that means. That is the way it ought to be interpreted. It is the same thing as a man who has got out of prison going around and showing his stripes. Look at those stripes. Don't you think those are pretty colors? If a man is wearing stripes it is quite probable he is a criminal. If a man goes around telling how he is being punished for his physical transgression that means what a great sinner he has been so we ought to be ashamed of our ailments. I remember some years ago I was talking something in this strain and a young man over in the far corner of the room got up and pointed a long bony finger at me and said, "Doctor, you are unfair. You unfair to us fellows. I have got dyspepsia. I have had it all my life. My father had dyspepsia before me. I inherited it and why do you say I am to blame for it. You bear down on us too hard. I said, "You say your father had dyspepsia and you inherited it from him?" "Yes Sir," he said. "Well," I said, "It is in the family and you ought to be ashamed of it just the same." Well he sat down. There is no excuse that I can see for talking about your ailments. It is really a discreditable thing to do and ~~that~~ it certainly ought to be tabooed. That subject ought to be tabooed. I would be very much obliged if this whole family of patients would just say "We won't tolerate anybody talking about their ailments?" I met sometime ago a lady who said



she would like to come here to the Sanitarium. She said, "Doctor, there are two reasons why I would like to come to the Sanitarium. In the first place I like to taste of people and there are such a lot of folks here you know I like to go around and get acquainted with folks and taste of them to see what they are like and then she said there is another thing you know. It is so interesting to talk with people about their different diseases and their different symptoms. She wanted to arrange to stay all winter but I found the climate was not suited to her particular case so I recommended a change of climate and besides, we could not find a room that was really just what she wanted. We didn't have any quite like it. Let us taboo this question of disease. Let us talk about health. That is the thing. Talk about health. Talk about getting well; not talk about getting sick. There is enough to pull us down but let us just set our faces healthward, right toward Pisgah's top and keep looking up all the time and try to help everybody else to look up and make this place so full of mental and moral sunshine that a person cannot get into it without getting rid of the blues. That is the proper atmosphere for a place of this sort. Now with your co-operation my friends, we can expect this thing. If anybody begins to talk about disease just go right off and leave them. If a man comes to you and asks you, "Well, what are you suffering from?" You say to him, "Get thee behind me satan." He is tempting you to think about things which you ought not to think about.

Q. Is ice water advisable at meals or at any time?

A. Yes. Ice water is the thing to drink. I believe in ice water. I have just been drinking some and had some at dinner today. I enjoy drinking ice water. Who likes to drink luke warm water? Theoretically the water should be the temperature of your stomach when it gets there. <sup>just</sup>so theoretically we ought to take water of about 100 degrees but that makes anybody sick. It is nauseating to think about it. Ice water



is the most delicious drink but my friends, it is very important that you take it right. In the first place the ice must be made from distilled water and the next thing you must fletcherize that ice water. You must not gulp it down, swallow it whole. I remember sometime ago a man took a glass of ice water, put it up to his lips, threw his head back and it was gone. One certainly would get the impression that his throat was an open tube. He simply poured it down as one would pour it into a hopper you know. Well, that is not the way to drink ice water. If you are going to take ice water take it in small sips. It is cooling and cold water feels in the mouth and greatly stimulates appetite, stimulates the flow of saliva. It arouses the sense of taste and freshens the mouth <sup>and</sup> so makes one enjoy his meal better but one must be reasonable and careful about this thing. Take the ice water in little, small sips. Then when it reaches your stomach it will be warmed up, don't you see but if you take it in large quantities it goes down like a deluge from an iceberg and paralyzes the stomach but if you take it in small sips it is all right. It is not in your mouth where the harm comes but it is in your stomach where the harm is and if you take ice water in little small sips it is all right. I always take it that way, just a little sip at a time and in a short time if you do this you will find those little sips are much more enjoyable than the big gulps, a great deal more.

Q. Is fish meat as objectionable as other meat?

A. Just exactly as objectionable in every particular and in some particulars more so. Now you all know how quickly fish will begin to spoil. It is a great deal harder work to keep fish than it is to keep other meat. Fish spoils very quickly and it undergoes changes much more quickly than in the stomach and intestine than other meats and so it does outside so it is true in the colon for the colon is where the trouble really is. Fish, oysters, shell fish of various sorts are the very worst of all. Well, what meats shall I eat? I don't recommend anything in the form of meat. A man asked me a question sometime ago and pressed it so hard that I had to



say something. If you couldn't get anything else and had to eat some sort of meat what would it be? I told him it would be a piece of very fat bacon, pure fat bacon fried very hard because if it was fried very hard it would be a so hard to digest, it would probably pass along without being digested and if it digest there is nothing but fat, no protein there, nothing that can rot or decay. I am not particularly friendly to the hogs but I am satisfied that a piece of fat bacon would not be half as harmful to a man as beefsteak for the undigested fragments of beefsteak will rot in the colon, putrefy and you have got the same situation



and you have got the same situation you have got when you find a dead cow in a fence corner, in the pasture somewhere or a dead rat in a closet. There is the same sort of thing going on in your own colon but you don't want it. You want your colon clean; you want your math clean. Why, there is no reason, my friends, why the sweet clean things you eat, why the residues, the remnants ~~that~~ <sup>should</sup> pass away from ~~it~~ our body so loathesome and and disgusting. Why should there be such a change in the sweet clean food, what appears upon the tables, why should there be such a change within the fragments that pass through the body as occurs in fragments of dead beasts which become loathesome. Why should it be? Just simply because the fragments are allowed to lay around in the interior of the body that they undergo putrefaction. That is the reason and putrefaction takes place rapidly in the body. So in the first place we ought to take food that won't putrefy, then we ought to get rid of the remnants within twelve hours anyhow. We sometimes find people have fragments of undigested meals lying around in their interiors for a week, rotting and putrefying and poisoning the body. This is a question of such tremendous importance, I always feel that I must say something about everytime I talk.

Q--Can cirrhosis of the liver be cured?

A--No cirrhosis of the liver cannot be cured. It is just as impossible to ~~re~~cure cirrhosis of the liver as to restore a piece of burnt liver to its normal state again. Now just imagine a piece of liver that has been cooked in the fire, put on the stove and it has been roasted, burned crisp and spoiled and has lost its normal elasticity. That is the situation of a cirrhotic liver. Its structure is changed and it is impossible to be cured, but here is a chance again to do work of super-irrigation. A man has got cirrhosis of the liver. The most of the liver is spoiled but there is a little liver left. Now if we can stop the onward march of the process so that the liver ceases to become more and more hardened, the liver gets a lift and may be enough to carry <sup>him</sup> on through many years of comfortable health because Nature sends us out into the world equipped with a splendid margin of safety. We have not only enough of it, a sufficient amount to meet the needs of our bodies, but we have energy and vitality enough, capital enough of strength to tide us over great emergencies. This pillar that supports this building here, there is a brick wall resting on that pillar and it runs up five stories. Now that pillar is made so strong that it will hold five times



heavy as ~~big~~ a wall as is resting upon it and that makes it perfectly safe. So when this floor was made, this floor was tested to be sure it was strong. We had this room filled up with bags of cement. The room was filled up to two-thirds its height, the whole floor covered with bags of cement and the beams that were under here did not sag, so we know it is strong. So our elevators were tested. There were put on to our elevators great masses of iron, cement and stone and ~~xxxxxx~~ it carried up four or five times as big loads as will ever ~~wikk~~ be carried with human freight, so we know our elevators are safe. The cables will hold any load that can possibly get in there. Forty or fifty people can get in there, then the load is not one-quarter as big as the load carried in the construction of the building. So the body is made with this margin of safety, you see. It has more lung power than it needs for every hour's work. We have more liver capacity than we need for the daily duties; we have more kidney capacity than is needed for the ordinary work of the body. Let me illustrate that by a simple story. A man came into the office and said, "Doctor, think there must be something wrong with my boy's kidneys. He is awfully thirsty all the time and he drinks a pailful of water everynight." I said, "Possibility he has diabetes or something of that sort." I told him to bring me up a twenty-four specimen and a couple of days later I looked out of the window and saw this man coming with a dray and he had a big bushel basket. I did not suspect what he was coming for, but pretty soon with a man helping him, he tugged that bushel basket into my office and it was full of two quart jars and there were twenty-eight pints of urine which had been secreted in twenty-four hours. Twenty-eight pints, that is fourteen quarts. That was a pretty good day's work for a pair of kidneys. I just mention this to you so you can see what is possible, and I have looked it up and found cases much more extraordinary than that that have been recorded. There were cases of fifteen, twenty and thirty quarts a day. That shows what it is possible for the kidneys to do. We do not ordinarily require that amount of work, although we have a great margin of safety, so it is with every organ in the body. Now then, although you are sick and broken down, chronically ill, you still have got some margin left. That is the point. It is not all gone and that is your hope, don't you see. It is that you still have a margin of safety. If your kidneys are diseased, they are not entirely diseased, you see. A man can live comfortably with two-thirds of a kidney. I have removed a kidney more than once. Persons have lived on for years afterwards with one kidney. I remember a case in



which I removed a man's kidney, a prominent lawyer from Ohio about twenty years ago and he was a man about fifty years of age. He had cancer of the kidney and I removed the kidney and the cancer did not return. So he went along with one kidney. Now he came to me in my office just as he was about to leave and he said, "Now Doctor, I belong to the 'One Kidney' club. There are four of us," and he mentioned three friends of his who had had a kidney removed and he had corresponded with them and they had organized a "One Kidney" club. "Now," he said, "I have only got one kidney left and I have got to take awfully good care of it and I want you to tell me how to live, just exactly what to eat, just what to drink and just what to do and I will do it." I laid out for this man a course of life and he ~~was~~ succeeded so well that fifteen years afterwards he was still alive. He came here to the Sanitarium occasionally and five years ago he came and I found he was prematurely old. The margin had been used up. You see, he had lost one kidney and that took away a great margin. He was now about sixty-five years of age but he was an old man. His arteries were hard and there wasn't very much I could do for him because I knew just the situation, that his margin of safety was very small so I did not dare encourage him very much. He stayed a few weeks, got better, went home, but a few months later he passed on because his margin was all used up. Every person who has a chronic disease has a reduced margin of safety. You would not be here if you had that splendid margin of safety you had when you were young, but you have used it up with big dinners, with tea and coffee, with cigars, with having a good time in life. You have consumed that margin and now you have got down to where there is only a little margin left, but there is a little margin there and the thing is to so manage your life that you will draw up on that small margin just as little as possible, that you will extend out this little capacity that is left. In a business way, if you are cautious and careful you can keep on doing business a great length of time. That is the thing that offers the great hope for the chronic invalid.

Q--Tell us why they do not serve ice cream in the dining room?

A--In the first place, the ice cream habit is a bad habit to have. When you have the habit of eating ice cream, you won't take it as you ought to but you just simply swallow it wherever you see some offered for sale. You go into any kind of a restaurant and say, "Give me some ice cream" or any sort of feeding place and say, "Give me some ice cream" if they have got it, and nine out of ten of those places, the ice cream is made in



a way that is dangerous. It is made out of materials, you don't know just what they are. It is not made of nice clean things such as you would put together in your own home, so it is dangerous. It is a dangerous article. Then there is another reason why we don't furnish you ice cream. That is: you swallow it whole. You do not fletcherize it. Nobody likes to fletcherize ice cream. You like to feel tickled by the ice cream all the way down, that cool tickle is what you want, don't you see. It feels good, so if anybody takes ice cream-- why I have seen people eat ice cream and the whole dish was gone in a couple of minutes. If you eat ice cream the way I told you to drink ice water, there wouldn't be any great harm in it. Just a little sip will do you good in the mouth before you swallow it. Then it is not particularly harmful provided it is made of good clean pure materials.

Q--Please advise us how many eggs one may use daily with good effects on the body?

A--I would prefer to answer the reverse of that question. How well can one get along without eggs, discarding them from the bill of fare entirely? I should say the less one eats of eggs, the better. Eggs are not a natural diet for man. They are animal food. The material of the egg is exactly adapted to a chicken diet. The yolk of the egg is a little luncheon put up to feed the chicken, the little young chicken while it is in the shell. The white of egg becomes the chicken, but the yolk of egg is food for the chicken stored up, so you see the yolk of egg is chicken feed and it is not good for a human diet. It does not belong to the human bill of fare and the white of egg is really sometimes very injurious. Two days ago I said to a lady in my office, "I don't think you ought to eat eggs." She said, "Oh I never eat eggs." I said, "Why not?" She said, "Why they poison me." I said, "Are you sure of it?" She said, "Indeed, I am." "Well suppose it is concealed a little white of egg in the frosting of a cake for example." She said, "It makes me sick every time. My people have tried to fool me a great many times because they thought it was only a notion of mine and everytime it makes me sick, destroys my appetite and gives me headache and I am in very great distress for some hours." That lady is suffering from what we call "anaphylaxis". It is the protein of the egg that finds its way into the blood and produces this particular effect. It is a well recognized fact. Dr. Vaughan of the University of Michigan made this experiment. He took a guinea pig, injected two or three ounces of white of egg into its abdominal cavity. The guinea pig was all right, nothing



happened to it. Three weeks afterwards he injected fifteen drops of white of egg into the abdominal cavity of the guinea pig and in a very short time, the ~~gmk~~ guinea pig was in convulsions and died in a fit in a very short time. Why? Why, because the guinea pig had been sensitized to the albumin of egg and these animal albumins sometimes--the same thing is true of milk of the curd of milk. Many people cannot eat milk without being poisoned by it and there are many ~~sq~~ people that have the same thing with reference to mutton and fish and oysters and many people suffer in the same way from these things. Some people cannot eat meat of any kind at all without being poisoned by it in the same way. This is characteristic of animal proteins and is not true of vegetable proteins. Why? Why, because vegetable proteins are the natural food of man and these animal proteins are not natural food for man. They are the result of a perverted taste, having sometime been adopted as an emergency diet, an appetite was created for them. The less eggs the better. Cut them out of the bill of fare. I do not eat eggs at all and I know I am better off for discarding them.

Q--Is soda injurious in colitis?

A--No, not particularly, but it is a bad habit to use soda continuously. It is better to take the soda than to have pain, but the cause must be removed and the trouble can be readily cured if the right things are done.

Q--Why should acid fruits like oranges, lemons, grape fruit cause inactivity of the bowels where there is no free HCl?

A--It must be an idiosyncrasy. That is not the natural physiologic action. There must be some personal peculiarity.

Q--What is the altitude of Battle Creek?

A--Six hundred and sixty feet, two hundred feet above Lake Michigan. Michigan is a ridge that stands up between two bodies of water and Battle Creek is on top of the ridge. That is why we have the nice cool breezes here all the time. Some years ago I was told there was a survey made from Lake Huron to Lake Michigan for a ship canal. Some of you have heard of the project that Michigan should have a ship canal and it was proposed to build a ship canal right straight through this region and the engineer who surveyed across the state pointed out a little hill to me just a little east of here as being the highest point of land in the line between Lakes Huron and Michigan.

Q--Are treatments beneficial for one person sometimes injurious to another person? That is where diathermy and the arc light are given daily, would such an appli-



cation of heat decrease the peristaltic action?

A--No, it would not be likely to decrease the peristaltic action but sometimes heat produces a depressing effect so that you feel weak after the treatment and that sometimes happens after fomentations, especially in hot weather when you perspire very freely. The depressing effect of heat is especially likely to be implanted, but this can be relieved by fre water drinking, but the effect of heat upon the heart and nerves is sometimes depressing so it should always be counteracted by a cold application. Cold will always undue any mischief that heat does unless it goes so far as to destroy the skin. A hot bath will make one feel weak and debilitated, but a cold bath will lift one away up above the level where he was when he took the hot bath. We measured a man's strength and found it to be about 6000 pounds. Then we gave him a hot bath, tested him again and he only lifted two-thirds as much. Then we gave him a cold bath, then took him back and he lifted more than he did in the first place. So the effect of the cold is an antidote for any depressing effect of the heat. This warm weather, ask your doctor to gige you just as cold water as you can stand. Call for it. It may not be pleasant at first but you must get accustomed to the cold water. Cold water increases vital resistance, not only to resist cold water but to resist disease. and it is by means of these steady habitual daily cold applications that resistance to disease can be built up. A very good illustration of this occurred in an incidence that happened in England more than one hundred years ago. A General, a commander of a company of troops found that fever was breaking out among his troops and he immediately adopted a measure. Quite a number of cases has come down and six or eight were coming down every day so he marched his whole regiment every morning down to a neighboring river and marched them in and made them all take a swim in the cold water of that river. They all had to take a bit every morning and the fever was stopped right there. Almost no more cases occurred and in a very short time the epidemic was broken up. There was simply a building up of the resistance of the soldiers. Cold water is good for fever and equally good to prevent fever, almost as good.

Q--What persons, if any, should not eat grape fruit frequently for breakfast?

A--Only people who suffer pain after taking the sour fruit into their stomach. If the grape fruit is rather acid and pain is produced by it as it sometime is in cases of persons who have hyperacidity or gastric ulcer, then they should avoid the use of grape fruit



Q--Would meat be disease engendering if we should eat it all, say, fresh and raw straight from the beast?

A--That would be the best way to eat it as Plutarch, the author of "Plutarch's Life" who wrote an essay against flesh eating as Plutarch said, "If you will eat flesh, then slay the animal as the lion and other carnivorous animals do. Take the life of the beast by a grip of its throat with your jaw. Tear off the flesh from the bones with your fingers and eat the flesh while it is still live, warm and quivering." Then he said, "You will do it as other animals that naturally eat flesh do it." That is the way a carnivorous animal likes the flesh and if we were really carnivorous animals, if we had any carnivorous element in our nature we would like flesh in that way. There is no such thing as an instinct to eat cooked flesh because instinct is a natural thing while cooking is an artificial thing, you see, and we could not have an instinct to eat cooked flesh. It is purely an acquired appetite. If flesh eating is natural for us, we should take it raw. An old adage used to say, "The lion is a noble animal and the king of all beasts." I say the gorilla is the king of beasts and he is a vegetarian like myself. The elephant is another kingly kind of beast and he is another vegetarian and a fine specimen.

Q--Is an electric bath advisable in rheumatic troubles?

A--A warm electric bath is very good for relieving rheumatic pain.

Q--When is the outdoor pool going to be opened?

A--I was looking into that matter today. It will be opened up very shortly. We have nice warm weather now and we want to improve it.

Q--A woman fifty-five years old whose blood pressure is 170 has always been very well. What treatment do you advise?

A--The simple life. It is not so much treatment as the simple living.--Diathermy, warm baths, moderate exercise, laxative foods, an antitoxic diet, abstinence from tea, coffee and all those things, the simple life, the natural life in general.

Q--Are cold applications better in cases of appendicitis?

A--Hot applications in acute appendicitis, an ice bag over the appendix and hot fomentations ~~xxx~~ or a hot blanket pack to the legs will give most relief and bring the disease often to a termination.

Q--Is an early paralysis in the lower limbs due to degeneracy of the spinal cord



curable?

A--If the spinal cord is destroyed, of course, that is injurable but many time the paralysis is due to pressure, to inflammation and when this is the case, the paralysis after awhile disappears. I have seen cases with paralysis get entirely well, but the case must be carefully examined and each case determined by itself.

Q--Kindly advise what is the best way to reduce a high blood pressure?

A--Stop doing the things that make high blood pressure. That is the first thing. Smoking, tea and coffee and everything else that raises the blood pressure. Cut down the salt in your bill of fare. Salt has a tendency to raise blood pressure. One who has blood pressure above 140 must begin a life long struggle to keep the blood pressure down. He must fight, fight, fight every day, every meal must be regulated in relation to that blood pressure. The whole life must be regulated and if one will take the trouble to do that, he may extend his life for many, many, many years. I am certain that most persons suffering from high blood pressure can extend their life ten, fifteen or twenty years just as well as not, but they won't take the trouble. Suppose you buy a big steam boiler intended to drive an engine that requires 200 pounds pressure. That would be an unusual boiler but there are boilers that carry a higher pressure than that. That is a high pressure boiler. Now you have been running that boiler and the fireman didn't keep the boiler clean until by and by the crown sheet has been burned, has been overheated and sediment accumulated in the bottom of the boiler, it has gotten overheated and has been damaged and burned so the iron has lost part of its elasticity and the inspector comes around, inspects that boiler, finds the seams leaking and evidences of weakness within itself, the end sheet has bulged and he knows just what has happened and he says to the proprietor, "Now this boiler is all right for 25 pound pressure, but you cannot run it at 200 pound ~~pressure~~. It is perfectly safe at 25 pounds." Now what do you do? You just have to ~~use~~ use that boiler for a low pressure boiler, but if you put that boiler up to 200 pounds pressure just once it might blow up and wreck everything. That is just the situation of the person with high blood pressure. His boiler is weakened. He has got to work at low pressure, but he may be just as safe at low pressure as a high pressure boiler because no boiler will burst at 25 pounds and do a great amount of damage. The pressure is not high enough. It is the high pressure boiler that does the harm when it goes to pieces, so the important thing,



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you see my friends, is to so order your whole life so as to extend it as far as possible and to make your life in accordance with the situation. Get your blood pressure down just as low as you can, then determine to keep it right there. I have a brother, a doctor, who is eighty-two years old. He got started out on this simple life ~~that~~ idea almost fifty years ago and he <sup>was</sup> ~~is~~ a great deal older than I and we started out together. He was just twenty years older than I, but I was interested in things of that sort. I was fourteen and he was thirty-four and he initiated me into these ideas of healthful living and put literature into my hands to read and I became almost intoxicated with the idea. It seemed to me such a splendid thing and I became tremendously enthusiastic about it and never have gotten over it. My brother and myself have been living now almost fifty years this way and I had a letter from him the other day, he had just passed his eighty-second birthday and he said he had spent eight hours in his garden. He has retired from active practice. He had spent eight hours in his garden and he had his blood pressure taken and it is 108. Now you see it pays to be good. This brother of mine the last time I saw him looked like a young man. His hair was by no means white. He was seventy-seven years old when I saw him last. He sent me the other day a picture of his little boy ten years old and a little girl five years old that are just as bright and happy looking little folks as ever you saw in your life and his skin was clear. He has only one infirmity. He has cataracts in his eyes so it hinders his sight but otherwise he is in sound health at eighty-two years of age and looks as though he is going to live twenty-five or thirty years more and he has been ~~xxxxx~~ through a great number of hardships on sea and land such as I have never known. He was my oldest brother and I think a much more hearty man than I and a good deal larger man in every way. Now you see when high blood pressure occurs early, it means premature decay. It is due to our abuse of our bodies, knowingly or unknowingly, unwittingly generally and the thing that will do more for us than anything else is to learn how to live, right living and sticking right at it. When you go home, my friends, you must not go back to your old ways. You must say to yourself, "Now then I have learned the way and I am going to follow it" and you will find it will pay and it is a very happy and delightful phase of this simple life, that you will find a keener enjoyment in living than you knew anything about before. You will find when you sit at the table, you will find your old boyhood and girlhood relishes come back again and you will enjoy your food as much as you did when you were boys and girls. The



same keen appreciation of food you once had. You can remember very well when a crust of bread tasted good. You can get right back there again after a little while, in a few months and you will find such relish that these unwholesome things will not appeal to you and you will be glad to be rid of them, and when they are offered to you you will really find them repulsive instead of attractive as they once were.

Q--Can cancer of the liver be cured?

A--No I am sorry it cannot.

Q--Is there any cure for chilblains?

A--Yes, the simplest thing in the world. Before going to bed at night put your feet into hot water as hot as you can stand, then into the coldest water you can get for half a minute or a quarter of a minute, then back into the hot water again and make the change ten times, using hot water just as hot as you can bear and cold water as cold as you can get. Do that ten times and do it every night for a week and your chilblains will be cured. I can subscribe to this as you sometimes find it stated in cookbooks after certain recipes. Try it. I tried it myself and cured my own chilblains that way when I was a boy.

Q--Is there any certain method for clearing a coated tongue?

A--Yes, get rid of the germs. Get the colon active, moving three or four times a day; get rid of all those poisons and pretty soon this coat will disappear. Why do you have coated tongue? Simply because the fluids of the body have lost their power to destroy the germs. Did you ever notice what a clean tongue a cat has? When you see a cat lapping up the milk, did you ever notice what a nice clean red tongue she has? That is the way your tongue ought to look, just like a cats. It is perfectly shameful that we go about with dirty tongues, with our mouths all covered over with slime and mould such as grows on the wall. It is simply because the fluids of the mouth have lost their power to destroy these germs. They are coming in with the air all the time and they grow. You have got to have your blood clean before you can ever keep these germs down. Any fluids of the mouth that are made from the blood will contain substances which make it impossible for germs to grow in your mouth and that is the way to get your mouth clean. You have got to get your blood clean. You begin with the filthy receptacle, the colon, get it clean and keep it clean. I find that it is the most difficult thing in the world to get people interested



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in this thing. They laugh about it. Why the idea that the bowels have to move every day. "My doctor told me if my bowels moved once in three days, it is quite enough." I have had people actually tell me that. They have sort of ignored this thing and regarded the function of bowel movements as a thing to be kept out of sight, put away, attended to when it was convenient, neglected when it was not convenient when really it is one of the most sacred duties that we owe ourselves to attend to that thing and see that the bowels are emptied or move at the slightest suggestion without any delay because by that means we are getting rid of these gross, horrible, putrefying materials or the materials that will become horrible and putrefying if they are let alone.

Q--Do you consider twelve to fourteen hundred calories sufficient for a long period if the appetite does not crave more?

A--No, it is quite too little, but I see I have kept you too long. I thank you for your attention.

End.

v-p-m



Question-Box-Lecture-at-the-Sanitarium-Parlor

Battle-Creek-Michigan-May-25-1914

Monday-Evening-at-8-p-m

by

J. H. Kellogg, M.D.

Sometime ago I told you about a beefsteak that had been in pickle in buttermilk for several years and still in a good state of preservation. It is secreted somewhere in this can but I haven't anything to fish it out with so I think I won't plunge into it just yet. Perhaps somebody will come to the rescue after a while with a fork. This beefsteak is perfectly sweet and wholesome. It was put here in this jar six years ago the 15th day of next month. We have an anniversary usually of the day when it was immersed and the buttermilk is changed twice a week, so it always remains sour and the result is that the beefsteak remains perfectly uncontaminated with putrefactive germs. Now when the beefsteak was put in, it had a little tint to it as all butcher's meat does. The best butcher's meat you can find has already begun the process of putrefaction. You do not have to wait very long to find it in a very advanced state of putrefaction. If you let a piece of butcher's meat lie out in a warm place for a few hours, it has a very decided taint and if it has been cold-storage meat, in less than twenty-four hours after it is removed from cold storage, it will be very far advanced in decomposition and the reason for this is that putrefaction goes on at a point only just a little above freezing. If the meat was actually frozen up solid it will not putrefy, but at thirty-four degrees and thirty-five to forty degrees, putrefaction goes on but at this point, the putrefactive germs do not produce odorous substances, they do not produce the aromatic poisons which are produced at a higher temperature. Consequently cold storage meat, although it may be far advanced in decomposition, has no bad odor, but when you bring it out and warm it up, then you begin to get a bad odor from it because then the putrefaction germs at higher temperature are able to produce these aromatic substances which are easily volatile at ordinary temperature, so it gets an odor. That is the reason why cold storage meat has generally the reputation of undergoing decomposition very quickly after it is removed from cold storage. If I were going to store meat, I would rather store it in buttermilk I think than in any other way because the buttermilk germs



not only prevent putrefaction but kill off the putrefaction germs. I have had this beef-steak examined in our laboratory more than once and it is found to be absolutely free from putrefaction germs. This is a very good illustration of the influence of these buttermilk germs or the bacillus Bulgaricus, the lactic acid forming germs of sour milk ~~XXXXXX~~ germs of all species. It is a very good illustration of the advantage they have as a means of combating the putrefaction organisms of the intestine. If we can flood the entire alimentary canal with these antidotes, with these friendly germs, the result will be complete cleansing of the alimentary canal, and that is the reason why we recommend a laxative diet combined with a carbohydrate diet because the carbohydrates feed the friendly germs and stimulate their growth and then also because if there is an active movement of the material along the intestine, two things occur. In the first place the material which is capable of undergoing putrefaction passes out of the intestine so rapidly that it has no opportunity for putrefaction. And another thing which is almost equally as important occurs and that is, when the material moves rapidly along the intestine, the oxygen which is swallowed with the food more or less is carried along with it and a sufficient amount of oxygen is carried down into the lower part of the intestine to enable the friendly germs to grow. Friendly germs require oxygen whereas the unfriendly germs grow best without oxygen. There are three friendly germs that have been discovered. The bacillus Bulgaricus---this is a sour milk germ which is found in sour milk in all Oriental countries. The people of Oriental countries take great pains to cultivate this particular germ. The milk has to be prepared in a special way. Ordinary sour milk does not contain the germ. Other germs are present which run it out, but in order that the milk should have this particular germ, it must be treated in a special way and the method employed in Bulgaria and the Orient generally is to cook the milk for about fifteen minutes, just until a skin or scum forms over the surface of the milk, then the scum rises. This scum on the milk is due to the coagulation of the lac-albumin of the milk. The milk contains casein and lac-albumin. The casein is not coagulated by boiling but the albumin is coagulated by boiling, so if the milk is heated to the boiling point, the albumin is coagulated and rises to the top and that is what forms the scum on top of the milk. Now ~~ix~~<sup>after</sup> this is formed, then the milk is allowed to cool to about the temperature of the body, then a little hole is punctured through the



skin on top of the milk and a little of the buttermilk which has been prepared before of the old stock. About a tablespoonful to the quart is poured in through that little hole, then a rod is put down through the opening and it is stirred up without breaking the scum which covers the top. Then this is covered over with a cloth, wrapped up in a blanket, kept warm for twenty-four hours and at the end of that time, the milk will be found to be a solid curd like custard and it is eaten with a spoon just as custard would be eaten. This is the way the buttermilk is made and used in the Orient. Now here we employ it here a little differently. Instead of using whole milk as is used in the ~~Mixing~~ Orient, we use skim milk and the ~~reason~~ reason we are using skim milk is because the bacillus Bulgaricus attacks the fats and produces sometimes flavors which are not desirable, while with the skim milk containing no fat, this is not so likely to occur. If we use whole milk which contains a good deal of fat, very often very unpleasant flavors are formed. In the Orient the people get accustomed to those flavors and rather like them just as some people get accustomed to certain flavors of cheese that are very disagreeable to other people. For example, limburger. I think most of us here would not care anything about limburger. We certainly would not like to have it around the house in general or in the parlor. We would not like to have the flavor of limburger about our person, but people actually learn to like those peculiar, outlandish and loathesome flavors. So with the people of the Orient, they learn to like these flavors that come from the decomposition of fat. But to get a pure acid, a pure sour buttermilk, it is best to use the skimmed milk and then when the buttermilk is served to add a little cream to it, whatever portion of cream you desire. That is the way our buttermilk is made and the cream is added just before it is brought on to the table. For some patients it is better not to add the cream. It is better to use only the milk without the fat, especially for people who are desirous of ~~it~~ losing flesh.

Now I am going to lift this beefsteak out of this buttermilk so that you can see what it looks like. You see it is still as tough as it originally was. It is really hard to tear it. It has not softened a particle as the result of any putrefactive change. The buttermilk is here and perfectly intact and I see no reason why this beefsteak cannot continue to flourish in this happy fashion for a whole century. I do not know any reason why it should not be just as good twenty years from now as it is now, for it apparently has not



changed a particle since the first week it was put into the buttermilk. If any of you wish to examine it you can do so. I began to tell you that there are three friendly germs. One is the bacillus Bulgaricus which is found in all these Oriental buttermilks. The buttermilk we have here contains germs from various parts of the world. The first germs I got from the Pasteur Institute in Paris. They were obtained from Bulgaria. I afterward obtained germs from two or three places in Bulgaria. I had samples of other buttermilk sent to me. I have seen this buttermilk in Turkey, in Constantinople carried about in flat jars about three or four inches deep and about twelve or fourteen inches in diameter and over there you will see several men every morning going about the streets with yokes across their shoulders and straps hanging down and a whole tier of these pans piled one above the other, half a dozen of them or more on each end of the yoke and you see them going down the street peddling this buttermilk to families along the road where they deliver it every day or every other day as the case may be. Now as I have told you we have these germs from Turkey and Bulgaria, also some from Armenia and Mesopotamia. A missionary came here from Mesopotamia who had been living at the foot of Mt. Ararat and he said, "My buttermilk has a better flavor than yours." He had taken great care to bring this germ and his daughter had nursed it along the road all the way from Mt. Ararat to Oberlin, Ohio where he was living. So he sent me some of his buttermilk germs that he had brought from Mt. Ararat. These germs we were particularly interested in because the people of that locality have a tradition that these germs were brought over in the ark by Noah. There seems to be some plausibility about that tradition because Noah lived nearly a thousand years you know, and if he lived a thousand years, he must have had some good thing to help him along to such great longevity and there is nothing known that is more helpful than the buttermilk germ. The bacillus Bulgaricus is a "longevity germ" sometimes called, and Noah must have had the "longevity germ" to have lived so long and if he had such a good thing, he certainly would not have left it behind but would have brought it with him in the ark and would have passed it down to his posterity. There is the tradition anyhow that Noah brought it over. When I was attending a meeting at New York at the New York Academy of Medicine, I met Dr. Jacobi, one of the most learned physicians who lives in the world today. He is a Hebrew as his name would suggest and he was talking with a friend of mine and myself and he mentioned the



longevity germ, these friendly germs and yogurt bacillus. "What," said my friend to him, "Do you believe in that?" "Yes, indeed," he said, "yes indeed." He said, "That is what our father Abraham employed to make the buttermilk or the butter that he placed before the angels when they visited him." So you see this is not of modern date. It is well known that this germ has been used in the old country for making buttermilk, a heathy food, from away back to the most remote ages and even the ancient Romans made use of it as we have some proof in history. A missionary from India told me of another interesting kind of buttermilk they had up in ~~Bajki~~ Dharjeeling, away up in the mountains there in the north ~~k~~ of India in the Himalaya Mountains and he said it was very very good, indeed, and the people there found it was of very great service in sickness. They use it and they think find it exceedingly healthful and wholesome, so I had him send me some hindo germs and on investigation we found they were the same germs but a particularly vigorous growth, so we added that to our collection. I met while in Edinburgh a couple of years ago, a very distinguished physician from Iceland. He was the leading physician of Iceland. Has charge of the Government Hospital there, a very bright man. I felt very much ashamed of myself when I saw his many accomplishments. He could speak with me in English and speak as good English as I spoke, although he was an icelander, and he also spoke equally well the Norwiegan, the Danish and the Swedish languages and was more at home in German and French than ~~me~~ I was and in Latin and Greek he was frequently repeating passages which almost made my hair stand on end for fear he was going to ask me if I knew what he was saying. which I didn't know a word about, so this very distinguished gentleman became very much interested in the Sanitarium. After I got home I sent him some literature and especially he became interested in the vegetarian ideas of the Sanitarium. He proposed to adopt these ideas in his own practice and has done so, but he said he was afraid it would not do to advocate these doctrines in Iceland because it would put the people all out of business if they should all become vegetarians for they had to live chiefly on fish there and he asked me what I recommended they should do, and I recommended they should all migrate to America. We have room for them here and it is a much more hospitable country than that icy, rocky country in which they have to eat out an existance, but he wrote me about the buttermilk they have there. He said when people get to feeling bilious and are very much upset they take our buttermilk which they call "skyr" and skyr is the yogurt of Iceland, so he sent me



some skyr and we studied this in our laboratory and found that skyr had the very same germs we had gotten from Turkey and from Mesopotamia and from India and from the Pasteur Institute, the very same germ or possibly a little variation, but with the same habits of growth and the same properties. So in our buttermilk we have the skyr of Iceland and the bhadi of India, of the Himalayas the Yougourth, of Hungary and butter which Abraham fed to the angels, so it is really worth while I think to ~~use~~ make use of a remedy which has proven itself to be so valuable in so many different parts of the earth and among so many different kinds of people that they thought it worth while to take care of it and cultivate it and pass it down from one generation to another through many thousands of years. All butter<sup>milk</sup> is a better form of milk than ordinary milk but this particular kind of buttermilk has been proven by experience of many generations and thousands of years to be more effective than the ordinary buttermilk germs which are simply lactic-acid forming germs that are derived from the air. But now there is another friendly germ discovered by Prof. Tissier of Paris. Prof. Tissier is perhaps the most learned man in the Pasteur Institute. Prof. Metchnikoff is a biologist but he is not a physician, he is not a doctor. Prof. Tissier was a very learned doctor before he became a student in the Pasteur Institute and is a doctor as well as a bacteriologist, and Prof. Tissier was the man who worked out the properties of the bacillus Bulgaricus. Prof. Metchnikoff gets the credit because he popularized it and wrote it up for the newspapers and the magazines while Prof. Tissier only wrote scientific papers for the medical profession, but Prof. Tissier at the time he made the discovery was the first assistant to Prof. Metchnikoff. Metchnikoff is older than he and was the professor of bacteriology at the Pasteur Institute, but Tissier was his assistant in bacteriology when these discoveries were made and the discoveries were made by his researches. Prof. Metchnikoff published an account of the discoveries but Prof. Tissier was the man who made the discoveries, but he made another discovery which is even more important and that is, that there grows naturally in the intestine a germ which is of greater value, of more importance to the body as a friendly germ than the bacillus Bulgaricus. The bacillus Bulgaricus is an outside germ. It does not grow naturally in the body and you have to keep taking it all the time in order to get the benefit of it. You may take the bacillus Bulgaricus for



six months if you like. If you stop taking it for six weeks it is gone because it does not thrive in the body and you have to keep introducing a new supply continually, otherwise it will run out because it is not native to the body. The body is not a natural place for it to ~~be~~ grow for some reason. It encounters influences there that are not favorable to it, although it does <sup>good</sup> work ~~make~~ while it is there, but Prof. Tissier made a most interesting discover, that there is a germ which naturally belongs to the body which makes acetic acid. I was very sorry for that because vetic(?) acid is the acid of vinegar and I don't like the idea that there is any germ making vinegar inside the body for I am opposed to vinegar but that is the truth about it, that the bacillus bifidus discovered by Prof. Tissier makes acetic acid in small quantity but down in the colon where it is needed. The bacillus Bulgaricus does not grow very well in the colon but only in the small intestine; but it is possible for it to grow in the colon when it is take in very large quantities but the bacillus bifidus thrives in the colon where its services are the most needed. Now Prof. Tissier made this very interesting discovery. The same discovery was also made by Prof. Escherich, an eminent professor of children's diseases in Vienna. Prof. Tissier made the discovery that every baby that is born into the world when it is born has no germs whatever in its body. It is absolutely free from germs. There is not a germ in its interior. If there were germs the baby would be in trouble before it was born and the mother would be in trouble too. There would be serious trouble but there is no such thing as a germ in the human body before birth, but within six hours after birth in the summer time and twenty-hours in winter time, for germs are less numerous in winter than they are in summer, the baby's alimentary canal becomes filled with germs but they are friendly germs and not unfriendly germs. They are friendly germs. They are germs which are derived from the mother's breast with the food which the baby eats. There are some germs that are found growing just about at the nipple of the mother's breast. There are some germs growing there, the bacillus bifidus and that is the only place where these germs have been found is in this particular spot of the mother's body and in the baby's intestine. Now within six hours after the baby is born in summer and twenty hours in winter its alimentary canal is just filled with these germs. It is the discovery that young babies had germs that took me to Europe several years ago. I was studying germs here of healthy people and there was not much known of these intestinal germs then and



we were making a study of germs in our laboratory and in order to be sure to get a foundation, I said, "We will begin to study the germs of healthy people", so I knew a mother, a very healthy woman who had a new born baby just a few days old and apparently a very healthy child, so I made arrangements with this mother to permit us to make a study of the bacteriology of this child of its flora, and specimens were sent to the laboratory every day for some time. Now the very first specimens sent, when the report came to me within a couple of days it showed that the baby's intestines were found to be swarming with bacteria. Two billion bacteria in one quarter teaspoonful of bowel passages. I was shocked. I said, "That baby must be sick" so I called the mother up by telephone and I said, "How is the baby?" "All right," she said, "all right," and I was never more astonished in my life. I expected she would tell me the baby had dysentery, diarrhoea or something and was awfully sick, but instead of that the baby was perfectly well. I asked her if she was sure of it. Yes, perfectly well, so we continued our studies. That baby remained perfectly well but the germs were present in enormous numbers. I said I went to Europe to find out the reason why the baby had so many germs. When I got over there I found it was good for the baby to have germs but they were friendly germs. They were not the kind of germs found present in ~~XXXXXX~~ <sup>a dead rat</sup>, for example or in a cow that is rotting in a corner of the pasture or the fence. They are not that sort of germs. Not the sort of germs found in meat or in any kind of decomposing thing, but they are friendly germs, acid-forming germs and they are put there by a wise Providence to protect the baby from the growth of these unfriendly putrefactive organisms which are assailing the baby all the time from the air and from the water and from everything that comes in contact with. Well I brought some of Prof. Tissier's friendly germs home with me. These germs are known as the bacillus bifidus because they had this peculiar conformation, they have this shape. Three of them are arranged together like this and the three together make them look like one with a divided end which is a capital letter Y, so it is called a bifid bacillus or a bacillus bifidus. I brought some of the germs home and they died on the way. It is very hard to keep them alive and I was very sorry, but not very long afterward, a friend of mine came to me and said, "My baby is very sick. The bowel passages are in an awful state. The stools are very foul smelling, black and very offensive and the child is very sick. He is pale, has got a fever. He has no appetite. His bowels are in a terrible



state. What shall be done?" Well I thought about Prof. Metchnikoff's friendly germs. I am going to tell you what I did. I did various things which didn't do the baby any good. I did everything I could suggest, so I thought of Prof. Tissier's friendly bifidus and I said, "We will hunt up a baby and get some friendly germs. So I called up some of the doctors in the town by telephone and found a doctor that was attending a mother with t newborn baby and we went to that house and got some flora, some of the bowel passage of that child, took it to the laboratory and cultivated the bacillus bifidus, found it was there sure enough, plenty of them and we got the pure culture of the bacillus bifidus, made a culture of it, gave it to that little boy and in three days he was perfectly well. In fact, he became better ~~than~~ in forty-eight hours and the bowel passages of this child that had been examined and found full of putrefactive organisms and no friendly ones, but when the bacillus bifidus was administered within four or five days we had almost a pure culture of friendly germs and the child was completely transformed. ~~Now~~ Now Prof. Tissier has reported a similar experience in thousands of cases in which there was used this culture, and this is the reason why we employ it here. I think it is the most important of all the friendly germs because it grows naturally in the intestine. When a child is born the first few days or weeks of its life while it is well and healthy, the bowel passages are not offensive. They have a slightly acid odor. Perhaps, because the bacillus bifidus makes vinegar so there is a little vinegar odor there. There is a little acetic acid there and a little odor of acetic acid, but the bowel passages are not offensive. They are of a yellowish color and slightly acid odor, but if the child begins to get sick, then the stools become ~~more~~ offensive and when they are examined they are found to have an entirely different kind of germs there. It is just the same sort of thing that occurs if you should look out into a garden and see it all beautiful with roses, poppies, pinks or violets and all sorts of beautiful flowers and you go away from home for six ~~weeks~~ and come back and find the ~~same~~ weeds grown up there in the garden and you can hardly see a flower there. The weeds have choked the flowers. Now that is just the very thing that happens in the intestine. These wild germs that get in are weeds that don't belong there. They are well called wild bacteria by Dr. Hurty, the eminent bacteriologist of New York and Dr. Hurty calls them meat bacteria because these wild bacteria are found in meat and in the excreta of animals. So the dust that floods in from the street and settles down on the carpet, the



dirt brought in on the father's shoes, smeared over the carpet and the dust that settles around the window curtains in the bookcases and all around the house. This dust is largely made up of these foul unfriendly germs that comes from the excreta of animals which is powdered up by the animals and then brought in by persons coming into the house, so when the baby moistens his thumb in its mouth and rubs it over the carpet and smears it with these filthy germs, then puts it back into its mouth again, you see it is inoculated by those unfriendly germs. Then by and by when the mother gives it meat, she is feeding it on friendly germs and when the child begins to eat such things as cheese, herring, codfish, mackerel and other things of that sort, why it is taking down these unfriendly germs by the millions. Now this doesn't seem to some of you a very serious matter, I am sure, because it is a new idea. I remember some years ago when I first began to write and talk about clean milk in this community, I was made the buck of a great deal of ridicule. Every little while an article would appear in a paper by some farmer's wife who had a rather keen wit, an article would appear holding me up to scorn and ridicule. "Why," she says, "these germs Dr. Kellogg is talking about are healthy. We have all grown up on them. We have been eating them from our boyhood and girlhood and we enjoy them and they are good for us and we won't be scared about it." And all the time these farmers' barnyard germs were killing off the babies by the thousands. Three hundred thousand babies die every year and more than half of them die from unclean milk. The germs I am talking about are the same kind of germs found in unclean milk, the same kind of germs that these societies are being organized all over the country to suppress, societies that are organized for the purpose of securing clean certified milk. They are trying to get away from these germs, but we overlook the fact that these same germs are found in the dust of the floor in the house. They are found in dried fish, preserved fish and salt meats of all kinds, found in enormous numbers, the same germs. So it is very silly for us to be so awfully particular about milk and so utterly careless about everything else that contains the very same kind of germs and even in greater numbers. We ought to be consistent and reasonable and if we are going to fight germs in milk, let us fight these same germs wherever they appear. If they come along in beefsteak, we will object to the beefsteak on the very same ground that we do to unclean milk. The germs are always there. The only way to get clean meat is to have the animal killed right in your own back yard and brought in while the flesh is still warm and



quivering and eat it at once. That is the only way to get clean meat. You can't buy it in any meat shop in the world. Well then there is one other friendly germ. These two germs the bacillus bifidus and glucobacter require sugar in order to support their lives. They cannot live without sugar. They have to have sugar, not cane sugar necessarily but they have to have some kind of sugar. The sugar that is formed by the action of saliva upon starch, malt sugar or the milk sugar which is found in milk--these sugars are good food for the friendly germs. They have to have sugar. Now unfortunately for these germs, the sugar which is taken into the body in the milk sugar and the other forms of sugar are rather quickly absorbed from the intestine. They are all absorbed in the small intestine. Practically none of them get down into the colon but it is in the colon where you want the germ to grow. When the germs get down into the colon they starve to death because there is no sugar there to feed them. Prof. Metchnikoff recognized this difficulty, so some years ago he began to search for a germ that would make sugar in the ~~small~~ colon, that would make sugar out of the residues of starch, which though small in amount might be always found to some extent, almost always be found in the colon and he finally discovered a germ in the intestine of the dog which he named glucobacter or the sugar making bacteria which the word really means. It was not discovered by Metchnikoff but by Wollman, his assistant, and Dr. Tissier also assisted in the work as I happen to know in a private letter from him. Now this germ which was found is capable of making sugar in the colon, so when we make the combination of the bacillus bifidus and the bacillus Bulgaricus and the glucobacter and have them altogether, each one helps the other. The bacillus Bulgaricus makes the lactic acid; the bacillus bifidus makes the acetic acid; the bacillus glucobacter converts the starch into sugar and feeds both of them so they are able to grow and thrive in the colon when otherwise they would starve to death. Some of you are taking a solution which is called "tisane". This is simply an active and a very rich culture of these three friendly germs growing together and named tisane after Prof. Tissier who really ~~is~~ is deserving of the chief glory of bringing these friendly germs to the notice of the medical profession and the public at the present time. Now these germs are always useful but they are none of them capable of correcting all the bad effects of a bad diet. If a man says, "Now I have got some friendly germs to help me out, I can eat all the beefsteak, sausage, ham and eggs and all sorts of things that I want to and I will be all right,"--That is all a great



mistake, my friends. These germs cannot do the whole thing alone. It is necessary for us to do all we can for ourselves and one of the most important things we can do is to make our diet consist largely of carbohydrates, that is, of starchy foods and it is important we should take some of our food in a state in which it will get into the colon and undigested. Now if we take all of our starchy foods so thoroughly cooked that it is digested and absorbed in the small intestine, there will be no starch left to feed the friendly germs in the colon. The colon is the filth receptacle, the garbage box of the body, the sewer and the remnants of undigested and unusable food materials are deposited there in the colon and if they stay there a little while they undergo a change, undergo putrefaction and it is necessary to have these friendly germs there to prevent their putrefaction just as they prevent that putrefaction of this meat here in this fruit jar. That is the purpose of the friendly germs but in order for the friendly germs to grow they must have some starch. If we take all our starch in a condition so thoroughly cooked that it is all digested and absorbed in the small intestine, none of it will reach the colon for it is really wanted, so it is important for us to take some starch in a partially raw state while the bulk of the starch we take should be well cooked. It is necessary for us to take at least some starch in an indigestible or ~~uncooked~~ uncooked form. I used to make sport of the Scotchman because he ate the oatmeal half cooked. You know in Scotland it is the custom to simply pour hot water on their oatmeal and stir it up and then eat it at once. That is the way they cook their oatmeal in Scotland, is simply pouring some hot water on it, stirring it up and eating it. That is Scotch brose. I used to think it was a very unwholesome thing to do. For many years we cooked our oatmeal twelve hours. Put it to cooking at night and had a man attend to it all night long to be sure it was thoroughly cooked and we used often to go so far as to cook it a second time and we thought it was a great deal better. It is more easily digestible but it is a matter of fact we need some food that is not easily digestible. We are getting our foods too concentrated and too easily digestible and we need some food to pass on into the colon undigested and this is true at least of starch. It is not true of fats and it is not true of protein, but starch we do need some undigested starch and that is why we should eat some raw food. Now at the present time, we do not cook out oatmeal like that. When you call for brose at the table, that brose consists of steel cut oats that has been cooked just six minutes, that is all. The oatmeal is simply



stirred into boiling water then set aside and allowed to simmer for six or eight minutes and oatmeal or cornmeal should not be cooked any longer than that. Five or six minutes is sufficient. That will cook enough of the grain so that it has a pleasant flavor and the raw flavor will disappear entirely and, in fact, if you try it I think you will like it better that way. You will find it tastes better when it is cooked that way. It loses its pasty, sticky consistency which made it constipating. so It has been discarded for many years. For years we did not have oatmeal ever on our bill of fare. It did not appear once for years simply because we found it tended to produce constipation and the reason why was because when it was swallowed in these pasty, sticky masses, it was liable to form hard lumps in the colon and to make serious mischief. Now we cook our oatmeal only five or six minutes and I advise you all to use this plan. Do not use the rolled oats because you will not like them but the steel cut oats cooked only five or six minutes, I think you will like very well. What is called brose at the table here consists of a mixture of steel cut oats and sterilized bran and cornmeal. That is our Sanitarium brose and these three things mixed together and cooked for five minutes or six minutes or seven minutes at the most, we find to be a very excellent remedy in helping to get rid of the unfriendly germs. I am spending so much time about this because really that is the one thing needful for the average chronic invalid is to change his flora. If you can get rid of these horrible putrefactive germs that have taken the place of the friendly, protective germs with which nature supplied us all when we were infants, if we can get rid of these unfriendly germs and get back again the flowers in our posy garden, if you please, as Mr. Dielly(?) calls the alimentary canal, if we can get the flowers back in place of the ~~weeds~~ weeds, nature will accomplish the rest because it is the poisons produced by these unfriendly germs which are responsible for most of the maladies from which we suffer.

Q--Would it not be of great benefit to many patients to have cots for resting after bath treatment?

A--Yes, it is a good thing for feeble patients to go downstairs or out of doors at once in a wheel chair or on a cot, out on the veranda and lie down to rest or to go to your room and with your windows open, lie upon your bed and rest. If our bath house were situated all alone by itself, we should have a large rest room, but because our bath house is connected right with our dormitory, we ~~did not~~ had not thought it best to provide



for such a place as that for it would have to be such a very large place to take care of six or seven hundred people.

Q--In a diet list, lettuce, celery and raw vegetables are excluded from the diet in cases of autointoxication. Is this correct?

A--No. Lettuce, celery and all kinds of vegetables are admissible to a diet adapted to autointoxication unless there is some other reason. In an ulcer diet, it would be necessary to exclude those things, in an ulcer diet, at least for a time.

Q--How is it best to care for measles especially for the eyes?

A--In the beginning, the eyes should be protected a little and it is a very good thing to protect them by means of some simple antiseptic solution like boracic acid, three or four grains to the ounce dropped into the eye every two or three hours, bathing the eyes with quite hot water for a moment then applying thin cool clothes to the eyes and not allow them to stay long enough to warm up for then it has a bad effect. They should be changed before they get warm. That is a very excellent plan to prevent inflammation of the eyes in measles.

Q--If what you say about a meat diet is a veritable fact and not hypothesis, why are not all reputable physicians vegetarians?

A--Now let me give you a fact which is verifiable by statistics. The mortality from typhoid fever used to be twenty-five years ago about 30%, at the present time it is about 16%, but when typhoid fever is treated by hydrotherapy, by water, the mortality is only twenty or thirty per cent. and a German authority not long ago, a very eminent German physician reported one thousand cases of typhoid fever treated without a single death by means of hydrotherapy. Now I want to ask you the question, "Why do not all reputable physicians employ the hydriatic method of treating typhoid fever?" Why in the United States every year there die sixty thousand. They die, I think, some twenty-one thousand people of typhoid fever, twenty-one thousand. Now the mortality would be reduced from sixteen per cent. to three per cent. at least. In other words, thirteen per cent. or four-fifths of the entire number would be saved. That would be sixteen thousand lives that would be saved in the United States every year if all the reputable physicians would adopt hydriatic methods, that is, the water method of treating typhoid fever. Why don't they do it? I want you when you go home to ask your doctor why? Now the very same thing is true of



pneumonia. The mortality from pneumonia is about twenty five per cent, but with hydriatic treatment as practiced in this institution, the mortality is only five or six per cent. In other words four-fifths of all the people who die of pneumonia ought to be saved. Now why are they not saved? There are over 150,000 people die of pneumonia in the United States every year. More people die of pneumonia than die of tuberculosis, 150,000 people and four fifths of all of them ought to be saved. In other words 120,000 people are dying in the United States that would not die if reputable physicians, all of them, knew how to make use of water in the treatment of pneumonia and used water in an efficient and thorough-going way. Why don't they do it? Now it is because they have not been educated to do it. It is because there has been a tremendous prejudice in the medical profession against the so-called newer remedies or physiologic remedies. For a good many years I was threatened continually with being turned out of the medical profession.

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Just thirty-one years ago this very summer I was on trial for medical heresy because I recommended water in the treatment of pneumonia and cold compresses to the chest which are used now in every hospital in the country. In every first-class hospital cold compresses are always used to the chest in pneumonia but thirty-one years ago I was tried for medical heresy. I was put on trial. I was tried for two long years. I was on trial all this time and it was published throughout the whole United States that charges had been preferred against Dr. Kellogg and it was expected he would be turned out of the medical society and when after being on trial for a year the vote was taken whether I should be left out or left in I knew how exactly every man was going to vote in the meeting and I found there were thirteen persons present and six I knew would vote against me and six I knew would vote for me and there was one other man that was favorably inclined to me and that was myself and I concluded I would vote for myself so I voted for myself and stayed in but it was simply my own vote that kept me from being turned out of the medical society thirty-one years ago and the principal charge brought against me was that I recommended the use of cold water in the treatment of pneumonia. A doctor got up and fairly frothed at the mouth in declaiming against the horror of that thing. "Why," he said, "You might just as well shoot a man through the heart with a rifle as to put cold water on his chest in pneumonia. Whoever heard of such a thing?" Now the medical profession are bound by precedence just as the clerical profession is and the legal profession is. There is no profession in the world so tied by precedence as the legal profession and next there comes the theologians who are tremendously tied up by precedence. Doctors are not the only ones that are held by precedence and established opinion. I think doctors are more liberal minded and perhaps get away from precedence more than any other class as professional men but still established opinion has stood fight square in the way of progress along the lines that this institution has been battling for during the last almost fifty years now. When I took charge of this institution



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there were twenty-eight patients the first day. The next day I only had twelve and you can imagine why. They didn't like the idea of a small boy twenty-four years old coming in to take charge of them and we hadn't had a chance to get acquainted yet but I didn't lose those twelve. I found as a matter of fact that the eight that went away had agreed to go away, in fact, they went off with the doctor who was here in charge of the place before I came. He left at night and I came in the next morning so I hadn't had any opportunity to get acquainted with the people. These patients went away with the doctor and twelve remained and we began to grow and year after year our patronage has grown. Within six months we had 100 people here. The next year a couple hundred and so we have been going along ever since until last summer we had twenty-two hundred and twenty-five people in our entire family and this summer we expect to have twenty-five hundred people here all told in the month of August and we are making provision to take care of them all comfortably. Now this growth has been a continual battle and the medical profession are no more opposed to the idea of vegetarianism than they have been to the use of water or the use of electricity and the use of every single remedy that has been employed in this institution almost. We are not the only ones who have been agitating these ideas. They are coming from various places. Every new idea has to struggle for its life, has to make a battle for itself. Every truth that ever came into human knowledge had to struggle for popularity before it ever became popular. It is simply because there has not been time yet for these ideas to become established in the minds of the great majority of physicians. You can ask the very same question with reference to tobacco. Tobacco is a poison. Why is it that so many reputable physicians smoke? Alcohol is known to be a poison. Why do so many reputable physicians recommend alcohol and take a little of it themselves? These are <sup>similar</sup> ~~stark~~ questions all of the same sort. This thing is certainly true that at the present time no man, physician or not physician, no man can offer any scientific reason why a man should not be a vegetarian, no man.



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I defy the whole world to rise up and give me one sound, scientific reason why man should not be a vegetarian. Now I say this without hesitation because the latest works on physiology say without any question whatever that a vegetarian diet is entirely competent to furnish a man with all the nutriment and with every nutriment that he requires to maintain himself in the highest health and to give him the greatest efficiency. Dr. VonNoorden, for example, perhaps the most prominent physician who lives at the present time, Dr. Von Noorden formerly of Vienna but now of Munich and Dr. Taylor of Philadelphia, Professor of the University of Pennsylvania there, professor of physiologic chemistry, in his late work on metabolism and nutrition says emphatically that the practice of vegetarianism presents no problem to the physiologist because there can be no doubt that the human body can be fully and completely maintained on a strictly non-flesh dietary. I think one of these days when we have an illustrated lecture I will throw upon the screens some quotations from eminent, scientific men which will show you that ~~the~~ scientific man no longer denounce vegetarianism. They do not recommend it because it would not be popular to do so to do that but they nevertheless have surrendered absolutely so far as any argument against the vegetarian idea is concerned.

Q. Do you believe in an exclusive milk diet for anyone suffering from a nervousbreakdown?

A. The exclusive milk diet is wholesome for certain cases. It is not nervous breakdown that requires a milk diet. The only special benefit a person gets from a milk diet is that it sometimes assists in changing the flora. When a person takes a large amount of milk, more milk than he can digest the residue that does not digest sours and it makes lactic acid and so as ~~the-poisons~~ it passes on through the intestines it develops a healthy flora in the intestine and eradicates the putrefactive germs just exactly as if buttermilk has eradicated from that beefsteak the putrefactive germs which were in in it and the milk diet works well when we know if the patient takes a glassful of milk every hour or every half hour in the course of



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two or three days he gets a looseness of the bowels. When it produces a looseness of the bowels so that that patient has six or eight or ten bowel movements a day then the effect is excellent. The patient gains in flesh, the tongue gets clean, he feels fine, he simply has changed his flora but it does not work that way with all persons. In some persons the casein of the milk is very constipating and acts as a poison and the patient instead of feeling better after a few days his tongue gets coated, he gets headache, gets autointoxication worse and worse and in such a case as that the milk diet does harm but in every case the milk diet does harm if it is continued more than a short time. Milk is not a complete food. Milk is lacking in one element almost completely that is very essential to the body and that is iron. Milk contains practically no iron. Well, you say, how can the baby live then. There is a marvelous provision of Nature by which the baby is enabled to live for several months on a strictly milk diet without food from any other source and that is before the baby is born Nature stores up in the <sup>baby's</sup> liver three or four times as much iron as the liver ordinarily contains. The liver is a reservoir for iron and the baby's liver has stored up a stock of iron. It is stocked well with iron before the baby is born. It has iron enough there to last it for several months and the same is true of the calf and of all milk born animals; that their livers are stored with iron to last them until they begin to eat food which contains iron. Milk contains practically no iron at all. Then again it must be remembered that cow's milk is not a normal human food. It sometimes is even a poison so it cannot be regarded as a universal panacea or a thing to be always recommended.

Q. What is a good tonic to make hair grow?

A. There is nothing so good as sunshine but in this case I am somewhat in a situation of the old Governor Bagley of Michigan who called here one time after he had been down to Chicago at a great banquet and told me he sat five hours at the table and ate most of the time and after the banquet he started home and got as far as Battle Creek on his way to Detroit



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and he had an attack of gout so bad he had to get off here. He said, "I always carry some colchicum pills in my pocket because I know I will have an attack of gout after a banquet but they got run out and I wish you would tell me something that will stop this gout. He was having a very severe pain in his toe. He said, "Now, look here doctor. Before making any suggestions I want to tell you a little story. I live in Detroit, you know, and sometime ago I called on Dr. Farrand and asked him what should be done for my gout and he made a prescription for me and I started off down the street and when I got away two or three rods I heard the doctor shouting for me, "Governor, Governor come back" and I went back and the doctor said to me, "Say Governor, if that medicine does you any good I wish you would let me know for I have gout myself." I don't want you to make any experiments on me so if any of you find anything that makes hair grow I would like to have you let me know for that question is asked me quite frequently.

Q. Is the use of salt in a bath as a flesh reducer harmless?

A. Yes, entirely so because the salt is not absorbed by the body.

So long as the temperature of the <sup>water</sup> ~~body~~ is higher than that of the body the movement is outward. There is no absorption movement to amount to anything but if the temperature of the bath is lower than that of the body in a cool bath then there is absorption taking place so in the ordinary warm bath with salt water the salt is practically not absorbed at all.

Q. Can a patient have three or even two bowels movements daily when confining himself to a strict diet without partial or constant use of remedies such as Colax or Para-Lax?

A. That depends entirely upon the individual. A person that has a crippled colon may have to use something all his life just as the man who has a short leg has to use a crutch. This is the normal shape of the colon but the colon very often has a different shape. For example, yesterday I was operating upon a patient and found a colon that had this shape and that was the shape of that colon and down there there was a kink like that and



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up there was a kink. Then ~~was~~ there was a membrane running across there that way. This patient was very badly constipated and no wonder because there was a constriction of the bowel here. In another case in which I operated a couple of days ago this pelvic loop here was fallen over. It is difficult to draw it here as it really was but it was something after this fashion and adherent. Here was a kink here and another kink here. There was also a kink up there. Now there were adhesions here which produced these constrictions. Now such a person must have one of two things: Either the patient must have an operation and have these constrictions removed, have these mechanical obstructions removed or else he must secure bowel movements in some other way. Now if the bulk of the food is made sufficient, for instance, in the use of Colax, that is one of its greatest advantages, agar-agar, In many cases bran answers the same purpose, is just as good and sometimes better when the food is bulky as it comes down here it distends the intestine you see until by and by it is able to dilate. In most cases it will dilate this constriction until it gets through so it comes down here, accumulates here until after while it stretches the bowel and can slip around the corner and go on its way. That is a great advantage of having a bulky diet in these cases. By combining this bulky food with Para-Lax or paraffin oil, a lubricant, which this process is very much facilitated because very often in the colon where there is delay the watery part of the intestinal contents is absorbed to such a degree that what is left has an adhesive putty like pastiness which causes this to adhere and to bank up. Recently we have been struggling with a case in the surgical ward ~~with~~ of this sort which has given us a whole lot of trouble. The patient had a complete obstruction of the stomach. The outlet of the stomach was completely closed so we had to make a new opening at which the intestine was attached to the lower part of the stomach but there was also trouble down here. The whole bowel was adherent and had to be dissected off, lifted up here to its normal state but in addition to that there were large masses here in the intestine, ugly lumps all the way down. They were about



as large as large plums and irregular masses and the entire colon was filled hard as wood. They had evidently been there a long, long time. Now in order to help this patient out we introduced a tube, a stomach tube, passed a stomach tube into the colon, passed it around away up in here. Then we passed water up into the bowel and every hour two or three pints of water was passed in and out so as to soften up these masses but it took us ten days to get all that great mass washed out and it is only within the last two days that we have finally gotten the bowel completely emptied. Now this patient was a very feeble man for he was nearly starved to death. I should have done that under the anaesthetic but I didn't dare to keep him longer under the anaesthetic. I felt at the time I ought to do it so as to crush those lumps up with the hand and let in gallons of water and wash them out. I should certainly do that in another case of the same sort because we had such a lot of trouble. As long as the colon was in this condition we could not get the food to pass out of the stomach. Food passed out for a few days but after that food remained in his stomach 24 to 48 hours and just as soon as we got the colon entirely emptied food passed from the stomach and the man is getting on very well. This shows what is going on all the time with these chronic cases who of people who suffer from headache, who can't get rid of aches and pains, biliousness and things attributed to the kidneys, spleen, stomach and everything else except the right thing. The colon is the chief cause of pain in the trunk of the body and the back. There is no question about it. The reason why this man had this condition was because the stomach was closed up and the opening was so small that <sup>nothing but</sup> liquid food could pass through so there was nothing that gives anything bulk at all to the fecal matter and that is why it formed these hard, dense masses so the great advantage of coarseness in the diet of roughage, if you please, the great advantage is to help stimulate these lazy colons and crippled colons and enable them to work without subjecting them to the necessity for a surgical operation. I am certain that persons who come



here and find relief by these simple measures and regulation of the diet. I am sure there are about three-fourths of all these cases that are relieved here would be operated on in London. They would have their colons removed if they would consent to it or would have some other operation performed upon their intestines for the relief of these troubles but by the use of these simple remedies which can be used for an indefinite length of time the operation can be avoided and it is our practice to avoid operation in every possible case in which we can avoid it and just as long as we can. I have had so much faith in Para-Lax and Colax and I make use of them every single day of my life and they are in daily use in my family. I have some boys and girls away at school scattered from one end of the United States to the other in different colleges and I keep them all supplied with Colax and Para-Lax and I write them every little while, "Don't forget your Para-Lax bottle, to patronize it." I think it quite important for these boys and girls who are living in schools where they cannot get just the right diet, they have sedentary life and I am sure their wits will be a great deal brighter if their alimentary canals are kept in good, clean, wholesome condition. It is the hardest problem I have to educate people to the importance of taking care of the colon, of taking care of the alimentary canal and keeping the "king's highway" clear.

Q. Is it good for one suffering from neuralgia and rheumatism to eat lemons, grapefruit, oranges or any acid fruit?

A. All sorts of acid fruits are splendid for people who have rheumatism. There is nothing better. That is another thing. Why don't all reputable physicians recommend their rheumatic patients to take acid? I will tell you why. It is because doctors as well as-- I got a letter from a ~~professor~~ professor in a medical college some little time ago scolding me tremendously because I recommended people to eat apples and acid fruits who had rheumatism. "Why," he said, "It was shameful to do such a thing". Now this is based upon notions which were current in the profession fifty years ago and twenty-five years ago but within the last fifteen years has been



absolutely and completely exploded and the foundation knocked right out from under them because in rheumatism the blood is too acid. That is generally recognized and the urinary secretion is too acid. The natural supposition would be that if we eat acid things it would make the blood and the urine more acid but now that would be true if one ate muriatic acid or sulphuric acid or nitric acid, any sort of mineral acid, that would be true but when we eat vegetable acid it is not true. Why? Why, because vegetable acids are burned in the body just as starch, sugar and all the other foodstuffs we take. They are all burned in the body, all converted into something else. When one eats for instance, the citric acid of the lemon, the orange, the tomato or the cranberry, all of which contain citric acid, when one eats these fruits the citric acid taken into the body is converted into carbondioxide into a perfectly harmless gas which is dismissed from the lungs as gas and is gone. It does not stay in the blood. It does not remain in the tissues. It is burned up, utilized, digested and assimilated down there just as exactly as starch is and treated in the same way. Now here is where the advantage comes in in the use of these things. For instances, here is the citric acid of the lemon and soda. Now in the grape we have glutaric acid and soda. Glutaric acid is joined to the soda. In the apple we have malic acid and soda. There is soda every time you see. Now when the acetic acid is burned up into glutaric acid and the malic acid why, you see that leaves the soda and the soda neutralized the acids which have been formed in the body so the effect of eating a vegetable acid is an alkaline effect and not an acid effect. The final effect is that of an alkali but I must hurry on.

Q. What should be the diet in a case of myxo~~id~~edema?

A. Persons who suffer from myxo~~id~~edema have crippled attenuated and insufficient thyoid gland. This is what this disease is Now what would you do if you had a horse that was lame and wind broken and yet he was such a good old patient animal that you didn't want to kill him or to ----- with it. What would you do? If this horse had been used to pulling



heavy loads you would give him lighter loads, wouldn't you? If he had been accustomed to travelling rapidly, if he had been on a mail route for example, you would give him a different kind of job. You would take him on to a farm where he could walk in front of a plow or a cultivator. You would give him a light job. That is what you would do for that crippled horse. Now that is exactly what you ought to do for the thyroid gland. The man with myxedema has a crippled thyroid gland. What is the job of the thyroid gland? The job of the thyroid gland is to destroy poison and the most important poisons it has to deal with are poisons that are absorbed from the intestine, these colon poisons. That is the duty of the thyroid gland is to destroy these poisons. Let me tell you a little story that ~~was~~ <sup>will</sup> illustrated it very well. When Professor Cocher the great Swiss surgeon ~~expressed~~ <sup>perhaps</sup> the greatest surgeon who lives today when professor Cocher began to remove thyroid glands you know large thyroids are very common in Switzerland up the Swiss Alps there is a place where almost everybody has goitre. I have seen men going about the streets with goitre that hung almost down to their waists and disputing with each other as to who had the biggest one. Some of them seemed to be very proud of their big goitres. Professor Cocher began to remove these goitres and some of the people died so he began to investigate the matter to see what was the cause of people dying when they had the thyroid gland or their goitres removed and the physiologist took some dogs and removed the thyroid gland and in a little while he began to be stupid. Then they had convulsions and went into coma and finally died, the whole of them, everyone of them and he published the fact to the world that the thyroid ~~is~~ gland could not be removed, that the gland was essential to the life of the body but another physiologist took it up and he removed the thyroid glands of rabbits and they all lived. Now that was a question. This other man had made his experiments right. Why did the rabbits ~~live~~ live and the dogs all die. The experiment was repeated. The dogs had their thyroid glands removed, then were fed on bread and milk and oatmeal porridge and these dogs all lived and thrived just as well as the rabbits did



Now that began to set men to thinking and the result was it was announced to the world by the physiologists that the function of the thyroid gland was to destroy the poisons derived from a meat diet. This was published a good many years ago. Now don't you see right away the conclusion comes that a man that has a crippled thyroid gland ~~the~~ ought never to eat any meat. That is plain as daylight, isn't it? He ought to discard meats of all kinds. He should take a low protein diet, a very laxative diet so as to keep his bowels active and to reduce colon poisons just as low as possible and of course a person who has myxedema has to take the dried thyroid gland of the sheep but he does not have to take so much of the thyroid gland of the sheep and he can often perhaps get along without it almost entirely if he takes care to avoid a ~~meat~~ <sup>meat</sup> diet and to keep the colon active.

Q. What is the cause of ulcer of the stomach?

A. Germs. I am satisfied that it is an infectious disease that is generally due to stasis. An eminent Chicago specialist declared that ulcer of the stomach is a meat eater's disease. He found that he could produce ulcer of the stomach in dogs by feeding them exclusively on meat and mixing a few colon germs with that diet. If he gave the dog a meat diet and colon germs along with it the dog got ulcer of the stomach in the course of three months every time. I heard the doctor say this, an eminent Chicago specialist in a large meeting of medical men, more than 2,000 medical men present at the meeting when he shouted it out to the surgeons present. He said, "Gentlemen, you do not know anything about ulcer of the stomach. Ulcer of the stomach is a meat eater's disease and I have proven it to be so." Here is a meat eater himself. He is not a vegetarian. He makes sport of vegetarianism but he knows perfectly well that meat eating causes ulcer. It increases the amount of acid in the gastric juice on one hand and on the other hand it increases the amount of putrefaction in the colon and this putrefaction gradually works up the gastric juice and irritates the stomach, erodes the surface. ~~which~~ This intensely acid gastric juice



which is not adapted to the human stomach. When a man lives upon a dog's diet he has to have a dog's gastric juice to digest that diet so his stomach makes gastric juice such as the dog makes but the man's stomach is not accustomed to endure the contact of such strongly acid gastric juice as that made by the dog's stomach and even the dog cannot endure it if his food becomes at all unclean. Now constipation and a meat diet are together in my opinion the foundation of gastric ulcer. Dr. Lane of London believes this thoroughly. He believes that gastric ulcer is due to delay in the colon so when a man has gastric ulcer he does not do anything to his stomach at all. He simply takes the colon out and the man gets well and he has proven this in a great number of cases or he short circuits the colon. That is where the small intestine comes across here. Suppose here is the stomach, here is the small intestine and it comes down, comes into the colon at this point and Dr. Lane cuts off the small intestine here and attaches it here so that the material passes straight down into the rectum and makes a short cut out of the way instead of going all the way around through the colon. That is what is known as short circuiting. Dr. Lane performs this operation for ulcer of the stomach and duodenum and claims that he cures it every time. I heard him say in Chicago at the Clinical Congress there last Fall that it is simply absurd to operate upon the stomach, <sup>that</sup> but the operation never should be performed because the stomach ulcer can be cured by simply short circuiting the colon here. I myself believe that ulcer of the stomach requires operation very, very rarely but in our experience it is not necessary to short circuit because we find in cases in which Dr. Lane performs this short <sup>that</sup> circuiting operation we find there is an incompetent ileocecal valve and the fecal matter is <sup>backing</sup> passing up into the intestine and that is what makes the trouble so we find it is only necessary to repair this valve here which is a very simple operation. I will try to give you a little idea of what this operation is. Suppose my coat here is the colon and the sleeve is the small intestine. The operation consists simply in tucking in a little of the wall of the



intestine, then a little stitch is applied here and that makes a valve inside. That is what the valve was originally. This is the only thing necessary in a great majority of cases.

Q. What causes headaches and drowsiness for years?

A. Autointoxication. That is one cause and another cause is bad position in sitting. Now if I sat as most of you are sitting this minute I think I should be half asleep all the time. I am sure it is getting a little late and that may be the reason why I see several people looking a little sleepy and I am rather a dull speaker and I will try to brighten up if I can. If one sits in this position, relaxing the abdominal muscles, the blood accumulates in this part of the body. We need the compression of the abdominal muscles to keep the blood in the brain where it belongs and when we relax in this way ~~it~~ the blood accumulates in this splanchnic pool as it is called and there is not enough to keep the brain machinery going. You see very often, don't you know, when you are getting a little sleepy, you raise yourself, throw your head back and your arms back and take a deep breath and that drives the blood out of this part and up to the brain and so clears the drowsiness for a moment.

Q. Can Bright's disease be cured?

A. No but it can be tolerated. A person with Bright's disease needs to learn how to live so as to tolerate his Bright's disease. A person who has Bright's disease perhaps has one quarter of one kidney that is diseased. We have two kidneys and we need about two thirds of the kidney in order to live. We can live with two thirds of a kidney. Now a person who has Bright's disease may have only one quarter of a kidney affected. If we stop the disease where it is, don't you see, he can live for years and years and years. He has got still kidneys enough to keep him going and have has got left still some excess of kidney power for emergency so the important thing is to learn how to live so as to take good care of your kidneys, no tea, no coffee, no mustard, pepper, peppersauce, ginger or anything that blisters as it goes down your throat for it will blister the kidneys as well as the stomach and the



throat. It will keep right on blistering all the way down. I remember a doctor once who said he liked these things because they gave his ~~to~~ palate a twist. He didn't like the insipid plain things that I recommended. I said, "Doctor, you forget this thing, that the thing that twists your palate and twists your stomach, twists your liver, nerves and brain and keeps right on twisting all the way down. It does not stop with the palate."



I said, "Doctor, you forget this thing, that this thing which twists your palate, twists your stomach, twists your liver and your kidneys and your brain and keeps right on twisting all the way down. It does not stop with your palate. One wants to eliminate those things from his bill of fare absolutely and what I am saying now with reference to people with Bright's disease applies to everybody here because we are all going to die of something. You know it, I know it. I have got to die of something. I am wondering what is going to be, some things I would positively be ashamed to die of. I would be ashamed to die of Bright's disease, that is sure and I would be ashamed to die of cancer or arteriosclerosis unless I was very very old. I hope I will die by accident because I don't want people to say, "Well that's because he is a vegetarian," But I want to say to you that it is just as important for you who do not want to die of Bright's disease and do not want to have Bright's disease, it is just as important for you to begin to live now so that you won't have it. Begin now before you have got it. That is the time to cure it. If you have got Bright's disease you cannot get rid of it, but if you have not yet got it, you need not have it and the thing that is best for a man that has got Bright's disease is the thing that everybody should do so that they will not have Bright's disease. Tobacco is a splendid thing to make Bright's disease. Cigars, cigarettes, pipes, smoking--that is a fine way to produce Bright's disease and constipation is another thing, perhaps, a more efficient cause of Bright's disease even than tobacco. I think it is. Alcohol is another thing and coffee works along the same direction.

Q--What kind of iron would you take for an anemic condition?

A--As a matter of fact, blood cannot be made of iron. Iron may be of some service sometimes to people who have anemia, but alone iron does little or no good. In any case the iron that does any good is the kind of iron you find in food. As a matter of fact, the person who has anemia is not suffering from lack of iron but from lack of ability to utilize iron. If you examine that patient's food you will see he is eating all the iron his body needs, but he cannot assimilate it, cannot use it. There may be now and then an exception in which the iron acts in some way as an antiseptic or in some other way, but there is danger in depending too much upon iron of getting your liver loaded up with rubbish that it cannot make any use of. The iron I would recommend is food iron and the more recent experiments with iron show that it is only the organic iron that the body can utilize, but



mineral iron is not utilized at all.

Q--Is rhubabb a good thing to eat in the spring time?

A--Some people like it. It has an acid flavor and I am not surprised that many people make use of it. Yet as a matter of fact, it is entirely unwholesome. It is not food at all, it is poison. The acid of rhubarb is oxalic acid. It is the same acid you use to take the fruit stains out of the carpet and to clean your hands with,--oxalic acid, the very same thing you buy in the drug store which is a deadly poison. That is the acid of rhubarb. It is not a harmless acid like the acid of lemons, oranges, grapes, apples and things of that sort, it is a poisonous acid and it is only because it is taken in such small quantity that it does not do a great deal of harm. I don't suppose to take a little rhubarb once or twice is going to do any very serious harm, but to use it habitually and regularly is certainly a very unwholesome thing.

Q--What sort of diet do you prescribe for the eskimo?

A--Before making any dietetic prescription for the eskimo, I should recommend a change of climate which I think is far more important than a change of diet. That is fundamentally important. But let me tell you something about the eskimo that you do not know. That is, that the eskimo takes the greatest pains to gather up every particle of vegetable food that grows in their country. Every little berry, every leaf, every sprout everything that they can possibly make use of as food, they gather up. They even go so far as to kill the reindeer and take out of the stomach of the reindeer the reindeer moss when it is half digested by the reindeer and they are able to eat it after it has been half digested by the reindeer, they can eat it and get food value out of it. They suffer terribly from constipation because of their lack of vegetable food and they endeavor to overcome this difficulty in every possible way. I am going to bring int to you the next time I come, some seaweed sent to me recently from Alaska, a large mass of seaweed, black as your shoe that these people gather from the sea, dry it on the shore and eat it and the cranberries preserved in seal oil that they gather and preserved for use in winter time. They have blue berries and cran berries almost as far north as anything at all grows and the eskimo gathers them and eats them and can them for winter use. Dr. Cook happened to be in Miami when I was there and I went to hear him lecture in order to see the man and the longer he talked the more convinced I was that he had never been anywhere near the



North Pole. He showed a wonderful picture on the screen. He had reached a place where it was possible for a man to stand on the North Pole and cast a shadow in all four directions of the compass at once. That was more than I was able to stand. Dr. Cook says, by the way, that an eskimo will travel thirty or forty miles during the wildest arctic storm to get a couple of gumdrops. Dr. Shackleton(?) in his trip to the South Pole said that the sailors had a great craving for things made out of flour for puddings and other things made out of flour. Now that shows you that the meat diet is not at all satisfying, even to the eskimo or to the arctic traveler.

Q--What is the cause of ~~xxxx~~ seasickness?

A--Disturbance of the stomach and of the center of equilibrium? Perhaps the labyrinth of the ear. The best cure for seasickness, in the first place, live very abstainously before you go abroad. Have the bowels thoroughly evacuated, moving two or three times a day, then don't eat any greasy meat or things of that sort on board. Make your diet consist of fresh vegetables, lettuce and all the fresh things you can get and fruits. The first thing I do when I go aboard the ship is to hunt up the chief steward and hand him a five dollar bill and tell him that there is another one at the other end of the journey, and I want him to supply me with the things I want and when I want them and I arrange for my meals at such hours as I want and I give him my bill of fare and I don't have the slightest difficulty. They are now a days very anxious to please travelers. There is so much competition in the steamer line and I find I can get on board a steamer just as good fare as I can get at home. I don't have any difficulty at all. You say that is a tip. It may be a tip but I think the jeff or the steward is entitled to a little extra compensation for taking trouble and I want him to remember me and it is the custom of the country and so I confess that I rather not suffer what I would have to suffer if I did not do so. I think it is right to follow the custom of the country. I hope the time will come when we will have laws against tipping. I am going to talk about that at another time. I want everybody here to understand that we do not have tipping here at the Sanitarium. It is not the fashion here; it is not necessary here for all ~~xxx~~ our employees are well paid, paid just as good wages as they can get anywhere. They only work here because they can get just as good pay here as anywhere else and because they like to stay here. They can get more wages somewhere else sometimes for a short season, but take it the whole year



around, they do better to work here. They do not work here because we plead with them and beg of them and ask them too, but because they want to and we do not believe in tipping. In the ladies' bath room I guess there is little or no tipping. Our young ladies, Mrs. Foy, tells me are above receiving tips. A young woman feels that she is going to do her duty and it is her duty to do for the patients the very best she can without having any special bribe and the young men in our bathroom I hope are honorable young men, though I understand some gentlemen think it is necessary for them to give tips. It is against the rule of this institution for anybody to receive tips, either in the dining room, the bath room or anywhere else and it is not necessary and I will just tell you a lesson I got a good many years ago. I was called up to see a gentleman ~~whom~~ whose name is familiar to most of you who was the senior member of the ~~firm~~<sup>firm</sup> of Wood, Herman & Company of New York, the great real estate dealers there, Mr. Wood. I was called up to his room. He said, "Doctor, I have been here a couple of days and I want to tell you this is the more remarkable institution I was ever in in my life. Why I have been here four whole days and haven't had my leg pulled yet." I didn't know what he meant for I had never heard that expression before. I said, "I am glad you are getting along all right." "Oh," he said, "it is just wonderful. I was down at the Hot Sulphur Springs and I hadn't been there three hours before I had my leg pulled four times," and he said, "I don't understand it." I finally discovered what he meant and I told him that we didn't have tipping here. "Well," he said, "I tell you I am glad to see it. I don't believe in tipping and I like this institution." ~~And~~ And he liked the institution so well that when he died some two years later, I saw a little note in the paper that Mr. Wood had made the Battle Creek Sanitarium the residuary legatee of his large estate and I later received official notice to that effect and sent an attorney to Washington and found that he had left a couple of hundred thousand dollars for his wife to use while she lived and to come to the Battle Creek Sanitarium when she died and besides that, there had been reported that Probate Court, the inventory had been brought in by his execut<sup>or</sup>~~or~~ of property valued at, I think, something like a million dollars more, and at the present time several hundred thousand dollars are accumulating at the bank at Washington for this institution to use because we do not encourage tips and it is for us to build a Sanitarium down at Atlantic City with where they won't have tips. You see, here



was one business man who had traveled a great deal all about the world and didn't believe in tips. I would be very glad if everybody here would help us to keep down and to ~~the~~ oppose this vicious tipping custom. When I travel in Europe, I tip everybody I come across because I know that is the only way whatever of making a living. At an English hotel, the man who carries your trunk for you has to pay thirty or forty dollars for the privilege of carrying trunks in that hotel. In the bathhouses in the continent the people there only just get their board and perhaps eight or ten dollars per month and they are expected to live by means of tips. It is the custom of the country, but in this country it is not so. In this institution it is not so, and as I said, we ~~ought to~~ <sup>should</sup> be very thankful if our patients would help us to oppose this vicious tipping system.

I will just say another word. You say my nurse has been very kind to me and has taken extraordinarily pains to help me and I feel as though I wanted to do something for ~~her~~ this young man or young woman struggling along who does not have many luxuries and is trying hard to get an education and seems to need some assistance. Now when you come to go away if you want to leave a five dollar bill or anything you want to we haven't anything to say about that. I am not inviting you to do it but we have no right to say you shall not make a gift to anybody you want to make a gift to but this is the idea. We do not want anybody to feel that you have got to say to a young man or a young woman, "Here is \$5.00. You give me good service and I will look after you." We don't believe in that because the young man ought to be honorable enough, conscientious enough to give you every service that you need and everything which your case requires and all that the doctor prescribes for you and all you want to satisfy you. He ought to be willing to do that without such a tip. When that custom is allowed pretty soon the young man will get so he won't give good service unless he does get the tip. There is where the vice of it comes in. You cannot get good service unless you do give a tip and people who do not give good tips will be slighted and will not have proper care and we feel that that is really a vicious thing. Several states are introducing laws against tipping and Michigan will have a law one of these days against it and I hope every state in the country will.



Q. How may fresh vegetables such as lettuce, strawberries be made safe for consumption in the Orient where everything growing is contaminated?

A. By dipping in peroxide of hydrogen. That is what we do in our kitchen. Every green thing and all the fruits that come upon our table has a bath in peroxide of hydrogen. A 5% solution of hydrogen will destroy any germ there in two or three minutes.

Q. Are raw potatoes wholesome?

A. No, they are absolutely indigestible. You might just as well eat sawdust.

Q. Do you believe in chiropractic?

A. Yes, I believe so much in it that if I were a law maker I would prohibit it by law. It does harm. I know does. I not only believe it does but I know it does harm. A lady came to me sometime ago and said, "Doctor, you know my husband was here a few months ago." "Yes". "Well," she said, "You didn't give him very much encouragement. You thought you could help him and he got a little better but he was not getting along as fast as he thought he ought to so I took him to a chiropractic doctor and he said he would cure him and if I would give him so much money he would cure him sure so I took him there and he gave him a treatment and it hurt him awfully. The treatment consists of shocks and strains, pulls and pushes that ~~are~~ are very unpleasant. He was hardly able to get up there the next time but he went up to the office again and that time he finished him. He came home and he suffered so terribly I had to get a doctor to relieve his pain and he kept getting worse and worse and in three weeks he was dead and that chiropractic killed my husband." With tears streaming down her face this woman told me how her husband had been killed by a chiropractic doctor. <sup>These</sup> ~~This~~ <sup>are</sup> ~~man~~ <sup>was</sup> ignorant. They don't know what they are doing. They will get a feeble man, put him under tension, have his head supported on one block and his feet on another block and then jump on him right in the middle of his back. It is wonderful



they don't kill more people than they do. We had a man brought here two or three years ago with a terrible pain in his knee. He had been treated by one of these manipulators and the man said the trouble was he had a dislocated hip so he pulled that hip around in all sorts of ways and he finally put him under an anaesthetic, lying on his face and put his foot on the small of his back, got hold of his foot and he was a powerful man and he pulled with all his might and finally to make something snap. Nothing snapped so the man was finally brought up here. He sat in a chair pinched and pale evidently a great sufferer and as I saw him sitting in the chair holding himself I suspected <sup>right</sup> fixing away what the trouble was and I said, "Won't you get up to make a test and he rose from his chair with his hands on his knee and I knew immediately that he probably had tuberculosis of the spine. I took him to the X-ray room for examination and sure enough he had tuberculosis of the lumbar vertebra at the small of his back. You can imagine how much advantage he would get by being wrenched and pulled about by a strong man. The poor fellow was badly damaged and I don't know as he ever did recover. It is a dangerous thing for a man with serious trouble to put himself in the hands of these ignorant manipulators. I suppose if I should inquire how many persons here have been treated at some time or other by an osteopath or chiropractic or some other similar practitioners, I suppose about one-fourth of all the people here would raise their hands. I will not ask that question. How many of you have never been treated by such a person? I see about half the hands raised. Perhaps the other half didn't care to vote. It doesn't make any difference. I have noticed that in talking with people. It is astonishing how many people have tried these people and have been promised all sorts of things, have been told you have got a little dislocation of the third vertebra of your neck or the seventh vertebra. The seventh vertebra is the one that has a long spine sticking out behind, sticks up very prominently and it is very easy for the osteopath to say to his patients, "Now don't you feel that vertebra? It is out of place. We will manipulate it and fix it and put it back in place. It is called vertebra



promenans because it is a prominent vertebra and every sort of means is employed to impose upon people and I might say many hundreds of dollars are being taken out of the pockets of people by jugglery of this sort which really is not fair. The time will come when it will be dealt with. At the present time the whole country is being humbugged to an enormous extent. At the same time people are benefited. If a man has lumbago manipulations, massage, rubbing, will sometimes relieve the pain and that is good but these men go too far and claim to be able to do things which they are not able to do. They have a false theory that all troubles are due to displacement of a muscle or a dislocated nerve, vein, artery, bone or something else.

Q. Is there any cure for catarrh of the colon?

A. Every case is curable.

Q. Is Bright's disease a forerunner of uremic poisoning?

A. Uremic poisoning is one of the ways in which a person suffering from Bright's disease dies.

Q. Can ulcer of the duodenum be permanently cured without operation?

A. Most cases can be provided the colon can be made to act properly and the patient can be made to take proper care of himself.

Q. Can a two year old child survive a second attack of meningitis?

A? I wouldn't give it a chance if you can help it. A second attack might be lighter than the first or worse than the first.

Q. How is the best way to treat a case of sunstroke?

A. The best way to treat sunstroke is to use the old-fashioned method originated by old Dr. Hippocrates. Nothing better has ever been devised. When a man has sunstroke he lies unconscious. Get a chair and it takes three or four people to do it, one to bring cold water, another to pour it on and two people to rub the patient. One should stand up in a chair and pour cold water upon the patient from as high as can be reached, as high up as he can reach and just pour the cold water on. Ice water is better than ordinary cold water. The coldest water you can get, pour it upon the patient and get have two



persons rubbing vigorously at the same time. The cold water does two things when used in this way. It carries away the excessive heat which the patient's body has absorbed from the sunstroke and the rubbing at the same time brings the blood to the surface and so relieves the congestion of the brain.

Q. Is an ulcer scar of the duodenum likely to result in cancer?

A. No. Almost certainly not. Ulcer of the stomach may result in cancer but ulcer of the duodenum rarely or never becomes cancer.

Q. If the use of fats makes a person bilious would the exclusion of fats from the diet be harmful?

A. Yes. One never should think of doing that. We need from one to four or five or six ounces of fat a day. No one should undertake to live on a diet containing less than one ounce of fat daily at any rate.

Q. How can one tell surely whether or not one should use milk?

A. If when you use milk you get a coated tongue, become constipated, feel sallow and have a bad taste in your mouth you better make up your mind that milk is not good for you.

Q. What is the function of the prostrate gland?

A. The prostrate gland secretes the mucous material/ There is a nerve connected with the genitourinary function but may be removed without serious detriment to the body.

Q. Please explain the difference between whole wheat and graham bread.

A. Graham bread is whole wheat bread and whole wheat bread is not whole wheat bread. That is the difference. Graham bread is the real whole wheat while the whole wheat excludes the coarser portion of the bran and whole wheat does not represent the whole wheat at all. It is a mixture of grain. It is simply wheat four to which some extra amount of the fine middlings have been added.

Q. Do you know any positive proof as to who has the greatest endurance, vegetarians or meat eaters?

A. Yes, the vegetarians have the greatest endurance. There isn't any doubt about it. Mr. Roosevelt gave a very good illustration of that when he was out hunting in East Africa. He said a horse with a heavy man on its back could run down a lion in a mile and a half every time. A lion is supposed to be the king of



beasts, the king of the forest

but the horse with a heavy man on his back can run down a lion absolutely anywhere in a mile and a half. Why? Because the horse had endurance and the lion has none. The lion is a meat eater and the horse is a vegetarian. The greatest pedestrian feats have been made by vegetarians. I notice by the paper that Mr. ~~Kakka~~ Kahlemainen, a Finn who was the winner in all the running events at the Olympic events of Stockholm, Sweden two or three years ago and has recently gone back to Sweden, he is a remarkable man and is recognized as one of the greatest athletes who ever appeared, who was winner in every event in which he ~~participated~~ was a contestant. Day after day he came up with fresh men and won in every single race. He did not go into the long race for he had been running every day in all the other races, and that one he did not enter, but in all the others he was a winner. He is a small man, perhaps half an inch taller than I am and he told me he had been a strict vegetarian since he was a boy and he has certainly most remarkable endurance. I saw him run for an hour. He started off at a rapid pace and kept that pace up during the entire hour. He run the last mile as quickly as he did the first mile. ~~XXXXXXXXXX~~ ~~XXXXXXXXXX~~ The average was a trifle more than five minutes. He run nearly twelve miles in the hour of his running and there were relays, four men who come on to run with him, men who had won some races and were very good splinters. They run and after running twice around with him, these men would fall upon the ground completely exhausted, simply keeping up with him and then another man would go on and run and he tired out four men, and at the end of the time was apparently perfectly fresh and trotted off to his tent as though he had just simply been out for a morning walk, apparently not at all weakened. This man is a vegetarian, so is Carl Mann who won the great walking race from Dresden to Berlin and for a number of years back, there has been a contest in the German army. The men who could walk the farthest on the double quick, who could go the farthest on the double quick time, military step carrying a full soldier's load, a loaded knapsack on his back, and for the last six years this race has been won every single time by a vegetarian who was not a soldier. It has been opened to the whole public as well as the soldiers to make them more competitive, but the vegetarian has won every time.

Q--What is the altitude of Battle Creek?

A--660 feet, I am told, two hundred feet above Lake Michigan.



Q--What should be the diet for a person with uric acid?

A--He should not uric acid. That is the important thing. He may eat everything else but uric acid and things that contain uric acid. Now to get rid of uric acid, you must exclude all kinds of meats, for they all contain uric acid. You should never eat uric acid. Beefsteak contains fourteen grains of uric acid to the pound and sweet breads contain seventy grains of uric acid to the pound. Chicken, lamb, mutton and those things contain just as much uric acid and fish contain practically the same amount that beefsteak does so they are all on the same order.

Q--Is there a cure for paralysis agitans?

A--In recent times some remedies have been found which are wonderfully helpful and ~~in~~ some cases <sup>have</sup> ~~seen~~ <sup>ed</sup> to be almost entirely cured.

Q--What can one do daily to guard against ~~stagnation~~ <sup>hemorrhage</sup> of the bowels?

A--The most important thing is to keep the bowels moving freely so as to avoid straining which is the most common cause of hemorrhage.

Q--How long must one be prepared to take treatment for a case of fairly long standing autointoxication? How long does it take to be cured?

A--It just depends in the ~~xxxx~~ first place how thoroughly the patient co-operates with the doctor and how thoroughly he is willing to adopt a strictly antitoxic dietary. My opinion is that the majority of cases, if you go at it in good earnest and work hard at it, that the flora can be changed in three or four weeks' time. Dr. Combe thinks ~~expatients~~ ~~ought~~ it takes about three years. The way he does it I should think it would. <sup>for</sup> ~~if~~ he does not absolutely prohibit the patient eating meat. He allows the patient to take a little <sup>meat</sup> ~~now~~ and then and the only reason in the world he does is because he is afraid his patients would pack up and go home if he didn't. The patient eats at a hotel where he cannot have the special catering to his needs that is possible in a place like this. I think three or four weeks ought to be sufficient. When the patient does all he knows how to do and the doctor does all he knows how to do to change the flora, we find almost invariably that the flora is materially changed in the first two weeks that the patient is here in the institution. Our laboratory reports show that very thoroughly. At one of our faculty meetings recently this question was up for discussion and it was demonstrated to the satisfaction of everybody present that persons who come here and adopt the dietary and follow the rules



that there is a wonderful change in the intestinal flora within two weeks' time. For radical and complete change, it is necessary for these measures to be employed in a most thorough-going manner and some cases require the application of the remedy to the lower part of the alimentary canal as well as to the upper part in order to reach every nook and corner of the infected region.

Q--Is it better to exercise before the morning bath or after?

A--Both before and after are good. The cold bath feels a great deal better if you have had just enough exercise to heat you up a little.

Q--Is an early paralysis in the lower limbs due to degeneracy of the spinal cord curable?

A--No, degeneracy of the spinal cord is not curable.

Q--Are cocoanuts, Brazil nuts and English walnuts good for food?

A--All nuts are good if they are thoroughly chewed.

Q--Why is it best not to sleep after eating?

A--Because when one goes to sleep after eating, the stomach does not act freely in emptying itself as it should. The secretion continues but the stomach does not empty itself, it does not act as vigorously as it should and one reason for that is, the diaphragm does not act as vigorously during sleep as during our waking hours, because when we go to sleep we do not breath deeply. The breathing is more shallow, so the stomach has no assistance from the diaphragm in emptying itself and the food stays too long in the stomach. The contents become too acid and sour stomach and ulcer are the result.

Q--What causes la grippe?

A--Germs.

Q--Some people believe that to do hard work they must eat meat at least twice a day. What is the best proof that they are mistaken?

A--The best proof is that the hard work of the world is done by ~~manxaxxix~~ animals and men who do not eat meat. For example, the horse and the ox are vegetarians, they are not meat eaters but on the other hand, the carnivorous animals, the lions, tigers and the leopards do not work and they won't work and they can't work. A carnivorous animal cannot work only in the arctic region. It is only in the arctic region where there is intense cold that these animals are able to work and it is only because they eat a great deal of



fat meat. Lean meat is the worst thing for an animal or a man who wants to work, but the fat of meat will support work and will support labor. The carbohydrates are the best fuel. Starch and sugar are really the fuel of the body. Fat can be used in smaller degrees but the lean of meat and protein are really the most objectionable of all elements to be used in any considerable quantity and they do not support work. Protein or the lean of meat is useful only to supply material for tissue building. It is not useful for food purposes which is the chief object of taking food. I might mention the fact also that the most of the ~~work~~ work of the world is done by peasantry and laboring people. The Italian laborer in his own home lives on maize, corn, wheat, chestnuts, rice and rarely ever tastes meat. In England sometime ago, I visited what is called the black country, spent sometime in <sup>in</sup>inquiring into the habits of the miners there, the hard working people who work in the mines and in the brick-making industry and I found that they rarely ever taste meat. I also inquired among the farmers of England and I find that they have a little meat on a Sunday as they say and on holidays but rarely ever any meat at all, so the thing is true in Ireland. I found an ~~ish~~man when I was in Ireland some years ago one hundred and twenty years old, had just died, a man that had lived on buttermilk and potatoes and oatmeal all his life and the oldest man whose age is recorded in recent times, old Thomas Parr, who is buried in Westminster Abbey, there is a slab in one of the iles of Westminster Abbey on which is recorded these words:

"Here lies Thomas Parr, who died at the age of one hundred and fifty-two years and nine months."

Think of it! and that man lived it is well know, he lived on buttermilk, potatoes and oatmeal and was a hard working man who lived out doors most of the time.

I thank you for your attention.

END.