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QUESTION BOX LECTURE

At the Sanitarium Parlor, Battle Creek, Mich., Monday, February 5th, 1912, at 8 p. m.

By

J. H. Kellogg, M. D.

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When I first took charge of this institution, about 35 years ago, I used to see all the hard cases every morning, and I remember one lady patient who had a brand new symptom for me every morning, and she served it up to me like a nosegay, don't you know, a rose or a lily, or something else, as a rare specimen. I have been very, very sorry that I did not keep a diary in those days, and put that all down, because it was such a fine collection of symptoms. I am sure she told me a thousand symptoms at least, and there were some new ones every day, so we never had any dull times looking for her. I was talking with somebody some time ago about asking questions, and he said he never liked to ask questions out of a box, but liked to take the question straight from the questioners mouth. It does not make any particular difference to me; if any of you have a question you want to ask, just put it in.

neuroasthenia
Question. What is the difference between nervous indigestion and intestinal indigestion?

Answer. When I was a medical student, old Dr. Palmer, who was professor in the University of Michigan where I spent a year, one day was giving us a lecture on nervous disorders, and his subject that day particularly was neuralgia, and he began his lecture with, "The symptoms of Neuralgia." He said, "When you have a pain, that is due to inflammation, that is an inflammatory pain; when you have an injury, a bruise of a part and there is pain there, why that is a traumatic pain; when you have a pain that is due to the growth of a tumor or something of that kind, that is a pressure pain. Now when you have a pain and you cannot find any cause for it, and you do not know what makes it, that's neuralgia. So you see neuralgia is only a cloak. The term

neuralgia is really a cloak for ignorance, and that is what dyspepsia is. Nervous dyspepsia is the term doctors apply to gastric disturbances, intestinal disturbances, or stomach disturbances of various sorts discoverable in the gastric regions, when doctors do not know what is the cause of it, without it is nervous dyspepsia, so nervous dyspepsia is a sort of "Pandora's" box from which you can draw any sort of symptom or any sort of trouble. Now nervous dyspeptics have been getting more and more uncommon, until recently they have become quite rare in the practice of most intelligent physicians, and at this institution we have not had a case of nervous dyspepsia in the last five years. Why? We have had the same sort of people that we had before, but we found as we learned more about the stomach and the intestines, and the functions of digestion, that we have learned more of these things. We have had less occasion to use this nervous dyspepsia you see, because whenever we could find a cause for dyspepsia it was not nervous, don't you see, but it was something else. The more we learn about disease, the more we find that were called nervous diseases, are for the most part only symptoms. The nervous specialist of the future will be a man whose function is to make diagnoses. Neurasthenia is another very good illustration of the same thing. It is a sort of garbage box for symptoms. You do not know perhaps, that is the cause of these man symptoms. He comes and tells you he has pain in the back of his neck, has a nonsensation in the little toe of his left foot, has a cold feeling running up and down his back and goes on with a whole lot of symptoms of that sort, and the doctor says, "Why you have got neurasthenia." Now why does he call it neruasthenia? Simply because he does not know what else to call it. He has to have some kind of name, and if he dont have a name, the patient would go and hunt up some other doctor.

I have heard of an old doctor from Kalamazoo, A Dr. Hitchcock, whom I used to meet frequently. The doctor said to me one day after he had been doing considerable particular work, "I have got to stay at home." I am going to give up this particular business.' I have got to stay at home and cultivate my practice. My

patients are getting away from me." "Why, he said 'one of my patients came to see me and brought her daughter, and I found the daughter was very nervous and semi-hysterical, and I told her mother she was suffering from nervous prostration. She went down to New York and saw Dr. Dana down there and he told her she had neurasthenia, and she came back and told everybody in town that I did not know anything about what was the matter with her daughter, and she bought a prescription which was the very same prescription I had given her, that Dr. Dana himself had written for her, and she came back and told her neighbors that Dr. Hitchcock was a very ignorant man because he did not know what was the matter with her daughter." He said she had nervous prostration, when she was suffering from neurasthenia. "Now, he said, 'I have lost my patient, and I have got to stay at home and cultivate my practice." A patient always wants a name. I remember very well a lady who had a pain down here in the prominent vertebra of the neck, the vertebra prominens. This point was a little sore and sensitive, so she said, "I have got a terrible trouble in my neck. Nobody has ever been able to tell me the name of it so as to know what it was, and of course they could not cure it. If I could only find somebody who could tell me the name of this trouble, I know I would get well right away, because they would know how to cure it, of course." So I examined her neck and found a sore spot here, just over the vertebra prominens. She said, "Oh doctor you have found out what is the matter with me, now I know I shall get well." I said "no doubt you will get well very soon." From that time on she never said another word about it. She had been complaining about it every day. It disappeared at once, for I told her what it was, but about three weeks afterwards, I asked her how the pain in the vertebra prominens was getting along. She began feeling about, and said, "It is there yet." It came back you see when I called attention to it. I had a great time to get rid of it again. It does not do always to recall things that have passes by.

Well nervous dyspepsia you see is a sort of myth. It is simply a hodge podge of symptoms. It is not a disease, it is only a group of symptoms. The same thing is true of neurasthenia. I think the doctors nowadays who make a diagnosis of neurasthenia very frequently are getting very scarce. Personally I never make a diagnosis of neurasthenia; never say a man has neurasthenia, unless I honestly do not know what else to say about it. If I do not know what is the cause of all these nervous symptoms, and cannot find any cause, I tell him he has neurasthenia. I am telling you the facts about it so you will understand the real truth about it. I do not have to say that very often. We never have to say it any more, and the same is true of nervous dyspepsia. As I said we have not had a diagnosis of nervous dyspepsia in our institution here for five years. Why? because the X-ray has come along and shown us what is the cause of this nervous dyspepsia. It shows us that when a man has the symptoms that used to be called nervous dyspepsia, there is some trouble in some of his alimentary gates. The alimentary canal is thirty feet long and has gates all along the road, from the mouth to the lower extremity of the canal. There are gates all along. Every little while there is a gate. There are twelve different gates in the alimentary canal, and the X-ray shows us if there is any trouble at any one of these gates, and if there is trouble along down these middle gates, they are likely to give rise to what is called nervous dyspepsia, and to symptoms that are called nervous dyspepsia. Dr. Moynihan of Leeds, England told me the other day, when I called on him, that he had made a discovery, that gall stones are a common cause of neurasthenia. He said here are just two things: A great many people are suffering from neurasthenia, and we have a whole lot of cases of nervous dyspepsia. We did not know what was the cause of it, but simply called it nervous dyspepsia, because we did not know what else to say. Now we have found in a whole lot of cases after people have died, that they had gall stones. We have found that about one woman in every six has gall stones, and about one man in every ten has gall stones. Now he said that's just about the proportion of nervous dyspeptics, and I concluded from that, that the so-called nervous dyspepsia

is due to gall stones. At any rate he said, "I am sure if anybody had gall stones who did not have stomach trouble from the result of it, and did not have ill effects from it, gall stones always make trouble." Now it is quite an important thing to know about that cause. I figured it out a while ago, and I found the people of the United States must be raising every year something over seventy bushels of gall stones. That is about the average annual crop as near as I can make it out of gall stones, and these gall stones, every one of them are making nervous symptoms, and that seems to be one of the great causes of nervous dyspepsia. Well there are other things, and probably a much more common cause of nervous dyspepsia, so-called, a ^Sstasis in the intestine, in the colon, in the alimentary canal somewhere. Now when you take food into the mouth, chew it properly and swallow it into the stomach. It gets out of the stomach in about three and one-half hours, and is doled out of the stomach little by little, dished out in spoonful doses, in teaspoonful doses. Just about that quantity is doled out at the lower end of the stomach, and this doling out begins very soon after we began to eat, within ten or fifteen minutes or so, and within thirty minutes after a person begins to eat, some of that food is down at the ileocecal valve, the lower end of the lower intestine, seeking entrance to the colon, but it does not get in. It is held right there, because there is another gate keeper something like the pylorus. The ileocecal valve does not let the food by and does not allow the food to pass into the colon, so it remains there three or four hours to complete the process of digestion, and at the end of three or four hours this is spooned over into the colon, a teaspoonful at a time. This is a wonderful process by which this thing is done. I will make a little rude indication of it here, so as to show you something about it. This represents the intestines, at rest perhaps. Now suppose this is a section of it, and this will suddenly divide into two parts completely by the contraction through the middle, then you wait a few seconds and watch it, and you see it divides again up here like that, and divides an equal distance here. Now you see it is divided into four parts, but within a few seconds this will start over again. It contracts here again and that makes a little trouble in don't you see, and then

when this relaxes here this trouble is released, and it pushes something out at the other end here, so just a very little of this segmentation goes on just that way. First one side, then another side alternates in this way, and the material is gradually pushed over into the colon through the ileocecal valve. Now if there is trouble here at the ileocecal valve, or trouble at any of these gates all along the road, the food remains too long. Instead of remaining three or four hours, it remains five or six or seven or eight or nine or ten hours, and I have known cases in which the food stuffs remain in one place for four or five days. I have seen a case to-day for instance, in which the food stuffs got lodged at one point and stayed there two days and ten hours, fifty-eight hours, and it made so much trouble and inconvenience and nervous symptoms of various sorts, that it was then removed by mechanical means. It might have staid there two or three days more with symptoms of pain in the back, pain in the head, nervous symptoms of depression, weight, languor, fatigue and exhaustion, getting up in the morning feeling as though you wanted to bite somebody's head off, or as though you were going to be hanged, horrible symptoms of various sorts, feeling irritable, cross, surly pessimistic. These symptoms are most all of them born down here in the intestine and are the result of stasis of food. We charge a great many things to bad character that are really due to bad digestion and sometimes things that are pretty good in themselves are attributed to biliousness. Bishop Vincent told our folks a while ago that some people thought they had experienced religion when they had only had a bilious attack, or a spell of the blues or something of that kind. Now these changes in feeling and changes in the state of mind are often unaccountable. If you do not know what is the reason for them, they can be attributed to these disorders in the alimentary canal, and those disorders practically all result from stasis, and that means stagnation, because when stagnation occurs, putrefaction occurs, fermentations are set up, poisons are formed and the germs that are present all the while multiply enormously and become virulent, become almost ferocious one might say in their activity and attack the

mucous membrane and the poisons which are formed are absorbed and taken into the blood and they are like poisons that are injected under the skin, they circulate through the blood, go to the brain and poison the brain and produce auto-intoxication.

I remember very well a lady whom I met in the office sometime ago for examination, and I told her that she was suffering from autointoxication. She said, "You are entirely mistaken, sir. You are entirely mistaken. I have not had a drop since night before last. I did not take any last night. I usually do take a **toddy** to make me sleep, but last night I didn't have any." She was here where she could not get it, you see. But I said to her, "You are worse intoxicated than that. You have got a worse intoxication than whiskey intoxication. You have auto-intoxication and autointoxication is a great deal worse than whiskey intoxication, or brandy or wine intoxication--it is intoxication with poisons that **are** even more toxic poisons, that ~~are~~^{are} even more potent for mischief than alcohol. Why one has to take quite a dose of alcohol to kill him. I heard of a baby sometime ago that was killed by taking a couple of ounces of brandy, and of a little boy who got ~~in~~ hold of a whiskey bottle in a corner of a harvest field and drank four ounces of whiskey and died, a five year old boy. But small doses are not fatal. A man can take a pint of whiskey or half a pint of whiskey at a time, without dying at once. If he keeps on taking it it will kill him after a while. But these poisons which are generated in the small intestines are so highly toxic that when the quantities are so small that they can scarcely be detected by the most delicate chemical reagents, by the most delicate tests, they are capable of producing death, even those small quantities. They have the character of the venom of the serpent. A rattlesnake, gets just a very little of the venom underneath the skin and pretty soon afterwards you are dead. The poison in that venom causes your tissues to swell up and such a person suffers terrible agony because of that virus. Now perhaps there was not one-tenth part of a drop of snake venom got under your skin and there was more or less water too in it. It was not pure poison,

but was diluted with a considerable quantity of water or else it would not have been in a fluid state, yet it has produced all these terrible effects. Now a drop of alcohol would not do anybody any appreciable harm. You could not ascertain that anything at all had been done to a man when you had applied only one drop of alcohol to him. So you see how terribly poisonous these venoms are, and the poisons produced by bacteria in the intestine are many of them more powerful than the venom of snakes. They are indeed very similar in character. There are the so-called toxalbumins, which means poisonous albumins, and they are all very highly toxic in character. Dr. S. Weir Mitchell of Philadelphia, was one of the first in the world to study these poisons. He discovered the so-called toxalbumins, and now it is found that these very things are produced right down in our own intestines by the germs that we sometimes swallow when we eat beefsteak. We do not get them when we eat potatoes. You never can find such a germ in a potato because these germs would die in potatoes, they cannot live there. We do not find this sort of germ growing in wheat flour. We do not find them in oatmeal or in apples, pears, plums, cherries, huckleberries or any other sort of fruit. They cannot grow in those substances. Prof. Dissate^(?) of Japan, discovered some years ago that the juice of fruits destroyed germs, they are germicidal. You have here some water perhaps that has cholera germs in it, germs that produce poisons that have a potency of venoms. That is why cholera kills people because of its venomous toxins. Here is a glass of water full of the cholera germs. I get a couple of lemons and squeeze the juice into that water and in half an hour there is not a live germ there, they are all dead. They cannot live in the presence of these fruit acids, so with the potatoes and vegetables of all sorts. These germs cannot grow in that kind of medium. They require certain soils to grow in, and the beefsteak is a favorite soil of these germs, because beefsteak is the flesh of animals and these germs grow in decomposing animals, dead animals.

Animal substances are their particularly favorable soil, and that is where they grow, live and thrive. That is what they are for. Their function in the economy of nature is to destroy animal flesh, dead animals, to reduce them down to dust. ~~The~~ The Almighty said in the beginning, "Dust thou art and unto dust shalt thou return". Now these ~~putrefying~~ putrefying organisms are the means by which man are reduced down to dust again. They take the highly organized molecules of animal flesh and tear them apart and reduce them down to the original elements, so that they can be used again for building up another animal body. Now these poisons are generated ^{this} in ~~that~~ way and circulating through the blood they set up a great variety of symptoms, and that is why nervous dyspepsia ordinarily has such a great multitude of symptoms because it is produced by such a multitude of poisons, and one of the common conditions that give rise to this ^{is} stasis of food ~~stuffs~~ in some part of the intestine, and this stasis gives rise to the generation of poisons which are absorbed and which injure the mucous membrane. Healthy mucous membrane is practically proof against the attack of these poisons and of these germs. So long as the skin is healthy you can put any poison on it that is not corrosive, or put any germ on it and it cannot do any harm because the skin is the barricade which nature has set up against the encroachment of germs. The same thing is true of poisons. A man who has been bitten by a rattlesnake, it is perfectly safe for him to put his mouth to the wound and suck out the poison. The poison wont do his mouth or his stomach any harm in such quantities. Even if he swallowed the poison it would not be likely to do him any harm because the mucous membrane will not allow these' toxalbumins to pass through. But now suppose this man who is sucking the poison from the wound made by a rattlesnake in his hand, suppose he has a little ulcer on his tongue or a sore place in his mouth, then these poisons will enter through that raw surface and they will get right into the tissues. I heard of an old lady sometime ago who was smoking a pipe and the baby fell down against a stove and

~~burned~~ was burned on the top of its head, and the good old grandmother thought she would do the baby a kindness, so she wiped off of the pipe on her finger a little of the oil of nicotin and rubbed it on the raw surface of the baby's head. In fifteen minutes that baby was in convulsions and in an hour it was dead. If she had rubbed that oil of nicotin on the baby's tongue, or in contact with any healthy surface, it would not have done the baby any harm. It did not kill the old lady because, while she had been taking the poison into her lungs, the mucous membrane protected the body, but when she rubbed it on a raw surface, a diseased excoriated surface, there was no barricade there, so the baby was killed. Now every person who has colitis, who is suffering from chronic gastritis, who has gastric catarrh; every person who has intestinal catarrh or catarrh of the colon, colitis or enteritis, or any catarrhal condition of the intestine, is just in that defenseless condition. He is in that condition in which the poisons that are generated here find easy entrance, find a door wide open and an invitation to walk in and pollute the body, and that is ~~the~~ the very thing they do. Now that is the reason why persons suffering from colitis have such terrible symptoms. Here is a person who has colitis. He has a ^{brown skin} ~~black~~ because the poisons that ought to be carried off out of the body pass thorough into the body poisoning the whole body and even coloring it, staining it. That is what makes these brown spots on the hands. I ~~saw~~ ^{met} a man the other day who had ~~some~~ spots on his hands that were almost black because of such an accumulation of these poisons in the skin. That is what makes the skin have this dead color, that is why it loses its natural clear transparency, that is where the roses have gone. They were driven away by these poisons that have been absorbed into the blood. That is what makes these little sacks under the eyes. It is all the same thing, because the body is trying to get rid of the poisons by dissolving them in the serum and pushing them out of the blood to get rid of them, so they accumulate in sacks, the ankles swell perhaps, by and by the kidneys become damaged to such an extent they cannot elimi-

nate the poisons and the poisons are accumulating in the body, then there is general dropsy. The hands swell every morning. The face swells and the feet swell, when a person is on his feet, and there is abdominal dropsy and other troubles which appear. These are only a very few of the consequences of this poisoning which results from the absorption of toxins from the intestine. Now these facts have not been known so very long. They were known in a practical way to the old Doctors twenty-five years ago. The old-fashioned Doctor one hundred years ago when called to see a patient, the very first thing he did was to give the patient an opening purge. That was the first thing in almost every kind of case. Now the Doctor knew that opening purge did some good somehow. It did do good, it carried off all these accumulating, decomposing putrefying materials that were really the source of mischief, and that is why the Doctor gave it, but the opening purge was not a good thing, that is it was not the best thing. It was not altogether good because there were evil effects from it. The patient's bowels ~~acted~~ were inactive. He took a purgative and after two or three days of excessive activity then there was more inactivity than before, so the patient had to take a stronger purgative, and the next time a stronger purgative yet, and the next time a still stronger purgative. I remember a man in Grand Rapids some time ago who was taking such powerful purgatives that a whole pound of epsom salts had no effect upon his bowels at all. He could take a pound of salts without any bad effects. Now his history showed the reason for that. He was an old gentleman seventy years old. He said when he was a ~~man~~^{boy} his mother used to call the whole family up every Friday night and give them all a dose of salts so as to get them ready for Sunday. Now that was not such a bad idea. That was pretty good. She wanted to dissipate the evil spirits so that they would have a better state of mind on Sunday. That was really a very good intent and a very worthy purpose on the part of the old lady, but this ~~man~~^{boy} had been brought up to take his dose of salts every Friday night and the consequences were that when he got to be thirty

or forty years old he was taking very large doses and when he was seventy his dose was a pint of salts and that had ceased to act, so he came here to have something done. So you see that is one of the bad effects of taking medicine. Irritating medicines, medicines that act by forcing the intestines to act, should never be used for any length of time. They may be used in an emergency, but never should be used ~~habitually~~ repeatedly, never should be used habitually. Even such drugs as senna, aloes and cascara sagrada, drugs which are perhaps the least harmful of the laxative medicines, can never be used for any length of time without producing colitis. They irritate the bowel, and the person who has colitis, who has an irritated mucous membrane, whose mucous membrane is diseased, such a person cannot possibly make use of these drugs, or of irritating drugs of any kind without injuring himself,--make use of them habitually I mean, and he never can get well so long as he is making use of those irritating drugs. Now the reason for that is this: Senna, aloes, cascara sagrada, all of these drugs and some more, contain a poison known as anthracin. This poison, anthracin, and it is the common poison of them all, that is the reason why they act. They all contain anthracin just as coffee and tea both contain thein. So these poisons all contain a poison, anthracin, which irritates the bowels. It is a most terrible irritant. Taken in pure form it would be a most drastic thing. Would have a most drastic action on the intestine, and as long as the intestine is being irritated in that way, it cannot heal, cannot recover. The thing that is necessary is to secure normal activity of the intestine, so that the pollution which is taking place, the pollution of the intestine and the pollution of the blood through the absorption of putrefying material, shall cease and when this ceases, the blood becomes clean, then its healing power is increased, and when the intestine itself is kept free from putrefying material, then there is an opportunity for these sore surfaces to heal over and healing will take place. That is the reason why we are

recommending to so many of our patients the use of two simple remedies, Colax and Para-lax. Now Colax is simply cellulose. It is the same sort of material, only in different form, that you find on the outside of the kernel of wheat. It is cellulose. It is wood. It is not chemically strictly cellulose. It is hemi-cellulose, that is, it is another variety of cellulose than the ordinary cellulose with which you are familiar in a pine stick or the form of wheat bran, which is also cellulose. Vegetables of all kinds contain a considerable amount of cellulose. A huckleberry has more cellulose than any other substance. Next Thursday night I will throw upon the screen some tables I have prepared with a good deal of care from the latest and best authorities, which shows just the quantities of cellulose found in all the different kinds of vegetables, fruits and grains. I will just now say that this cellulose which is present in these different substances is the only residue which is left behind in the process of digestion. It is the only thing in the food which is not digestible. Flesh foods, meats, are digestible completely unless one happens to swallow a bone and even a small bone may be digested in the alimentary canal, but flesh in general is completely digestible. That is one reason why people think it is such a good food because it is so easily and completely digestible. Vegetables require longer time for digestion, are more difficult of digestion and they leave behind a certain amount of indigestible residue, and that is why they are necessary, why they are the natural food for human beings, because human beings have a long alimentary canal, an alimentary canal that must be stimulated to a considerable degree in order to secure proper activity. The carnivorous animal has a short alimentary canal. An eagle has an alimentary canal only two or three times the length of its body, and there are some carnivorous fishes which have alimentary canals that are nothing but straight tubes just the length of the body and nothing more, While carnivorous animals in general have an alimentary canal from one to four or five times the length of the body, whereas ~~herbivorous animals~~ the herbivorous animal, a vegetable

eater, has an alimentary canal and intestine many times the length of the body. In human beings the length of the alimentary canal is about ten or twelve times the length of the body. In the case of the sheep the alimentary canal is thirty times the length of the body. Herbivorous animals in general have alimentary canals from twenty to thirty times as long as the body itself. I was very much surprised a good many years ago and doubted that statement. I saw it in the Comparative Anatomy about twenty-five years ago, and I went out in the country, found a sheep that was going to die and the farmer said he would sell it because he was just about ready to sell it to the butcher anyway, so he would let me have it. So I bought this sheep that had outlived its usefulness and saved the people of Battle Creek from eating this sick sheep by administering chloroform, so the sheep had a chance to die an easy death, and I measured the alimentary canal of that sheep and found it to be thirty-three times as long as the sheep was. I really thought I would never get through reeling off that small intestine. The sheep was about three feet long, and here was this alimentary canal which was one-hundred feet long. My recollection is it was 102 or 103 feet long. It was over thirty-three times the length of the sheep. By the way, I might call attention to the fact that a somewhat voluminous writer who contributes to the magazines, Dr. Woods Hutchinson, made an argument sometime ago against the use of vegetable food. He said man is naturally a carnivorous animal, and he proved it to his own satisfaction. He called attention to the fact that Dr. Kellogg at Battle Creek was recommending cereals, and he said it was perfectly ridiculous. He said, "Why oatmeal actually has poisons in it, but the proper diet for man is meat, that is his most natural diet", and he proved it very conclusively. The alimentary canal of the lion is about five times the length of the body. Now man has an alimentary canal thirty feet long and the man himself is six feet long, so you see you divide thirty by six and it gives us five and that puts man in a class right along beside the lion, don't you see. So he is a carnivorous animal

Dr. Woods Hutchinson proved that to his entire satisfaction, but he made a serious mistake when he made his measurements, don't you see. When he measured the lion he measured from the end of his nose to the end of his back bone, but he forgot to put the man down on ~~his~~ all fours to measure him don't you see, so when he measured man he measured from the top of his head and included his hind legs in his measurements, so he measured him just twice as long as he ought to be you see. So we have to multiply the five by two and that makes ten and that puts man in the class with the ^{monkey} ~~herbivorous animal~~ which is a vegetable eater, and that takes man entirely out of the carnivorous class. Now it seems impossible that a man who claims to be a scientific man should make such a ridiculous blunder as that to include the hind legs of an animal because he happens to be standing up straight--to include the hind legs in the length of his spinal column. Now this question of diet is an extremely interesting one, but we must drop it and pass on to something else.

The difference between nervous indigestion and intestinal indigestion then is nothing. They are the same thing as they are commonly used. But as a matter of fact, there is such a thing as intestinal indigestion. When the intestine is in a state of colitis or enteritis, there must be indigestion, it cannot do its work properly. Enteritis is always accompanied by indigestion. The food (stuffs) are not properly acted upon. I was called to see a patient last night--in fact I was visiting a patient here in the house, had not gone home yet, at half past four o'clock this morning--and as I went in to see the patient I found him quite ill. I found that his alimentary canal was in such an irritable state he has complete intestinal indigestion and even a small amount of huckle-berry juice taken into his mouth was discharged from his body in less than an hour just as it ~~was taken~~ ^{had been} swallowed, absolutely no digestion at all, because of the state of irritation that exists there. Now by tomorrow morning, with the treatment he is having, I am sure he will be better for he is better already, and

I trust he will continue to get on better and in the course of a week or ten days he will take square meals again, that is ~~Sanitarium~~ square Sanitarium meals, not square restaurant meals.

Question. What do you think of the claim Dr. Evans of Chicago advances in the Chicago Tribune, that smoking in moderation is harmless?

Answer. Well I read that article by Dr. Evans, some one called my attention to it, and I read it with a good deal of satisfaction. He said smoking is terribly bad for boys. He said when boys smoke that they do not grow and they are likely to become vicious, and it is very bad for boys. So he went on, every now and then through the article giving tobacco ~~and~~ a tremendous hit, but at the same time he said that if adults want to smoke ~~he~~ ^{they} can. Of course, if a man smokes too much, he gets paralysis of the heart and he gets bright's disease and he gets other things, still tobacco does not do him any harm if he does not take too much. How much is too much? I dare say if you get hold of Dr. Evans and pin him down he will tell you that one smoke is too much. Dr. Evans is writing articles for ~~the~~ ^a Chicago newspaper, and I suppose there is not a man up there in that newspaper office that does not smoke. I dare say if you go up there in the office of the Chicago Tribune you would find that the air was so blue with smoke that you would almost want a lantern to light you through some places on account of the tobacco smoke. That is the usual story in newspaper offices. Newspaper men all smoke. I do not believe they would publish an article from Dr. Evans if he said tobacco smoking is a deadly vice. It kills snakes and it kills men. If he should tell that story in just that way I do not believe they would print it, but I think he shows a good deal of adroitness in seasoning his articles in such a way so as to make them palatable to the publisher and at the same time putting in a lot of facts. I wish he had courage enough to tell the whole truth. I am satisfied he knows the truth. I do not believe he would defend smoking. I never yet found a Doctor who when the facts were put before

him and his mind was recalled to the facts in relation to tobacco, I have never found yet a Doctor or a scientific man who dared to defend its use. It is impossible to say that a thing that will kill snakes, wont do a man any harm. Why not take ratsbane for breakfast if these poisons are so harmless and so good. Dr. Evans knows that tobacco will spoil boys physically, mentally and morally. When he knows that is the case, he certainly has no foundation on which to say it cannot do men any harm. We cannot find an example of any other thing in the world--the thing does not exist--that has one effect upon a man and another effect upon a boy. It is only a question of doses. A poison that will kill a boy will kill a man because a boy is a human being. He belongs to the same species, ~~and~~ the same kind of animal exactly, but is not quite so big, ~~and~~ he does not require so big a dose to kill him, but he is not specifically different. Now a goat can eat a pound of tobacco and seems to thrive on it, but a man is not a goat, so when he takes the tobacco it is certain to do him harm. A tobacco worm lives on tobacco. I have seen some men chew tobacco as though they really almost ate it, as though they were as proof against it as the tobacco worm, but that is quite a mistake, there is not anybody uses tobacco that is not damaged by it. I am sure Dr. Evans knows that.

Question. What will remove dark spots from the hands?

Answer. This is something like the old question of ancient times, "Can the leopard change ~~his~~ spots?" Well the leopard can't change his spots, but the man who has spotted hands can change his spots. I have seen thousands of spots disappear entirely. Look at your spots and then determine to get rid of them and to be ashamed of them. I have got one spot on my right hand and I keep it out of sight and I am going to get rid of it. I am watching it and I think it is fading away and I am very glad to see it go. My left hand has not any, so when I want to show people what kind of hands they ought to have I always put out my left hand. I am honest enough to tell you the truth about it. I have got one. I am going to get rid of it. I can see it fading off. If it was getting

bigger

~~danger~~ I should be alarmed about myself because it is a significant symptom. It means, these brown spots, they are the result of chronic intestinal auto-intoxication. It means when we see them growing or multiplying, enlarging, it means these poisons are accumulating in our bodies and that is what brings old age. That is what Metchinoff has been talking about. Old age means a body saturated with poisons. That is what old age is. A French physician said that a man is as old as his arteries. The arteries are the best means of determining a man's age, that is the condition of his arteries. The man whose arteries are hard, the man who has a blood pressure of 200 or so is an old man no matter what his years are, he is an old, old man. Fortunately if he gets a knowledge of the fact in time he can become young again. He can subtract ten or twelve or twenty ~~or~~ ^{or} twenty-five years from his age and become rejuvenated. I have seen that happen more than once. I remember a lady who came here five or six years ago now, and she had a blood pressure of 240 and she looked like an old lady, and I tell you she went right to work. She was wrinkled, her skin was sodden, dingy. It was really very dark, looked almost as though she was slightly jaundiced. She went to work very earnestly, put herself on a low protein diet, began living healthful in every way she knew. She spent several months with us and went home under orders. I had frequent reports from her. She established a new regimen in her home. She came back the next year and spent two or three months with us, and when she finally left the institution her blood pressure was 124, and when I met her a couple of years later she was just the picture of health and was working away like a steam engine. She was a prominent woman in the East that almost everybody ~~know~~ in the East knows. She is very prominent in educational matters in New York and is working as hard as ~~much~~ she ever worked in her life and is able to keep it up and getting better every year. She is younger this year than she was last year and she is certainly thirty years younger than she was six years ago. It is possible for one to rejuvenate himself if he begins early enough. Here is a house. We have a house here that is a good illustration. Perhaps you

find some of the sills of that house getting rotten and some of the supporting partitions and beams are becoming decayed, they begin to show signs of decay. Now when you discover those signs of decay, suppose you begin to take out one old rotten timber and put a new one in its place. You took out a rotten beam and put a new one in its place. In every place where you look you find dry rot at work and you have to take it out and put something fresh in its place. In that way you can rebuild a house little by little, but suppose you wait until one corner of the house is sinking away down until the roof has a big sag in it, until one side is fallen in and some partitions are actually leaning over and drop out. Suppose you wait until that time comes until you cannot shut a door of the house because of settling in various places. Such a house has come to the place where it is in ruins. If you begin to repair it anywhere, begin to tear something out it will fall to pieces. There is not any hope for it. It is a hopeless case. All in the world we can do for that house is to prop it up a little and keep it from falling down quite so quick as it would otherwise. Those two classes are illustrated in this place every day by people arriving here. The first is the case of the man whose arteries have become hard, but are not yet chalky. The structure of the arteries is still intact. The artery is contracted, is a little hard, but does not yet turn to chalk. Now the reason why the artery becomes chalky is this: This hard artery as it hardens shuts out the blood supply. As the arteries become hard the blood supply is excluded, so the artery changes to fat and when it becomes changed to fat it is brittle and likely to rupture, so nature to save us from sudden death, to maintain for a while the strength of this artery, takes the fat away and puts chalk in its place, converts the walls of the arteries into lime, hardens them in order to keep them from breaking so quickly as they would if they were simply fat. It is first ~~fibrous~~ fibrous degeneration, hardening; then fatty degeneration, softening; then another kind of hardening, the chalky deposit by means of which life is preserved and extended for a time,--that is the prop I am telling you about. So you see

the thing to do is just the minute you find out there is a rise of blood pressure, that your age is beginning to show its characteristic signs, at once begin to fight it. Take out some of those rotten timbers and put fresh ones in in their place. Can it be done? Can the body be rebuilt? Certainly it can. The only hope for curing anybody, the only hope for helping any chronic invalid is based upon the fact that the body is a stream of matter flowing through a certain form. That is the pathological definition of an animal form---, that it is a stream of matter flowing through a certain form. Now the reason why your body gets into a state of senility is because the stream that is flowing through your body is polluted. The first thing is to purify that stream at the fountain head, and the fountain head is the dinner-table or the breakfast table. That is where all this filth comes from. It is the foodstuffs put into your bodies. We must purify the source at the fountain. You see you must not put in tea, coffee tobacco and alcohol. We must bar alcoholics in every form. We must not put in bad air,---The filth that comes from air that has been breathed out of other people's bodies. Did you ever think what a horrible thing it would be for one to drink water which some one else had been drinking before? Suppose here is a water barrel, some one comes along and ~~wash~~ washes the mouth out in that barrel. Here comes another one and does the same thing, and another one does the same thing. What a filthy thing that would be. It makes one almost want to vomit to think of such a thing, yet we will see people shut themselves up in a room, shut up every window tight and shut up every door tight and every one is taking into his body and pouring out again polluted air. Filth from this putrefying mass of material down there in the colon is absorbed into the body and poured out from the lungs, and that man's breath smells like a sewer because it has been visiting a sewer and it comes out contaminated, so this air has been breathed again and again and again and again. Take a room the size of this one, put 100 people in it and in ten minutes the air of the room is not fit to breathe unless it has been

changed. That is why we have the air flowing in through the ventilators around the windows. The air is flowing in here continually at the rate of 300,000 cubic feet of air every ~~minute~~ ^{hour} while we are here. This air is sweet and clean. We have no more ventilating space than we had before. It is all just the same, but the temperature is a little lower tonight. The other night the janitor got the heat a little too high. The air gets in straight from outdoors and has to be warmed, and he had not got the thing regulated just right, but I hope he will have it right hereafter. When you go back to your homes think about that. Perhaps your house is heated by gas. The best way in the world to heat a house is by an open fireplace because then the large open grate carries the foul air out and keeps the house breathing. There is a continual outpouring of the impure air which carries off the pollutions which come from the body. So I say if we pollute the stream that comes along through our bodies, the poisons greatly accumulate, so the man who wants to renovate his body must purify the stream. One of the most important things of all is to keep the bowels moving properly. The intestines must act. The bowels should act at least three times a day. Must act after every meal, ~~that~~ that is none too often. If there is an additional movement in the morning on arising, that is all the better. These materials should pass through the body so rapidly that there is no time for putrefaction. I met a man today who said he believed he was one of the healthiest men in the world because his bowels moved regularly twice a day and always had all his life, and he said he just felt like a steam engine. I got a touch of his muscles as he was going out and they felt like wood. People find their muscles wasting away and they wonder why it is. It is autointoxication. If you find the skin getting dry and the hair falling out, it is autointoxication. If you find these brown spots coming, it is the same thing. It is this pollution of the body by ~~putrefaction~~ ~~putrefying~~ ^{put} ~~putrefying~~ material that is ~~put~~ ^{pent} up inside that ought to have been extruded from the body perhaps days before.

Question. What must a person eat who has Arthritis Deformans?

Answer. He should eat a good Sanitarium diet. There is no specific food. He should not avoid fruits, but should take good wholesome food, no meat, and the less eggs the better. Dr. Herter of New York, a few years ago, and Dr. Tissier of the Pasteur Institute, some fifteen or sixteen years ago, called attention to the fact that these persons suffering from deforming rheumatism are subject to colitis and the germ that produces the colitis, produces poisons which when absorbed into the blood give rise to this disease of the joints. So the important thing is to keep the interior of the body clean. These germs which produce these poisons are always found in beefsteak. They are beefsteak germs. Dr. Herter calls them meat germs. They are mutton germs too, and fish germs. We find them in all these animal foods. We find them in stale eggs too. They are the germs which produce putrefaction. Wherever there is anything undergoing putrefaction, and that means anything that has been dead for a little while, a few hours--that has been dead twenty-four hours, every such thing has these germs growing in it, and when they are taken into the body they set up there infections sooner or later and give rise to these poisons.

Question. Do you consider the examination a patient receives when he arrives here enough, providing he stays seven or eight weeks?

Answer. I think the examination the patient gets when he comes here, if he takes all the examinations that are indicated, is sufficient to give him a good knowledge of his case. Of course, sometimes the examination, taking the patient's history, will show that he needs some special examinations. For instance, a lady came in the other day who said she had had an injury to her arm and she said: "Can you do something for this arm?" First of all we have to know what is the matter with that arm and she had to have an X-ray examination, and by means of the X-ray we could see the elbow and that the cartilage had been knocked off the elbow and dislocated to the other side of the elbow. That was why the elbow was stiff. We had to tell that lady it was too late to do anything for her

arm. We should have had the case when the accident happened. The Doctor who made the examination at the time did not have the appliances which we have. If she had been here we should have examined it with the X-ray, then made an incision through the skin, put the cartilage back, fastened it with a screw so it would stay there, and the patient would have had a useful arm.

The same thing might be true of the stomach. The patient comes here and says I have got something wrong with my stomach. I do not know what it is. The Doctor makes an examination and finds the stomach is not in its right place, and he says to the patient, "Now I think you ought to have a bismuth meal and an X-ray examination", so the examination is made. A test meal is given and the Roentgenologist watches that bismuth meal all the way along. The Roentgenologist told me today that he had been watching a bismuth meal for nearly three days and it got to be so much trouble to the patient, as well as to him, that he terminated the interview and hurried the bismuth meal up with a laxative so as to get rid of it. The Doctor said, "I believe it would have stayed around a couple of days more if I had permitted it." Now just think of the importance of knowing that. In the old days of ignorance we could only experiment upon people and guess what was the matter with them, but now that we have means of examination which are exact and scientific we can get positive information, and it is our duty to do the best we can and to make use of all these means. And I want to say to you, anybody who comes to this institution can have any examination he needs. If he is too poor to pay for the examination, he can have it by saying so. Of course, a person who makes a plea of poverty must state the facts about the matter. I do not suppose many people come here who would take advantage of such a proposition, but I assure you it is a fact that anybody who has anything the matter with him can come here and have the benefit of any examination that is required to reveal the character of his case, whether he has money to pay for it or whether he has not. Across the road we have a Dispensary and over at that Dispensary we have just as good electric light baths as we have here. Over

there we have our laboratories. We have just as good baths of every sort as ~~are~~ given here in this institution, and if you have some poor neighbor that is a worthy man and you think he ought to be helped, when you go home, tell him about that. Tell him he can come here and if he can find a place outside where he can live and get his board, or board himself in a hired room, or board in our little hygienic cafe down here-----. It is quite interesting to know that you can go there and get just as good meals as you get upstairs, cooked in exactly the same way, by the same recipes, prepared with the same care by cooks educated in the same place, ^{and} you can get it for a very small fraction of what it costs you upstairs. That cafe is run for the benefit of the people who cannot afford to take their meals in the Sanitarium dining-room. They get just as good food. The little institution does not quite pay its way, but it comes pretty near it. Last year we felt pretty good because it came out within \$200.00 of paying its way. It is generally Five-hundred or a Thousand Dollars behind. If a man can hire his own room and board at the cafe, he can go to the Dispensary here and he will find a Doctor there waiting to examine him regularly every day. He can get all the examinations any of you can get in this institution, and without paying one cent for it if he needs them and if his circumstances are such that he cannot pay. This institution is not for wealthy people alone. Last year I find our Annual Report which has ~~just~~ just come in, shows the institution expended \$90,000.00 in just that way--in taking care of people who could not pay regular rates, and in the actual cash paid out, not in discounts, not in low rates, no surgical fees included in that \$90,000., not a single one, and not a single examination fee, not a single charge for any examination was included in that \$90,000. which represents cash paid out in taking care of people who were not able to pay. Now that is twice as much as the average ~~sum~~ amount that is earned by the institution and is applied on its debt. We have no dividends. We have a debt of more than half a million dollars that we are trying to pay off. When we get that paid off, we hope this institution will be

25.

self-supporting, will go on and be able to make the necessary improvements from year to year and to keep going. I am telling you that because I find people think it costs so much to get an examination, and some people say they do not want to have it because it costs so much. I want to say to you, if you cannot afford to take it, you shall have it anyway if you ought to have it. Don't go away from this place where opportunities are offered for a thorough-going examination, without knowing all you ought to find out about yourself. If you cannot pay for it, see me or see Mr. Judd in the business office, and you can make arrangements with him by which you can have it. Don't go away without knowing everything you can get here in this place. This place is to help people. There is not on the whole face of the earth a place that is more altruistic, philanthropic than this place is. If somebody would endow us with Twenty Million Dollars so we would have the interest on it to support the place, we could open our doors and ~~ask~~ ^{ask} everybody who wanted to come here to come and get all we could possibly give them without paying a penny for it, but I suppose we would not do as much good as we are ~~asking~~ trying to do now because the kind of people who would come would be the people who would not so much appreciate it perhaps as the people who do come now and pay something for it. But I assure you there is no effort made to commercialize the knowledge ~~which~~ ^{that} this institution has accumulated. ~~unreceptively~~ Our effort is to make enough so we can do something for all who come.

Question. Is it possible to follow the Battle Creek diet system at home with uncooked foods?

Answer. I do not think you can follow the Battle Creek diet system on uncooked foods because our system includes cooked foods. One can follow the monkey with uncooked foods because the monkey lives on uncooked foods, but you could not quite follow the Battle Creek idea because we do not live altogether on these uncooked foods.

Capt. Sanderson of India was here some years ~~ago~~ ago. He got hold of a publication from here and he said it helped him so he came here to get more in-

formation. He had to go up into the jungle every year and capture one-hundred elephants ~~man~~, that was his duty. He told me that one time he got one-hundred and twenty-four elephants in one catch and I guess that is the biggest bag of game any man ever got. He got one-hundred and twenty-four elephants in his big trap. His trap was three or four miles in diameter and he had an army of nearly one-thousand men who went away out through a circle of one-hundred miles or more in diameter and drove those elephants in, and he superintended this operation. He got his system so infected with malaria poisons, jungle fever, that he was nearly dead and had to be carried on a litter. He would no sooner get to the jungle than down he would come with fever. He got so many injuries that he finally died of the enormous spleen which he contracted in that way. And he said when he came here, "Doctor I got hold of a little book that came from this institution and it said something about living on the same diet the monkey did!" Now he said, that struck me very forcibly because I had noticed the monkeys were all right in the jungle and I could not understand why the monkeys could live there and I could not live there, so I said to myself, I will follow those monkeys' in diet and see what happens. So the next time I went into the jungle I watched the monkeys to see what they ate and every thing they ate I ate, and as long as I followed the monkey in diet I could follow him everywhere else. ~~saxiangxaxixhad~~ So long as I ate what the monkey did I found I could live anywhere the monkey could live and got entirely over the jungle fever! He came here and learned how to cook, so he could establish a Sanitarium regimen at home. He brought a man here and had him learn how to cook according to our recipes, but in crossing the ocean this man died, and he said the next time he was going to start with three cooks so that at least one of them would live through. But this man acquired enormous advantage from adopting the simple diet which the monkey follows.

Question. Is suet pudding healthful?

Answer. Now suet pudding contains an enormous amount of nutri-

tion. It has a large amount of carbohydrates. It is highly nutritious, but it is terribly indigestible for the average man. This large amount of carbohydrate present in the pudding requires saliva to digest it, and the large amount of protein requires gastric juice to digest it, but the large amount of fat which is present prevents the saliva from digesting the starch and prevents the gastric juice from digesting the protein, so that great mass lies there undigested because the fat is not digested in the stomach, but in the intestine down below the stomach, and the carbohydrates, the protein, ~~starch~~ the cereals and the protein must be digested in the stomach before they can go ^{on} in to the small intestine, so it lies there a long time without digesting. That is the reason why plum pudding is considered such a hearty food. It is hearty like fat pork which the lumberman is so fond of. He likes it because he says it sticks by the ribs. It stays right up here in the stomach under the ribs and does not digest you see, so it is hearty food--it sticks by the ribs, but you want it to pass on.

Question. What is chiropractic?

Answer. It is a modification of so-called osteopathy. It is a modification of Swedish movements. Swedish movement has in it all that is good in osteopathy. Chiropractic is simply a variation in name without any practical modification of the real thing that osteopathy offers.

I might tell you a little story about chiropractic which seems a very ridiculous name. We had in the town here a person who was practicing *chiropractic* and we had a patient who was suffering with spinal trouble and was not getting along here as fast as he thought ^{he} ought to. He visited this chiropractic who held out to him the prospect of his being made well right off by three or four treatments. But the patient was going away just then and the Chiropractic said to him, "Now you are going away and I have not time to cure you but you come back as soon as you can and I will cure you in a short time." I got this story from this man's wife. When he came back he went down town to the chiropractic practitioner,

and some years later his wife came to the Sanitarium again and told me about the case. She said, "Doctor, that man killed my husband." "Why? I said, what do you mean? He ~~didn't~~ didn't cut his throat did he?" "No but he might just as well," she said. "You know he put him up there on supports, his shoulders were supported on something and his hips, then he got up there put his foot on him and broke his back, and he had an awful pain and got worse and worse and worse, and I had to take ~~him~~ ^{him} home and in three weeks he was dead. That man killed him. There is no doubt about that." Now I am only telling you this story as she told me. I did not see it, but it is a rude practice, it is a dangerous practice. A strong hearty man could endure some of these rude wrenches to which people are subjected, but a delicate invalid, a man who has really something serious the matter with him, runs a good deal of risk in subjecting himself to some of the practices of these people.

I might mention another case in which a man had been treated by a prominent osteopath in this town. He was brought here and the Doctor asked me to see him. The man was sitting in a chair and I asked him to stand up. He had something the matter with his knee. This is the way he got up, by putting his hands on his knees and making his arms help to lift himself up. Finally he got up and I said, walk. That is the way he walked. Now that is all I needed to enable me to make a diagnosis. I knew he had trouble with his spine and he had to put his hands on his thighs to help himself up so as to take some of the weight off his spine. So we examined him carefully and found he had tuberculosis of the lumbar vertebra in this part of his spine well developed. Now what had been done for that man? He had been to an osteopath and the osteopath had examined his knee, and he said, "Why you have got trouble with your knee." He treated it a long time. Then he thought this head must be dislocated, -- it is always a dislocation in osteopathy -- so he wrenched and twisted his head and tried to make something snap in it, but he did not, so he finally had him put under an anesthetic

and stood up on a table or on a sofa and put his foot upon the man's back and wrenched and twisted his leg in order to make something snap. Finally something snapped and he was all right, but the man was not able to walk after that. He had been able to go about his business before, but he was then practically bed-ridden and he was brought here and I found he had tuberculosis of the spine and that is what he had all the while, and the disease of the spine happened to reach a nerve which went down his leg, you see, so the pain was in his knee, although the disease was in the middle of his back. Now that is where these men who are insufficiently educated, who are not surgically educated, who have only a smattering of knowledge, are very unsafe. At the same time it cannot be denied that sometimes do some good. A man has inactive bowels, an osteopath gets hold of him, manipulates, rubs his bowels, percusses him, puts him through a lot of gymnastics, and he is better. He needed stirring up. A man has a pain in his back, and the osteopath twists and rubs and pounds and manipulates and the man feels better because all he needed was stirring up. We had a man who had traveled all over Europe to get rid of a pain in his back, and when he came here and went into the gymnasium and was made to bend over, after about three weeks, as he was bending forward trying hard to reach the floor, something snapped in his back and his hands went down and touched the floor and the pain disappeared and he was the happiest man you ever saw. What happened, nobody knows. Perhaps some adhesions were broken up, but that is a case for an osteopath you see. There are a few such cases, but they are very scarce and they do not represent the whole class of sick people by any means. But what the chronic invalid needs generally is correction of the condition of his alimentary canal. A right diet is the first thing he needs so his body can be reconstructed. I did not quite finish that story about the reconstruction of the body. As I said, the only hope is in the stream flowing through the body.

it can be modified, then the body will lift itself up out of that condition, will rid itself of that sort of material and that will renew the body. The body is constantly renewing itself, and what we have to do is to modify that process. We can accelerate, hurry it up and cause the body to renew itself more rapidly, or slow it down a little if necessary. We can supply better material. We can localize the renewing process at some particular part. An experiment made by a German physiologist makes very clear that this thing can really be done. That we can actually in a physical sense be born again, and it is important to know that thing. This German physiologist took a rabbit and cut off half of his liver. In three months he found the half that he had cut off was grown on so the rabbit had a new half of his liver. He then cut off the other half and at the end of three months examined the rabbit again and the other half had grown on, so the rabbit had a brandnew liver. Now that is exactly what the most of you need, a new liver, and you can get new livers. These applications of the photophore, the fomentations, the manipulations, the vibrations and all these various things are applied for the purpose of getting rid of the old material and building in the new, of accelerating the movement of blood, the health-giving, healing blood, through the affected parts, and as this work is going on from day to day, you will pretty soon begin to feel yourself coming up, coming up. You say why don't I feel better? A lady said to me today, "Doctor, why don't I feel better? I have been here three weeks." Yesterday a man said, "I have been here ten days, and I do not feel any better than when I came. I said, "But you are better." He said, "How do you know?" I said, "You look better; your face is clearer; your tongue is cleaner; you are getting better." That case is just this sort of a case. Suppose we have an old chronic invalid away down at the bottom of the lake, 100 feet under water, stuck in the mud, and you let down a grapple and get hold of him and pull him up. Now

we can see he is coming up, up and up. We can see his head away down there and we can see he is coming along, but he feels just as bad when he is half way up as he did at the bottom. He is under water, he cannot breathe any better half way up than down at the bottom. By and by he gets near enough to the top so we can see his head coming up near the surface. His nose is still under water and he feels just exactly as bad as he did at the bottom, but he is a lot better. He is nearer the top. The next instant his nose comes out of water and then he knows he is better. That is the case with many of you. You are rising, coming up. Perhaps your nose is just below the surface and at the next lift it will be out, then you will know you are getting better.

Now I must say goodnight. I hope you will have a good night's rest.

v-p-j

QUESTION BOX LECTURE

At the Sanitarium Parlor, Battle Creek, Michigan, Monday, Feb. 19, 1912, at 8. P. M.

by

J. H. Kellogg, M.D.

> obesity 17
nerves & nutrition 19
Thyroid gland & meat 21
flesh eating 20

> meat 3.
> radium 5
> enlarged spleen 12.

Lecture 45

Q.--What is the harm in swallowing food that is not thoroughly chewed?

A.--Unmasticated food is irritating to the stomach, not because it is unchewed simply, but because it over-stimulates the stomach so that the stomach acquires the habit of making excessive acid. This excessive acidity does not occur usually until about two or three hours after a meal, when it occurs right away after eating, or when it occurs in the morning before breakfast when you haven't taken anything at all, it is a form of acidity in which the stomach is making an excess of acid all the time. That is a condition in which the gastric juice flows continually, gastrosuccorhea, the doctors call it. It is like a catarrh, it is gastrosuccorhea. That is a continuous flow of gastric juice and is a most undesirable state of things to have. Now, all of these conditions of the acidity of the stomach are associated with an inactive state of the bowels and I am becoming more and more convinced that an inactive state of the bowels is the most common of all causes of acidity of the stomach.

What in the world can that have to do with it, I imagine I hear some of you saying to yourselves. This thing, Professor Pawlow showed that the introduction of meat extracts into the stomach stimulated the stomach more than anything else, but he found, also, that it was because of the putrefaction of the meat, because of the putrefying material in the meat, because he found, when he soaked the meat, washed it thoroughly and got all the putrefying material out of the meat, and got the uric acid all out of it, that ~~the~~ it did not stimulate the stomach. Uric acid stimulates the stomach. Beef tea stimulates the stomach, caffien stimulates the stomach because they are all allied to uric acid.

By the way, there is more uric acid in one cup of coffee than there is in the same quantity of urine. That is a good thing to remember the next time you are about to drink some coffee, that there is three times as much uric acid in that cup of coffee as there is in the same quantity of pure kidney secretion, so coffee is one way

in which people get acidity of the stomach, by drinking coffee. It stimulates the stomach. The renal secretion, the urine, taken into the stomach, would stimulate the stomach in just the same way. Beef tea does it because beefsteak is just the same thing, exactly.

Dr. Austin Flint of New York, 35 years ago, had an examination made of beef tea, and had an examination made of urine, and he compared the two and they were exactly the same, just the same, and there is a good reason why they should be the same. The urine is not manufactured by the kidneys. It represents what the kidneys have strained out of the blood. The Kidneys are filterers, you see, and the blood washes the tissues, and the blood comes along through the kidneys and the kidneys filter the poisonous material which the blood has found in the tissues. The tissues are producing uric acid all the time and poisons in work. The body is like a machine, like a furnace, and when it is working, it is producing waste material. When you have a fire burning in the stove, the smoke comes out of the chimney, and ashes come down through the grate. There is fire burning in the body all the time and the smoke goes off through the lungs, the chimney, and the ashes that come down through the grate are carried down through the kidneys are in solution.

I thought of a good illustration of that a few years ago when I visited ~~Bruepe~~ Jerusalem. Some of you have been in Jerusalem and seen the ^Scite of the old temple there, and there is one curious place down in the basement of the temple, and there is a hole in the bottom of it and it has been traced away down the side of the mountain and it empties away out in a valley some half a mile away. Now that is where the old Jewish priest^s, three or four thousand years ago, used to wash the ashes out. They would offer upon that great altar in the temple, thousands of animals a day, sometimes; the fire was kept continually burning. The animals were burned and what became of the ashes? I used to think ~~it~~ would be an awful job to carry off those ashes and the burned bones, but they did nothing of the sort, they had here an underground tunnel, and had a stream of water coming along, and they washed these ashes away with a current of water.

That is exactly what the body does. The tissues are washed all the time. The ashes are dissolved and carried away through the kidneys. Now then, you can see at once that if the urine is derived from the tissues in this way, then the tissues of the animal always contain the constituents of urine. They always contain uric acid and the other poisons that

are present in the urine, so the urine simply represents an extract of the tissues.

Now, whether the extract is made by the body of the animal in the normal way or whether the extract of the tissues is squeezed out by the kidneys, or whether it is squeezed out by the hands of the cook in the kitchen, whether it is pressed by one of these little instruments the cook has, or whether the squeezing is done by the kidneys, it is all the same thing. It is the same urine, and I want you to remember that when you are taking chicken broth, or beef tea, or Armour's Extract of Beef, that it is simply concentrated urine. That is what Armour's Extract of Beef is. It is the most ridiculous thing in the world for anybody to think ^{of} ~~that~~ taking such a horrid thing as that. Why, it is one of the deadliest things you could possibly think of taking. You would a great deal better take old scraps, such as Armour throws out the back door, that he makes the extracts out of, they would be a great deal better than the extract itself, because they are washed clean.)

meat.

About twenty years ago, when we were still using beefsteaks here, it is not so very long since we had plenty of beefsteak on our tables, (for about 25 years in this institution we used beefsteak, and it is only 10 years ago we voted them out,) but after 25 years experience, comparing the two diets side by side, I called our faculty all together just 10 years ago this very time, this very day, the next day after the fire. (We had a fire here that burned up our building,) and I think it is rather coincident that last night we had a puff of wind instead of a fire. We had a puff of wind instead of a fire. We would a great deal rather have air than fire, but it was nothing but a little puff of air so it didn't do us any serious harm and could not. This building is constructed so that there can not anything serious happen to it, so long as the old earth remains solid.

(The next ^{day} year after the fire, I got all my colleagues together and I said "Now the, we have had a catastrophe here, and we are all torn up and we have got to start on a new foundation, and it will be a good thing for us to consider if we can not make some improvement. Now that we are going to put up a new building and reorganize our work, which we must do, there are some things we might just as well leave out. What do you think about it?" And do you know, every single member of our faculty voted to leave out beefsteak, the first thing of all, to leave it all out because it did nobody any good, and

and it positively did harm.) I see a member of our Board here, Mr. Murphy, who very well remembers the meeting of our Board ten years ago today, or tomorrow, and we voted to discard beefsteak entirely. (Somebody said, "We will lose lots of patients. What will we do? People will come here and can not get beefsteak and they will turn around and go home." I said "If anybody here is not satisfied with our fare, they can slip out down town to at the Post Tavern or some other place and get beefsteak, but they will pretty soon get tired of it. We will feed them so much better things that they won't want beefsteak" and the majority of people had had all the beefsteak they wanted at home, and they come here for the sake of getting a healthy change. We were interested in seeing how the thing would come out, anyhow. We have had a chance to study human nature here somewhat, so we went about this thing in a rather careful way. I did not go into the Parlor and get our patients together the next day and announce we were not going to give them any more beefsteak. We dropped it off the bill of fare, never said a word about it, you know.) We were a little sly about it. I instructed all the waiters to take the orders for beefsteak, as usual, the next morning and to go to the kitchen and if they didn't find any beefsteak there, to go back to the dining room and report the fact that we were out of beefsteak this morning, that they didn't have any and they were very sorry, and I told the cooks if they didn't find any beefsteak, to call on the steward, and if they didn't get any, just to report to the waiters that they were very sorry they hadn't any that morning and I told the steward that if there was any call for beefsteak from him, to forget about it. When he went down town to give his orders, to forget it, and when he got back, he told them he didn't have any and they couldn't get any today.

One gentleman didn't get any for breakfast or for dinner or for supper and he said "If you don't have beefsteak tomorrow morning, I am going to leave" but he was the only one that really threatened to leave, and he didn't go. He changed his mind the next morning. I am not sure but he did go one day, but he came back, so we got rid of the beefsteak. Now, I just mention this to you so that you will see (it is not without having given the matter a great deal of thought and careful attention and as the result of years of experience, we discarded beefsteak, and the reason why we discarded beefsteak was because we wanted to cure our people up quick. We used to keep them here four or five

or six months, and the average man stays 27 days and the average woman stays only 37 days, now, and I know we have accomplished more for that man and for that woman in that 27 or 37 days than we used to do in four or five times that length of time. I know we do, and that is the reason why we have more patients here right at this moment than we ever had in the institution before at this time of year, and a year ago this time, we had more people than we had ever had before for that time of year. And so it goes on from year to year. We have a few more people every year than we ever had before at the same season of the year, so our family of patients is constantly growing and I am certain that the increasing success in the treatment of our patients has been largely due to the dropping out of beefsteak and the adoption of the low protein system of diet. Fortunately we do not have the same difficulty now we formerly did for many scientific men have demonstrated this thing to be the best way, the very best plan, but now, we may go back to the subject of radium again.

Radium

This piece of ore here represents the original earth from which the radium is obtained. This came from Joachimstal. I visited the mine and picked this out myself out of the mine in Joachimstal in Bohemia. Joachimstal is a town away up in the mountains, some distance from Carlsbad, and probably has the largest deposit of radium to be found anywhere in the world. Here is where this ore is obtained from the earth, where it has been mined for the uranium which it contains for 450 years. There were silver mines there 4 or 500 years ago and for 2 or 3 hundred years the silver mines flourished and the silver was dug out and then it was found that coloring matter could be made from the cobalt and uranium and then this pitch blend was mined and finally it was discovered by Professor Currie and his wife, Madame Currie, in 1898, that this material contained a new substance known as radium. Radium is really a very remarkable substance. It is the heaviest of all the metals and it is said to be a radio-active metal, because it shines in the dark. It shines by its own light, produces light, and the theory has been propounded that the sun produces its light because of the radium which it contains, that radium is the source of the light of the sun. I don't know anything about that, but at any rate, this radium does produce light.

As I told you, it is a very precious metal, found in very small quantities. One ton of this ore contains one-seventh of a grain of radium, and it requires 5 tons of

chemicals and 50 tons of water to get that one-seventh of a grain out. It requires a year and a half of work, and it is greatly concentrated. It is gradually concentrated in great vats. First in solutions and then in smaller solutions and it is finally precipitated and redissolved and finally a precipitate solution is obtained which is manipulated with very great care in porcelain vessels. The process consists first of grinding up the ore, then by forty processes which are used in connection with mining generally, the ground up ore is passed over a sloping surface and a stream of water pouring over this surface agitates it so that the lighter materials pass off and leaves the heavier materials and by this process this black material in this bottle is obtained. I obtained this from the mines, saw it washed out of the ore, saw it ground in the crudest oldfashioned ways by the most crude methods imagineable, and if you should take hold of this, you would be surprised to see how heavy it is. It is as heavy as though it were filled with mercury or with lead. Now this contains but a small amount of radium, only about one part in ten millions of this heavy part here is radium. Radium is so heavy that it has very considerable weight. It contains a large amount of cobalt and uranium. It is separated by the color works Radium is manufactured in a color factory, in a factory which makes dye stuff. This is the residue which is left after the coloring matter has been taken out, and this residue contains the radium in much larger quantity. It was found, by experiments, that this residue, which also contains a little uranium, has radioactive properties in much larger proportion than was accounted for by the uranium which was present. After the X-ray was discovered in 1895 by Professor Roentgen, Professor Beckerel made some very expensive experiments with various subatances. He found, by application of these rays to various mineral substaces, they became phosphorescent, would shine in the dark, and, in the course of his experiments, he found some of these substances possessed the same properties the X-ray does. Some of these substances throw off rays like the X-ray and he found this was true of uranium, and wherever he found uranium, he found it was throwing off rays similar to the X-ray. That led to a further study of the subject by Professor Currie and his wife, and they found that this material, this pitch blend, which contains large amounts of uranium, had these radioactive properties, throwing off these rays of light and heat and various other rays, they found it threw off five times as much of these rays as could be accounted for by the uranium which was present, so they concluded

there must be some other substance there beside uranium and that led them to make a study of this subject and they obtained a ton of this residue from the Austrian government. This residue had been thrown away as a waste material before. It was dumped out of the back door of the factory and there are great heaps of it here where it has been accumulating for years. Much of it had been washed off down the creek and carried away, but there are great heaps of it there that have accumulated, and the Austrian government sent to Professor Currie and his wife a ton of this residue, which was not of any great value.

Then they made a careful study of it, and in the course of two or three years succeeded in getting out of a ton of this material, a very small amount of radium. From this residue, I think they got out about a grain and a half of radium, and this was found to possess astonishing radioactive properties. It was found to produce rays even more powerful than those produced by the X-ray and with a remarkable property. They found this radium was throwing off rays which had some very peculiar properties. One of these properties was that it would throw off rays which would cause the air to conduct electricity. I was making an experiment today. I had a lady at the end of a long rubber tube breathing out and in, breathing into a large metal reservoir. The lady at the end of this long rubber tube, with a mask over her mouth, was breathing into a large reservoir, breathing air that had radium in it. As she breathed out, it went on into a reservoir. She breathed out of one into the other. She was charged with negative electricity and it was not very long after she began breathing into that reservoir several feet away before that reservoir was also charged with electricity. This negative electricity, in other words, had been conveyed from her body, through her breath, through this long rubber tube and accumulated in a large reservoir holding about eight cubic feet, so that if you stepped up and took hold of the reservoir, you would get a spark. There was no other place in the room where you could get a spark, save the reservoir, where the radium had carried the electricity. That is one of the first properties noted of radium, was that it gave to air the property of conveying electricity, and I was very much surprised when I accidentally got against this large tank and got a big spark. I had not the slightest idea there was any electricity in it. I had forgotten about this particular property of radium until I was reminded of it by a good sharp spark. The radium also sends off other rays. One of them is known as the Alpha

ray, and this consists of another substance, helium. Helium has an atomic weight of four. It has four times the weight of an atom of hydrogen and these Alpha rays consist of atoms of helenium, which are sent out from radium with an explosive violence, and under the microscope, if some radium is put on a little plate of sulphite of zinc, under the microscope you can see the explosion. Every atom of this helenium that is thrown off, when it comes in contact with this sulphite of zinc, produces a light and it looks like a shower of stars.

I am having an arrangement prepared so that I can show it to you one of these days, and you can look down through the microscope and see the radium falling down through the air. Of course, you do not see the atoms themselves, they are so small you can not see them, but you see the light produced by the atom as it strikes against the sulphite of zinc. This is one phenomenon that proves, in the first place, the character of this emanation, because it is possible, by preadjustment of the microscope actually to count these atoms that are thrown off and note the rate at which they are thrown off, and to measure the speed at which they travel, and it is found they travel at a rate of more than 150,000 miles a second. That is the rate at which they travel through space, more than 150,000 miles a second. Now because of the very great rapidity with which they travel, they diffuse very rapidly through space and when radium is exposed to the air in this way, it is throwing off continually, all the time, throwing off into the air these helenium atoms and they travel on through the atmosphere and keep right on traveling on, just giving off rays of light. They go right up into the sky and away off into space, and it is believed the atoms are diffused all through space. They are found in the atmosphere. The examination of the atmosphere, as you know, has shown it contained some of these metal substances that we didn't know anything about before, and ~~helenium~~ helium is one of the substances which has been shown is always present in the atmosphere, and in an appreciable amount. Now this emanation is the active part of the radium. These atoms that are thrown off from the radium in this way, this emanation as it is called, is 100,000 times as active as the radium itself. The radium itself is very active, but it is the radium emanation which is the most active part of it. It is being thrown off and it does the work.

This emanation is what is known as the Alpha-rays and it has very peculiar properties. When it comes in contact with glass substance, it will color the glass purple or brown. I have in this little bottle another bottle which contained radium, which I brought home with me some time ago. The bottle is packed just as it was packed by the Austrian government. Here is a little bottle and there is another little bottle inside, and this is the small bottle which contained the radium. This small bottle has the capacity to hold \$20,000 worth of radium. The bottle is not very big, but I will let you see it, some of you, if you want to come close by, and you will see it is very brown, almost black in places, but when the radium was put into it, it was clear as crystal. It was a new, perfectly clear, transparent bottle, but in the few weeks which I was carrying it with me, it became stained by the radium emanation. Now, each one of these atoms that is thrown off, that is, that has effected this pure, clear glass in this way, produces the same effect upon glass that the rays of the sun do acting upon glass during many many centuries, but in a very few days, or a few weeks, at most, this radium will produce greater changes in glass than the sun will produce during the hundreds of years. It is so very powerful. Each one of these atoms of helium that is thrown off in this way, this emanation, as it is called, each one of them is a sort of X-ray tube. Some of you have been in the X-ray department and you know the rays from the X-ray will destroy flesh, will kill cancer and do various sorts of things. These X-rays do the same thing, but are much more powerful. These emanation rays are much more powerful than the rays from the X-ray tube. Every little atom of radium in the form of emanation that is taken into the body can be breathed into the body in this gaseous form, taken into the blood, and it travels through the body, rubs up along side of the living cells of the body that are sick, infirm, diseased, and there they send out their rays, and, on the very spot, where they are needed all through the body, that is the way in which this emanation does its work. Every atom is a source of rays just as is an X-ray tube, but it has the advantage that it can be introduced on the inside of the body and can transport it wherever it is needed.

It has no taste, it is small, it is invisible and the emanation has also these rays, because they are like the rays from the sun. The chemical rays of the sun, the

ultra
 so-called ultra-violet rays, which are up beyond the scale of sight, There are other rays produced by the radium, the Gamma rays, which have the power to pass through glass, Emanation, which can not pass through glass, They are even stoped by a piece of paper, but after while they will destroy the paper, burn it down, and destroy it so it will crumble up, so they are very powerful, the Alpha rays, but they will not travel any great distance, but these Beta rays, the second class rays, will pass through glass and pass through a piece of lead half an inch thick.

I might mention that the Alpha rays are positive rays, while these Beta rays are negative rays, and there ~~is~~ still another ray known as the Gamma ray which is neither positive or negative. It is made up of ²paired atoms, negative atoms and positive atoms joined together, so it is neither positive nor negative. These Gamma rays will pass through a layer of glass three inches thick. They will pass through a slab of iron eight inches thick. They will penetrate it and take a picture on the other side, they are so marvelously powerful. They will pass through a distance of 6 feet and pass through the human body and illuminate a screen on the other side, so they are marvelously powerful rays. These Gamma rays are the rays that are used in the treatment of cancer, and it is by reason of their great penetrability that they are able to accomplish their curative power. They have such wonderful penetrability that when the body is exposed to their action, it seems to be absolutely transparent.

Now, in the case of the X-ray, the bones are opaque, so when you stand up before the X-ray tube, and have a picture taken, the bones appear as shadows, and the denser parts of the body appear in the form of shadows on the plate, but when these Gamma rays are applied to the body, there are no shadows produced, because the Gamma rays pass straight through everything, including the bones as well as the soft tissues and are able to pass through a piece of steel half a foot thick. I have seen myself pictures that have been taken through steel four or five inches thick, so you see this metal is one of the most remarkable things that has ever been discovered in the preparation of this metal, radium. There are other metals which are similar, Thorium, actinium, ionium, which is even more active than the radium.

We are making some use of radium in various ways here. We have just completed our emanation arrangement for giving the radium rays which we find is working very nicely

indeed. I met today a lady who, two weeks ago, came in and began to take radium baths. For a year and a half, she had not been able to raise her feet from the floor in walking, she had chronic rheumatic troubles of muscles and nerves and was really in great distress and had not been able to sleep one single night continuously, had not been able to stay in bed during one entire night, because of the great pain which she suffered, for more than a year. After two weeks, this lady reported yesterday that she was almost well. The pain in the back had entirely disappeared, she was able to walk off lightly and to raise her feet lightly without the slightest embarrassment, and her hand which she could not place to her head, she is able to use with perfect freedom, and she put her arms up to show me how nimble she had become. There is almost no trace of pain left.

thing in this

Another very interesting case, was an effect which had been noticed at a place in Germany, where radium was used, and the doctors there claimed that radium would relieve chronic constipation, and recommended it for that purpose. I confess it was a little too much for my credulity. I simply did not believe it, but, very much to my surprise, this lady said to me that after suffering for years from a very inactive state of the bowels, that for the last week or ten days, since she had been using radium baths, that difficulty had wholly disappeared, very much to her surprise, without taking any remedy or without any medicine of any sort, although she had taken all sorts of remedies before and without any very good results. Radium is not a cure-all. One thing I feel very sure of and that is it will not cure any disease without attention to diet and to all the habits of life and other things which might have been the cause of the disease. I have not a particle of faith that anything exists on the face of the earth or anywhere in the universe which can antidote the effect of wrong doing, except right doing. Right doing is the only thing. We must cease to do evil and learn to do well. That is the primary thing, for after a fire, a house has been afire a long time, and the fire has destroyed part of the house, and we have turned the water on and put the fire out, there is left something to be done in the way of repairs and that is where these remedies come in. That is the purpose of these baths, massage, radium and all the other things, is to repair the damage done by the fire, but we must stop encouraging the fire and fanning the flames and must put the fire out. Then these various measures

come in as general aids to complete recovery, to remove, so far as possible, the destruction the fire has wrought. Now if any of you have any question you want to ask with reference to radium, I will be very glad to answer you. Now, we will pass on to the other questions we have here.

Q.--Will excess of acidity in the stomach cause pain without the presence of ulcer in the digestive tract?

A.--Most certainly it will.. Those who have had much experience upon the stomach have become thoroughly convinced that a great number of persons, probably many thousands of persons are suffering from small superficial ulcers of the stomach like little excoriations of the lips. We sometimes have little raw surfaces which do not amount to the extensive penetrating ulcers which are sometimes produced, and that these are very painful. These are more painful than some older and larger ulcers, even when they have very large calluses, so there can be no doubt about that, but there are a great many ulcers that are not recognized and become a seat of pain. The normal stomach is not sensitive.

I have, on more than one occasion, when required to operate upon the stomach, I have the stomach exposed through an opening made while the patient is under anaesthetic. I have had the stomach exposed, taken it out into my hand, cut an opening into the stomach and into the small intestine, spliced the two openings together without the patient feeling the slightest bit of pain. Now that really seems impossible, but the stomach is not the seat of ordinary pain. It can be punched, cut, sewed, almost anything you like done to it, without the patient knowing there is anything going on in it at all. Now there is a good reason for that. The stomach is inside the body, protected from the skin, so it does not normally require any such protection. Pain is a protective sensation. The reason why we have pain is so when we put cinders into the fire, we will not hold them there until they are burned off. The exterior of the body is constantly exposed to attacks of various sorts, so it is full of nerve sensations and the pain is to warn it of dangers, but we don't need to have such warning notice in the interior of the body because we are not exposed in this way, but when the stomach, intestines, or any of these interior parts become the seat

of disease, if they are inflamed, then they become subject to pain, so pain in the stomach always means disease, and it means really something pretty serious, too, because taking the stomach in the hand, punching it, cutting a hole in it, sewing it with a needle, pulling a thread through it, if that won't hurt a healthy stomach any, you can readily see that the stomach must be pretty badly diseased in order to be the seat of pain. There is one thing that always produces pain in the stomach and intestines and that is overdistension. That is one thing to which these hollow organs are sensitive. When the bladder becomes overdistended, the secretion becomes very painful and the bladder is also sensitive to temperature, but it is not so sensitive to tactile sensibility, to contact, so with the intestine or the stomach, when distended, this distension produces severe pain and that causes colic. (Colic always means distension, and that is why heat gives relief, because heat is relaxing and relieves the spasm, so stops the distension and relieves the pain.)

Q.--What is an enlarged spleen?

A.--An enlarged spleen is a spleen that is enlarged. I suppose the question is Why is the spleen enlarged? The spleen is enlarged because it is diseased. ^{Just why} certain forms of disease cause enlargement of the spleen nobody knows, but this we do know that enlargement of the spleen is very common in cases of chronic autointoxication, and the same thing which causes enlargement of the liver will cause enlargement of the spleen also. The same thing that causes cirrhosis of the liver will cause cirrhosis of the spleen, so when we examine the liver to see if it is enlarged or cirrhotic, we also examine the spleen, because these two organs are associated in their functions, and the principal cause of enlargement of the spleen is the presence in the body of toxins. Poisons produced in the intestine and absorbed into the blood.

Q.--What would be the proper treatment and diet for the same? ^{enlarged spleen?}

A.--In the first place, the diet should be antitoxic. When a person has pernicious anemia, he generally has an enlarged spleen. When a person has chronic malarial infection, he has an enlarged spleen. Poisons present in the body in these diseases cause enlargement of the spleen. The first thing is to remove the cause and that you must do first of all. There are a number of things which can be done that are very helpful,

indeed, and one of these is the application of hot and cold over the spleen. A hot spray, a hot ~~douche~~ over the spleen, followed by a cold douche for 5 or 10 seconds has marvelous power to cause the spleen to contract and so relieve this congestion and enlargement and another excellent remedy is the X-ray. (Probably the most powerful of all the remedies we possess at the present time is the X-ray. The X-ray has a marvelous influence upon glands. These rays, produced by the X-ray tube, and which are also produced in radium and thrown off from ~~radium~~ continuously, these same rays are wonderfully effective in causing contraction of the spleen. They have an effect upon the gland structures. Applied to the skin, if the skin, for instance, is too active and produces perspiration, the bottoms of the feet perspire too freely, the X-ray applied to the bottoms of the feet will destroy a lot of those sweat glands, and so destroy that difficulty. If the thyroid gland is enlarged, the X-ray applied to it will cause the glands to shrivel up and if applied to any other glands, it will have the same effect, so, when it is applied to the liver, if the liver is enlarged, it has that effect upon the liver and applied to the spleen it is particularly effective in causing contraction of an enlarged spleen. It can be applied to all the glandular structures of the body and causes changes in them. Other structures are affected by it. Even the ovaries may be affected by it and large pelvic tumors are now-a-days being destroyed by the X-ray by sufficiently strong application so that operations are now not necessary in cases in which it was formerly supposed they were the only means of relief. I am telling you this so that you may have an ~~idea~~ opportunity to tell some of your friends that the doctor has pronounced incurable because of a large uterine tumor, perhaps, before the tumor was too far advanced. There is still hope. The X-ray has cured a large number of cases that have been pronounced absolutely incurable and so bad they were inoperable.

For instance, a patient has organic disease of the heart, and can not endure the removal of a tumor. The X-ray will cure it.) Some recent improvements have been introduced which make possible the administration of larger and stronger doses than was formerly possible. The difficulty was formerly the skin would be destroyed by these large doses. About two weeks after the application, the skin, perhaps, would turn black, swell up, become inflamed and would begin to slough, which was very, very

difficult to cure. Some patients died of the sores produced by the X-ray, but as experience has proceeded, there have been developed, one by one, safeguards and accessory means which make it possible now to apply as strong doses as are necessary without doing the least bit of harm to the skin, and we have delicate tests by which the amount of current applied may be measured by delicate measuring machines so that we know all the time we are giving just the same dose and never need to go beyond it. I have never known of but one case in which a person was injured by the X-ray in our history here and that was at the very beginning. We had a man here who was an electrician and didn't know anything about it, thought he knew all about it, thought it was such a wonderful thing, and he had a patient, a friend of his, who came in and let him make an application to the side, and there was a bad X-ray burn and it was a year and a half getting well, but it was not prescribed by a doctor and was not done in the proper way. You can, of course, imagine, that that man did not remain here very long. He has not been in our employ for a good many years, but that is the only instance in which any harm has happened in any case connected with this institution and now we know perfectly well nobody can suffer harm because protective measures are so complete.

Q.--What would be the best diet and treatment for malaria?

A.--The best diet for malaria is an antitoxic diet which will build the body up in every possible way. A diet that is suited to the patient, that meets the appetite of the patient, but, as a rule, the patient does not have very much appetite while he is having malarial fever, and the important thing is to get rid of the infection. There are parasites in his blood and we must kill those parasites. Now the way in which the parasites are killed is always the same, no matter what we do, no matter what remedies we give, there is only just one way in the world for getting rid of the malarial parasites and that is you have to eat them up. You have got to eat them up. In this case I recommend the carnivorous diet. That is, I do not recommend it, but I mean to say you are condemned to it if you have gotten malarial infection and got these bugs in your blood. There is no other way but to eat them up.

The white blood corpuscles are pursuing them and it is only when the white blood corpuscles of the blood are brought up to that state of efficiency that that

condition of leukocytosis, as we call it, so they are numerous enough and active enough to be able to capture these parasites and destroy them. It is only when you have reached that point that you have any chance for getting well of malarial fever. Well, you say, what do you take quinine for then? Well, quinine is not necessary. The very worst cases I have ever seen were cured without quinine. I am not going to say I condemn quinine, because I should take it myself under some circumstances, but the patient is not cured by the quinine. The quinine, when taken into the body, has the peculiar property that it paralyzes these malarial parasites and makes it easier for the white blood cells to capture them. It is something like what the boys you used to do when I was a boy, when they would scatter something in the water and the fish would eat it and get drunk and float on the surface of the water and the boys would gather the fish up with their hands. When I was a boy I went out gathering fish on one occasion in that way. That while I was still a barbarian, before I had been reformed. Lord Byron said "Man is a canniverous product. He must have prey" and I think that is generally true of the small boy. Now that is exactly the thing that happens in our bodies. The quinine which we take in, circulating in the blood, comes in contact with the malarial parasites and they become so weakened and poisoned that the white blood cells are able to capture them more easily and to destroy them. The patient is put into a warm sweat, then had a cold application. That is the reason why you have so many baths here, the towel rub and frictions, the morning swim, shower baths, pail pours, wet sheet rubs and all those things, the whole purpose of it all is to increase your resisting power, to increase the number of white blood cells, and get them out into the blood doing active business.

Q.--How far back are germs supposed to have been present in meat?

A.--That is a question I shall have to look up in my ancient history about. I have several encyclopaedia and a whole lot of ancient histories. I will look it up and see if I can find anything and report. Just at present I am unprepared to answer that question.

Q.--Does not the early longevity of the human race tend to prove their absence? (?)

A.--That is a ^{good suggestion.} ~~different~~-question. Look back to the old Biblical record, which is the

oldest history we have, and which has proven to an increasing degree, by modern discoveries, to be the most authentic history of ancient times, we find that there was no meat eaten before the flood, whatever that flood was, and wherever it was and whenever it was, according to the records, there was no~~x~~ meat eaten before the flood. God told Noah to take into the arc, with himself and the animals, of all that foods that were eaten "and it shall be meat for thee and for them", and we haven't any record at all that they took in any animals to eat. He took in the animals in pairs and in groups of seven and he brought them out again in pairs and in groups of seven. We don't read any account of this sort, that Noah took a ^{fine pair} large-number of lions into the arc and a large drove of sheep, to feed them. We don't find any such record at all. Now, it would take at least a sheep for one pair of lions a day. They stayed in the arc for ^{one} 54 years, and it would take a sheep every day to feed that pair of lions. and that would be 365 sheep for every pair of lions, and the arc wasn't big enough to hold them, so you see there is no question about it, because you see, besides holding all those sheep, they would have to keep food to keep the sheep alive and an average of half those sheep would have to be fed the entire year. You see what a prodigious quantity of food would have to be eaten, taken in. They would have had to have several barges besides the arc to furnish food for all the animals that were going to be eaten by the lions, leopards, catamounts and other carnivorous beasts, but at that time they were not carnivorous; the very first permission the race ever had to eat meat came after the flood. "Every living thing that moveth, creeping things and all living things, everything that moveth shall be meat for thee." You will find that in the ninth chapter of Genesis that was after the flood and Noah was given permission to eat all the meat and creeping things, moving things, grasshoppers, worms, toads, and everything else he wanted to, that is, he was informed those things would keep him alive if he was brought into an extremity and was likely to starve to death if he did not eat them. But there is another thing about that that is very interesting, and that is the animals were give permission to eat Noah at the same time, "but your life will I require, your life will I require at the hands of the beast, will I require it." That is right there in the ninth chapter of Genesis. Look up the original and you will find that word require means seek. That

is one of the definitions given in the old Hebrew rectokans(?). I looked it up and one of the definitions for the word used for require there is seek. "Your life, then will I seek, at the hands of the beasts will I seek it." You can eat these beasts if you want to, but if you eat them, they have got a perfect right to eat you and they will do it and that is the way it has been going on ever since. That was the beginning of meat eating, and it has not been in any advantageous to either man or animal.

Q.--What course is best to pursue to reduce flesh?

A.--Eat less and work more. A lady asked me that question some time ago and I asked her something peculiar. I said "Had you noticed that your hands are not fat?" "O, yes" she said, "I have noticed that;" and I said "Your forearms are not fat at all, and your feet are not fat and your legs from your knees down are not too fat. That fat is all around the hips." "Well," she said, "What do you think is the reason?" "Why," I said, "It is plain enough. Your feet and legs have to do so much work, carrying your big body around, don't you see? And then your hands and your arms have to do a much work of this sort you see (illustrating carrying food from the face to the mouth). That is the trouble. Now, what you want is less sitting down, more exercises for your arms, your legs and for your trunk, particularly, and less food."

Q.--How many gastric tests are necessary to determine the characteristic condition of the stomach?

A.--For absolute proof, we have to have two or three, any how. Sometimes more than that. It depends upon the case. Some cases are very intricate. Sometimes the stomach does not show the characteric symptoms we are looking for the first time and we have to try again. For a complete study of the alimentary canal, one should havenot only a stomach meal, a test meal, but a bismuth meal, which is made visible by bismuth which is taken into the stomach. The bismuth is taken into the stomach, and then watched by the X-ray, all the way along the whole thirty feet of intestine. One of the most useful things I know of, the test meal which is given, gives us an idea of the chemistry of digestion, ^{how} The digestive juices act upon the food. The bismuth meal tells us how the stomach, as a muscular tube, behaves in relation to the food, and those two things

are necessary. It is not simply the chemical changes of the food, but the carrying of the food along from one part of the digestive canal to the other. There are twelve gates in the alimentary canal, and these various departments produced by these gates, each one has its particular function to perform upon the food and the food is moved from one to another, then another, then another, and it is necessary that there should be a regular and continuous and uninterupted movement of the food along from one department to the other.

Now, when this is interrupted, changes take place right away, and putrefaction begins, fermentation begins. When the food stagnates anywhere, and there is a gate closed, does not let the food through, then there is trouble, and if there is a gate left open, so that the food that has passed down comes back again, then there is trouble. Infections occur and travel clear up to the liver sometimes. I met a man the other day who had gall stones, we think he has gall stones. If he has gall stones, it is because he has stagnation in the duodenum. This is unquestionably a part of the cause of it. So I said to him "Tomorrow you will have a bismuth meal!" Our Roentgenologist will give him that bismuth meal and watch it from tomorrow morning until the next day, and the next day he will watch it until he sees the last of it with the X-ray, and he will see just what is happening, where it makes too long a pause. Suppose it gets down to the ileo-cecal valve, for example, and he finds it there four or five hours after it ought to have passed on. If it is still there eight or nine hours later, he knows there is an obstruction there, and it ought to have passed on long before. By this examination, it is possible to know how the alimentary canal deals with the food stuffs when taken into it.

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Q.--Is/Veronal a harmless drug?

A.--No, indeed, it is not a harmless drug. Veronal is very far from being a harmless drug. It disturbs digestion, disturbs the nerves, it is a toxic substance which must be eliminated by the body and it has to pass through the kidneys. It is not to be tolerated if it can be helped.

Q.--What effect has liquid sulphur on the system?

A.--I don't know of any such thing as liquid sulphur. It may this refers to a solution of sulphur in bisulphid of carbon or something of that kind, but ⁺ certainly could not

recommend this as a remedy.

Q.--Is it ever right to eat vegetables and fruit and the same meal?

A.--Certainly. Healthy people can eat all kinds of wholesome foods at the same meal, provided you do not eat too much of it. You better not take too great a variety but fruits and vegetables agree perfectly well if they are thoroughly chewed. The chewing is the important part of it. It is because they are not perfectly chewed that they make trouble. If they are well chewed, they pass on quickly and there is no trouble. Everything harmonizes in the food line in a fluid straight.

Q.-- Which element of food has the most to do with nerve building, protein, fats, or carbohydrates?

A.--Well the nerves are never feeble because of lack of nutrition. The nerves are the toughest part of the body. They suffer the least unless the person is actually starved out. The man's muscles may be weak, not because the nerves are weak, but because the muscles have not the proper store of energy. The nerves require very little energy, indeed, in their work, and their structure is the least likely to be injured of any in the body because it is so soft and so active and so vital, it takes care of itself, even at the expense of the rest of the body. For instance, when a person starves to death, his muscles may diminish half their weight. His liver may diminish two-thirds, his heart may diminish one half, but the brains and the nerves are not perceptibly changed even if the person starved to death, they remained practically the same, because they take the nutriment away from the rest of the body, so that they take great care that they do not suffer.

Q.--Are deep breathing exercises harmful?

A.--No, indeed. They are always beneficial, provided you have a chance to breathe. It is very harmful, for instance, for a man to take a deep breathing exercises with a belt tied very tight around his waist, away up here around the ribs. That is very harmful, because when one undertakes to breathe, and he can not expand his waist here, his chest at the sides as he ought to, there must be expansion somewhere, so everything goes down, and those misguided people who wear tight things around their waists/are still trying to are all the time forcing the stomach down, forcing the liver down, forcing the spleen

down, forcing the kidneys down out of place, and this thing is so common, I am bound to tell you the truth, I am here on the witness stand and have to tell you the truth about every question that arises here, you can scarcely find a civilized woman 30 years of age, that has not some of these organs down out of place, the liver, kidneys, colon, these organs are almost universally out of place. The conventional dress is an instrument of torture, there is no question at all about it. It is one of the great causes of the growing weakness of American women, and of race degeneracy.

Q.--If the thyroid gland is given us to take care of meat poisons, why have we such a gland if it was not intended that we should eat meat?

A.--I have been looking for that question, and I made a slip of the tongue the other day in telling you about the thyroid gland. I said "Some people thought that that was the reason why the thyroid gland was there, that it was there to destroy poisons produced by the putrefaction of meat in the intestines." Now I did not say that I thought that, because I don't believe such a thing as that, but this thing is a fact, that if the thyroid gland is removed, and the man eats meat, he dies. If a rabbit or a dog eats meat after the thyroid gland has been removed, it dies. That thing has happened. The thyroid gland was removed over in Switzerland, as an experiment, and the patient always died. Then the doctors began to experiment on animals and found the animals died, but the discovery was made after while that if the animals were fed on a non-flesh dietary, they did not die, they lived along as well as ever, so you see it is an exceedingly important thing for a person who has a growth of the thyroid gland to take care of it, to eat no meat, and there is another very important thing about it. I met a lady today, I took hold of the skin of her hand, pinched it up a little like that (illustrating) and it was just like paper. She was not thin in flesh, but the skin had become atrophied, so it was like parchment. Now that meant her thyroid gland was deficient. That was what that meant. I said to her "Your hair, is dry, I presume." "Yes," she said, "My hair is very dry." I said "Is it falling out?" "Yes, it has been falling out." Now why did I know that? Because the thyroid gland presides over the functions of the skin and over the functions of the hair and when the skin was in this shape, I knew, of course, that the hair was also diseased as well. So this lady is suffering from thyroid deficiency and it is a very common thing. I found the lady knew that and she had big brown spots

all over her hands. The lady was 55 years old and she looked as though she were 75 at least. I told her so. She said "That is not very complimentary." I said "I didn't intend it to be. I intended it to be a caution and not a compliment." "But," I said, "you obey orders and you will get to be pretty good looking before you go home". Then she smiled and so we got over that.

Q.--The most eminent physician in Philadelphia told me a young man would lose much by leaving off meat.

A.--He wouldn't lose so much as the butcher would. The butcher would lose the profit on that beefsteak. That really is the principal loss there would be in that case.

That is the only loss ^{I know of.} ~~in that case~~. Well, there is another thing he would lose. He would lose a good deal. He would lose his bad breath. That would be a good thing to lose, and he would lose his muddy complexion, he would lose that tired feeling you read about in the newspapers sometimes. He would be almost certain to lose that tired feeling that he has been taking so many tonics for and all that sort of thing and he would gain tremendously in efficiency. A good many people I know have tried it and come out very successfully. One man you can write to, if you want to, and ask him what the adoption of the low protein diet has done for him. That is Professor Irving Fisher, Professor of Political Science for Yale University. He has written, he told me, more than a thousand letters to people to ask them what they ate and what the effect of their diet was, so he is willing to be interrogated himself, he likes to correspond with people on the subject of diet and he keeps a stenographer busy almost at that thing exclusively, gathering information on the question, and you write him and ask him about it and if you want to go a little further, write to Dr. J. N. Hurty, Sec'y of the State Board of Health of Indiana and ask him what he thinks about a non-meat diet. I heard him talking at a Chautauqua last summer and he said just as ugly things as you ever heard me say about meat. Somebody asked him what he thought of ham. "Well", he said, "If anybody wanted to eat ham, they could have the consolation that ham was simply fine mummy that he believed the people of modern times had adopted the same way of preserving dead pigs that the old Egyptians had for preserving their dead friends" so if you like mummy

ham would be first rate. Now, I never thought of anything quite so bad as that before, so I have occasion to quote from Dr. Hurdy quite frequently. If you want to write to somebody ~~else~~, write to Mr. W. D. Simmons, the manager of the Simmons Hardware Company of St. Louis. He has been trying it for five years now. You ask him what he thinks about the non-flesh diet. When I was in St. Louis, a few months ago, I called to see Mr. Simmons and I found him up there in his great establishment where he employs 2000 clerks. I found him up there just going through that institution just like a steam engine, a regular bundly of energy and enthusiasm. When he came here, he was a very bad invalid, at that time, he was feeling awfully bad, so he could hardly hold his head up, and he was so nervous and so irritable that he could hardly tolerate himself. He didn't tell me all about that, but some of his managers told me that, that they could hardly tolerate him there. They had great times, and they were awfully glad when he went off on a vacation and came up here, and when he got back he was another man. It is amazing what an enormous amount of detail about his business that man has. He employs 2000 clerks and 500 traveling men, all over the United States, and he can tell you where every last one of them is and just exactly what profits he made off of every man the last month, and all about it. He has it all at his fingers ends. That great business he has absolutely at his grasp. He knows every detail about it, and his mind is clear as a crystal. It is a delight to see that man going about his business, with things humming and at perfect ease. He doesn't know anything about becoming tired any more. He is just a dynamo, full of energy all the time. It isn't work that hurts people, that uses them up, it is not work that makes men tired, it is beefsteak that makes men tired. Now some of you, perhaps, have heard of a man called "Battling Nelson". Did any of you ever hear of him? I read this note in a newspaper some time ago, somebody had cut it out and sent it in to me. (Battling Nelson had been defeated in a battle he expected to win, and in explanation he said it was beefsteak that defeated him, for just before he went into that battle, he sat down at a table and overstepped his orders, ^{After} he had eaten his ration, he felt so confident he was going to win that he had an extra big beefsteak brought, and it was that beefsteak that defeated him. He had sense enough to know, it, that it made him groggy, that it made him stupid, and slow and he wasn't up to his normal status, and that was perfectly true. I t ~~is~~ the beefsteak and big dinners that business men consume

that disturbs them. That is why they can not concentrate their minds. That is why they can not form a conclusion quickly. The reason why a man can not write a conclusion to a matter he is considering is because he can not sum it up and get into his brain and arrange in order before his mind at one instant a sufficient amount of data. That is the reason. He can not get into his mind clearly and prominently where he can look at it and see it, a sufficient amount of data to enable him to put the proper elements together to form his original conclusion. That is the trouble, and the reason why he can not and that is the reason, because (his brain is dull and he is groggy, he is intoxicated.)

I might tell you a whole lot more about that. I might mention a whole lot more names, but if you just write to those men I have mentioned, you will very quickly find what they will tell you. Mr. Simmons said this to me "Doctor, I wish I could take you up to my house, I wish you could see my wife cooking." "Why", he said, "We do it a lot better than you do it at Battle Creek." He said "We think we represent in our home the Battle Creek Idea a little better than you do it up here at Battle Creek." He said "My wife has just got it down fine". Now that is the way that man is going on and he finds it pays. He finds it profitable.

Now, when a business man finds a thing that is profitable, finds a thing that pays, he generally sticks right to it and works it for all he is worth. That is the enterprising business man. That is the way Mr. Simmons is doing, and that is the way Professor Fisher is doing, and I can give you a long list of people that have been doing the same thing. I sent out, some time ago, a thousand letters to people that had been here, prominent people, and had been trying this Battle Creek Idea, this low-protein idea, which really does not belong to us, because it is as old as the race, and I did not get a single letter back from those people saying that they found the thing did not work well, that they found it was damaging to them. I didn't find such a letter in all the replies I received. It can not be the experience, because it is not harmful, it is natural, it pays to be good.

Q.--What should a man of 40 with a blood pressure of 140 do?

A.--He should get it down, and when he gets it down, he should keep it down, and the best

way in the world to get it down is to eat it down. Now, if you adopt a low protein diet, eat right, and keep the bowels active, the blood pressure will come down, if the arteries have not become chalky. It is sure to come down. The average man who comes here with a blood pressure of 140 or 150 or 160 will find a drop of about 20 points, on an average, within two ~~or~~ three weeks. That is our experience. I have gone through our records, and made up the averages and find that is what it amounts to.)

Q.--Did Professor Chittenden eat meat during the experiment by which he established the low protein diet?

A.--Yes, he did. He took care to eat a little bit every day, a piece about as big as his thumb nail, so he would not be classified as a vegetarian. He didn't want to be classified, he didn't want somebody to say he had adopted a fad. It is interesting to look over his bills of fare and see him measuring out one gram of three grams, two or three or four grams of fat bacon with no protein in it. If you are going to eat anything in the way of meat, you better eat fat bacon than lean meat every time.

Q.--How should lime be supplied in the diet of children three years of age?

A.--Give the child whole grain preparations. Graham bread, and Scotch brose. There is nothing better for the child than Scotch brose. Scotch brose is made up by stirring rolled oats into some hot water, a proper quantity of hot water to make it rather a thick mush, stir it in when the water is boiling and in four or five minutes, take it off, four or five minutes, remember. That is Scotch brose. You must not boil it. It must not be cooked very well. It must not be allowed to simmer for several hours. You don't want to do that. You want to have it about half cooked. Then there is left some uncooked starch which passes down through the colon and acts as a laxative in the colon. That is why the Scotch are so healthy, because they eat this brose that is not cooked too much. You eat that as a sort of medicine, so you don't have to take Colax and a whole lot of other things, and besides it is something you can prepare yourself.)

Another splendid thing for children is Wheat Flakes, Granola and Granose.

They are all splendid.

Q.--Is drinking buttermilk between meals objectionable.

A.--Yes, because it has to be digested. One should never eat between meals unless he is

is thin and lean and needs to take on flesh. Then he should consult his doctor and arrange his bill of fare in such a way that ~~one~~ meal won't lap over onto another. One never should take food into the stomach while the stomach has still undigested food in it. There is only one exception to that, and that is fruit juice. Fruit juice may be taken any time, and malt honey or malt sugar may be taken any time, because they do not require any digestion or any change of any kind in the stomach, so will pass right along into the intestine without troubling the stomach under any condition.

Q.--Why is it harmful to take meals at too short intervals?

A.--Because the process of digestions is deranged. We will have to take that up at another time, perhaps.

Q.--What is the color of the actinic rays?

A.--Actinic rays are colorless. There is no color at all.

Q.--If there are so many scientific facts in support of flesh abstinence, why is it denounced and opposed by the practical medical men of the country?

A.--Because they have not investigated it. However, this is not ~~true~~. They do not denounce it. If you have Bright's disease and see a doctor, he will tell you to eat less meat. If you have arteriosclerosis or hardened arteries and go to the doctor, he will tell you not to eat any meat. He will say, if he is an intelligent man, "Eat no meat. Cut it out". Doctors are doing that all over the world. The leading medical men are doing it everywhere. Sometime ago a man came here from Iowa, passed through Chicago, and on the way stopped off to Dr. Frank Billings, who is one of the greatest physicians in Chicago, and Dr. Frank Billings gave him a prescription. He had arteriosclerosis and Bright's disease, high blood pressure. Dr. Billings gave him a prescription, directions, and when I came to look it over, I could not add a thing to it, positively nothing, for the prescription was all right as far as diet is concerned. ~~That~~ It said, "Drink three quarts of water a day. Eat no meat, smoke no cigars, drink no alcoholics. Live a quiet life, avoid excessive exercise;" and so on. The prescription was exactly what I should have given him and ~~that~~ simply represents what intelligent progressive medical men are doing the whole world over.

Q.--I am following the Battle Creek Idea and have no autointoxication and yet every summer

I have ~~hives~~ an attack of hives.

A.--The Battle Creek Idea is a very good way to travel in. The probability in this case is that there is something you eat that does not agree with you. It may be you have an idiosyncrasy against strawberries, and when strawberries come, and you eat them, you may have hives. There is a volatile substance in strawberries, which, to some people, acts as a poison. I would say this further, to explain that, that the poisonous substances that are present in strawberries, perhaps all these peculiar substances, are, to ordinary people, harmless, because they are not absorbed, but there are certain people who absorb these substances. Then they exercise this peculiar effect, and that is because of the diseased condition of the intestines.

Q.-- Can an enlarged joint ^{or} ~~enlarged~~ toe be operated on and brought to proper shape?

A.--Yes, that is possible.

Q.--Can dropsy be cured?

A.--Yes, many people are cured of dropsy by leaving off salt. General dropsy is generally benefited by simply discarding salt, but of course, there is a cause back of that must receive attention.

Q.--Does the Sanitarium use any evaporated milk?

A.--No.

Q.--Why not?

A.--Because we don't know anything about the cows that produce that evaporated milk?

We use the milk from 500 cows and we have a man who travels around among the thirty different dairies that supply us with milk, inspecting them, and the milk has to be produced according to certain rules which we lay down, and the milk which is served upon the tables comes from a dairy which is carried on by persons we are well acquainted with and this dairy is put under the rules for the production of "certified" milk.

The cows are washed and curried and are cared for as though they were human beings.

Everything is kept so clean you can't find a speck of dirt anywhere about the place.

Otherwise we should not furnish the milk to you without it's being sterilized

The milk used on our tables is equal in quality to the best certified milk that is produced in the United States.

Q.--What diseases will radium cure?

A.--Well, it is particularly good for rheumatism, gout, neuralgia, neuritis and arteriosclerosis. These are the things it is particularly good for.

Q.-- Has the Sanitarium a branch in Atlantic City?

A.--No. We haven't a branch, but we are going to have one. Three or four years ago, an old patient of ours who died of pneumonia, I believe, an acute attack of pneumonia in Washington City, Mr. Wood, of the firm of Wood Harmon & Co., the real estate dealers of New York made the Sanitarium, in his will, his residuary legatee. We were notified by our attorneys some little time ago, that the property, which consisted of real estate in 26 different states, was being sold off, and there had accumulated in the bank there ~~some~~ four or five hundred thousand dollars. We hope, in the course of two or three years more the estate will be settled and then we shall build a Sanitarium, on the same plan as this one in Atlantic City for the benefit of our Eastern friends. We hope this will come about in the course of three or four years, but, of course, we have not the money in hand. So far as we know, there is no obstacle in the way of this being accomplished.

But I see I ought to have stopped long ago. I thank you for your patience.

I wish you goodnight.

jhk-v-s-9-10-12.

SYMPOSIUM OF THE BATTLE CREEK IDEA.

At the Sanitarium Parlor, Battle Creek, Mich., Tuesday, February 20, 1912,

At 8:00 P. M.

J. H. Kellogg, M. D., Chairman.

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Dr. Kellogg. Ladies and Gentlemen: I talked so long last night I expected that everybody today would have a severe attack of neurasthenia. I am surprised to see you have such splendid constitutions that you are able to get out again tonight; but the attraction of such a galaxy of splendid speakers as we have to listen to tonight, I am sure, would bring an audience under almost any conditions. I am going to keep still tonight and other people are to talk. This is to be a symposium. The symposium was suggested by Sir Horace Plunkett, our good friend who has been spending a few weeks with us and who has become very much interested in our Battle Creek Idea, and he will first of all set the ball rolling by telling you what he thinks about the Battle Creek idea, which is the subject of our talk tonight. (Applause).

Sir Horace Plunkett. Dr. Kellogg and fellow guests: I am afraid the murder is out. It is quite true that I suggested that we should indulge in a symposium; those of you who at an earlier period in your lives were taught a lot of useless Greek know that "symposium" means a big drink; and we have got tonight to tackle a rather dry subject under dry conditions. (Applause). I can confess to you that my object in making this suggestion was somewhat malicious. I am tired of hearing the doctors say what they think of us, and I thought we ought to have a show to say what we think of our doctors. And that is the insidious object which is being concealed in the title "Symposium on the Battle Creek Idea." However, looking at it from the point of view of the institution, which I have come not only to respect, but, I might almost say, to love, it strikes me that as the Battle Creek Idea, however sound it may be in theory, depends fundamentally for its success upon the intelligent co-operation of the guests at the institution, it might be useful to the staff, & the

the splendid body of sanitarists who preside over us here; it might be useful to them if they could take a psychological survey of their guests and try to find out what is in their minds about the Battle Creek Idea. I think it was Josh Billings who defined psychology as looking into the mind to see its little game; and I think the more our medical advisors know of our minds the better it will be for them and certainly for us.

Now, night after night we are given in this parlor in the clearest language by extremely able and distinguished scientists, I think I may say, far more knowledge about ourselves than we ever possessed before. How far we understand what we are taught, nobody knows. We put into the box questions every Monday night, some relevant and some perhaps a little irrelevant, but nobody knows who asks those questions, and a great many of those who do ask them I am quite sure are not at all satisfied with the answers that they get. I put one in once, and I was not at all satisfied, and I wanted to come next to the Doctor, but I was ashamed of my question after he dealt with it, so I held my peace.

Now there seem to me to be two main reasons why we should understand the Battle Creek idea. The first is it will be good for ourselves, good for the guests of the institution that they should thoroughly understand what is being done for them and thereby should derive the fullest possible benefit from their treatment here; but there is another reason, a public reason. This institution is unique. It occupies a position not only in the public life of this country, but, I might say, in the life of the human race, which is not occupied by any other institution. Dr. Kellogg, with his usual modesty in a little book which he gave me yesterday, which I judge some of you have seen, called "The Reason why", has told us that there is nothing particularly new here. His description of this institution is worth reading to you. He says here:--

"The Battle Creek Sanitarium system professes to be nothing more nor less than a thoroughly up-to-date, scientific and progressive system of health culture for the sick and the well. It is unique only in that it represents the pioneer attempt to organize under one management the best results of experience and the latest findings of medical science in everything pertaining to health

culture and the treatment of the sick."

Now, that is a pretty large ideal and very modestly expressed. Now I take it that very few of us here, I think we are nearly all laymen, and very few of us here are capable of forming any judgment as to the validity of the claim of this institution to be scientific. We do not pretend --it is only experts in science who can form a judgment upon it; but I doubt whether any of us come here without pretty well satisfying ourselves that the science is sound. In my own mind, I apply, just like any other man of common sense, three main tests, one, the test that I value most, is my own observation of the patients who come, of the stream of patients that come into this institution and the stream that goes out. I see the stream pours in in a very muddy condition, and it flows out in a very clear and beautiful condition, and any man with any powers of observation at all who has been here as long as I have, which is eight weeks today, can not possibly fail to observe the extraordinary difference between the departing guests and the incoming guests; but that, of course, is a test we can only apply after we have actually had experience of the place. But the other two tests that I applied--I inquired into the history of the place, and I found that for a very considerable period it was bitterly opposed by the medical profession. I do not blame the medical profession. I think that the medical profession ought to be extremely critical of any institution that professes to introduce a new system of therapeutics. I think myself that they carried the opposition to somewhat extreme limits. However, that opposition has absolutely died out. I have spoken to the foremost physicians and surgeons at various times in this country and the old country as well, and the institution is now accepted by the profession, not without criticism in detail, but it is accepted as genuine and as being in the main--even the most critical admit that in the main the work here has been a great and signal contribution to medical science.

There is just one other feather that impressed me, and that is the absolute openness of the institution to outside criticism. When qualified medical men can come and investigate every detail of the system here, I think that alone, even if the other tests that I myself apply, and many others that no doubt you have applied before you came here

no doubt you have applied before you came here, even if you disagree with it,-- the mere fact that any qualified medical man can come and see the whole thing for himself is to my mind ~~xxxx~~ proof positive that there is not only nothing to conceal, but also that there is nothing that the men of science here do not believe that they can absolutely demonstrate to be true. As I say, I am not going to suggest that we should discuss the institution in its scientific aspects. That is not our function, and I think that is not even the province of most of us; but there is just one medical aspect, so to speak, of the institution that rather appeals to me. A few days ago I dare say you all saw in the paper one of our greatest British medical men passed away, the famous Dr. Lister, or Lord Lister, as he became afterwards. Now Lord Lister is known for what was perhaps the greatest of all surgical discoveries in the last century. Not being a medical man I can not describe it, but we laymen know that until Lord Lister's time it was generally accepted by the medical profession that the healing process in every wound must be preceded by a state of putrefaction which in serious wounds generally killed the patient. In fact, so necessary was this putrefactive process, or whatever it was called, that we used to hear of "laudable pus" as one of the ministrations of the healing process. Well, Dr. Lister discovered that this very disagreeable and dangerous process could be absolutely avoided. Well, as we all know, later on, I fancy in quite recent years, the old antiseptic process was superseded by the aseptic process. That is to say, they did not apply antiseptics to remedy these wrong doings, but the surgeons found out that they could absolutely prevent wounds from putrefying in any way.

Now, it seems to me that Dr. Kellogg occupies to the great Metchnikoff very much the same position that the later surgeons occupy to the great Lister. Metchnikoff has practically told us that if we could only prevent these wild beasts in our lower regions from playing the devil with our constitutions that we could live almost certainly to 150 years of age, and he said the best thing to do was to put into these dark regions an invading horde of bacteria which

We drink in sour milk, I believe and set up a sort of armageddon inside and that at the end of the fight we could probably survive and live in health and comfort to a green old age.

Now we are taught here that all this is quite unnecessary. That if we would only live as nature intended us to live, there is no reason that this enemy should prevail in these dark regions, there is no reason why there should be any fight at all.

Some of us are, no doubt, a little skeptical about the vegetarian theory, but I myself believe that sooner or later Doctor will persuade the world to come around to his view and that the next generation at any rate will begin to live as long as to the ripe old age Metchnikoff has promised for the human race.

Now I have only two criticisms of the system here to suggest as matters for discussion in this symposium. I do not say that I altogether believe in the criticisms that I am going to make. I am going to be what they call "the devil's advocate" and I am going to express these hostile views here because they have been expressed to me by eminent physicians and surgeons when I have been on the other side of the fence and fighting for the Battle Creek Idea. It has been put to me that the Sanitarium here tends to make us think far too much about our insides; that it generates a morbid introspection, and in fact, I have known a great dietitian in the old country who said that the mere fact of thinking so much about what we eat has a dyspeptic effect upon the stomach, develops what he called "the stomach consciousness" to such a degree that it would be really better for us if we forgot all about what we were eating and ate whatever came our way. Well personally I believe that criticism would be perfectly sound if the Battle Creek Idea had not safeguarded us from this morbid tendency, and I am rather

interested myself in these psychological sides, and I try in discussing matters with the large number of patients whom I had the great pleasure of meeting here ~~this year~~ last year and this year, to form a judgment as to the soundness of this condition. Now I believe that it is absolutely met by the way in which knowledge is imparted to us here. As I understand the Battle Creek Idea, what the doctors say to us here is this: We do not pretend that we can cure you, nature will cure you if you will only leave nature alone. All that we can do is this: If you are not well, it means you have offended against nature, and we here are able to tell you, not only the character of your offense against nature, but the extent of your offense. We can determine exactly the degree in which you are abnormal, and by showing you the cause, we can point out to you the road by which you can get back to nature who will take care of you. Now the result ~~is that~~ of that teaching I find is this: That instead of a morbid introspection which my advisers in the old country told me must necessarily be the result of that, instead of that I find a cheery optimism, I find a faith in the patients that they are getting well all the time, that they must get well if they only do what they are shown to do here. That to my mind is the essence of the Battle Creek Idea. At any rate it is the part of the Battle Creek Idea that appeals most to me, and I believe that it is in the dealing with this psychological question, by getting us into the right attitude mentally toward the system, it is upon that that the system will stand I feel, and I feel it will stand and that it will win.

My other criticism is a smaller one, but one in which I do rather believe. I am inclined to think that the doctors here do not sufficiently consider the difficulty that a great many of us have in keeping up the Battle Creek Idea after we leave. They are perfectly right I believe in every principal that they lay down, but they are so afraid that they might weaken their position by making any concession to us that I think they neglect to help us to get as nearly as we can to the Battle Creek Idea when it is impossible for us to follow it absolutely. Of course, if I could live in

this Sanitarium I would obey the Battle Creek Idea in every detail because I believe that it is right. I know that when I go back into public life in my own country and when I am sometimes living in my own house and sometimes in other people's houses, traveling about stopping at hotels, eating at irregular hours and so on, I know it is absolutely impossible for me to do what I am taught here to do, but I can come very much nearer to it by finding proper advice. I can come very much nearer to the Battle Creek Idea than I would if I had not had that advice. I only throw that out as a suggestion to Dr. Kellogg and his staff here that he should make such concession, I won't say to the weaker brethren, but to those whose circumstances make it difficulty, or impossible, for them to follow out the idea in its entirety. I believe myself, and I read in your booklet ~~HERE~~, we ought to eat two meals a day, and I think that that has been demonstrated to be absolutely correct, not only by Dr. Kellogg and his staff, but by a great many other physicians as well, and I was told to-day that ~~the custom~~ that used to be the practice in this institution and that it has been abandoned, and I strongly suspect it was not because Dr. Kellogg had changed his views at all, but because the patients knew that while the rest of the world eats three meals a day, that is the world in which most of us move, that it is impossible for us to get into the two-meal habit because it interferes with our business. I dare say that Dr. Kellogg when he goes to speak will have an absolutely good answer to everything I have said here, and I have made myself disagreeable here because I want to provoke the fierce discussion with our advisers here on all these points.

I have taken much too much time. I was going to speak on the public aspect of this institution, but I see, on looking at my watch, that I have already taken much too much time. Therefore, I shall now say way to other speakers. I am quite sure the interest of some of them is so

much more public. They are men who did not come here for their own health at all or for any selfish object. That is one thing I like about this institution. I have never been in any community where I have met so many men who have realized that the greatest pleasure to be gotten out of life is by the pursuit of altruism. That there is no greater blunder that a man can make ----- I agree that one of the ~~most~~ highest objects of life should be to get the greatest amount of pleasure we can get out of our lives, but if their philosophy of life is to realize that, that although in our earlier years it maybe that there maybe some reward for a purely selfish existence, when we ~~some~~ get older we realize more and more the blunder that we have made. And unquestionably if we want to get the greatest amount of pleasure out of life, we should more and more as time goes on get interested in the lives of others; get interested in the lives of the community; get interested in the great social and economic reforms, because then our interest in life can go on growing and growing up to our very last hours, whereas if we concentrate, even if we came here merely for the sake of trying to improve our own health in order that we ~~may~~ might get more pleasure out of life for ourselves, it will all turn in the end to dust and ashes and we will soon have this gloomy outlook that our miserable lives must become more and more miserable every year.

If I had spoken on the public aspect of this institution, the chief claim that I should have made for it is the splendid work that it does in helping people like medical missionaries, for instance, and other missionaries, people who live for others, in showing them how they can add to the efficiency of their work and their service to mankind.

I thank you.

(Loud applause)

Dr. J. H. Kellogg:

I am sure we have all enjoyed these interesting remarks exceedingly. It is not very often that we have the privilege in this little isolated place of listening to such a man as has just spoken to us, who, I think I may justly say, is the foremost living Irishman, (Applause). Who has done so much for his countrymen and is so large hearted and he is willing to come over here and do something for us.

Now we shall have the pleasure of hearing from our friend, Rev. Mr. son-in-law Mason, a ~~son-in-law~~ of Dr. Stephen Smith, the distinguished New York surgeon who spoke to us a few days ago—and for many years a missionary in India.

Rev. Walter M. Mason:

Dr. Kellogg and friends, I could wish that I were as well prepared for such an occasion as this or as well qualified, I might say, as the Hon. Mr. Choate for almost any occasion which he had to meet, and once while he was our representative in England, I believe he attended a public function at the home of an English gentleman, and at the close of the function he happened to be standing near the door before returning to his home, and a young Englishman accosted him: ~~say~~ "They call me a Cad" Mr. Choate said, "You are a Cad" and the young Englishman returned to his host in high bludgeon saying, "I have been insulted in your home. One of your porters as called me a cad." Of course the host was very much disturbed and proceeded immediately to find which porter was responsible, and as they approaced Mr. ~~Choate~~ Choate at a ~~ex~~ distance the young man said: "The gentleman standing by the door is the one", and the host in much amusement said, "Why, my friend, don't you know who that is? That is the Hon. Mr. Choate, the representative of the United State", and then, of course, an apology was due to Mr. Choate, so they proceeded to Mr. Choate and the host expressed his deep regret that one of his guests should have been so rude, and the Hon. Mr. Choate said, "It was all right, He requested me to

call him a caā, which I did, and if I had thought quickly enough, I would have been delighted to call him a hansom cab.

I have been asked tonight to give my impressions of the Battle Creek Idea. I feel as well prepared to do that as I have sometimes been inclined, as a resident in the East, to think that some who travel around the globe feel themselves qualified to pronounce upon the conditions in the East. I have been here two weeks only, and unfortunately, I have not entered into the life of the institution as much as I would have had I been taking treatments myself, and so I feel that whatever I say tonight will be quite superficial. I did not intend to speak in criticism, although I doubt not that there are some among us, perhaps, many who think that they could offer suggestions and criticisms, perhaps more in regard to details than as Sir. Horace Plunkett has spoken, of which suggestions if they were observed would add greatly to the efficiency of the institution, but as I say, I hardly feel in a position to do that because of the brevity of my acquaintance, and also because I stand more or less as one outside. But looking at the spirit of the institution as a whole and its work as I have seen it in these few days, one thing has especially impressed me and were I to sum it up in one word, it is the sanity of the institution. Now some of you may think it is rather strange that the sanity of a Sanitarium should be questioned. It would seem strange to anyone, and perhaps to us by contrast from my experience in any ~~sk~~ institutions, or with other institutions, that that particular thing has struck me as I have been here. The sanity of the administration, of the method of procedure ~~procedure~~ of the whole conduct of the institution has struck me as very remarkable. I think it is sane, particularly sane in the means used for its desired end of any other institution where every known means is used. We have so-called Sanitarium, but they are usually for some one purpose, perhaps one disease, where some one method of treatment is used, but here where the field of knowledge is ransacked and every latest discovery is used ~~is~~ it seems to me a wonderful example of the sanity of the leaders

and notwithstanding that there is not another institution which has such a large force of physicians and surgeons and which covers such a large field, which seeks to deal with so many diseases and maladies, I have been struck with the sanity of the recognition of the limitations of human knowledge and power. It seems to me that that is a great indication of sound judgment--that there are things that cannot be done with the best medical science. In the words of Dr. Kellogg just last night, we remember, when he said that no amount of medicine or treatment will make amends for continued wrong doing. Perhaps as a preacher that side appeals to me more than another, but I think it is sound in the extreme and sane.

With regard to the use of means, the people among whom I have lived more or less for some nine years of my life, both as a boy and a missionary, have the practice when any of them feel ill that they will try, somewhat hastily perhaps, waiting only one or two days for a remedy--they will try first one remedy, then another, then another and, of course, during a week or so their list of treatments and remedies is exhausted, and if the patient shows no signs of recovery, then all treatment is abandoned, his day has come, and he is left to his own resources which soon means, of course, that he dies. The idea being that there is a place where human power ceases and will leave all the rest in the unknown. And the fact that here every possible human instrumentality is used to push that ignorance, that conjecture, that uncertainty to the limit, it seems to me is very, very, sane. But in the second place, the sanity of the ends sought it seems to me is remarkable. We all come here, the most of us with some trouble probably, but the aim, as I understand it of this institution, unlike those of most other institutions, is not merely to cure them of one disease. It is to cure the disease incidentally, but it is to so build up the whole system that the individual may be prepared to resist, not only that disease, but all diseases. The outlook, the aim, the purpose is so much larger, such a

sane wholesome view of life, and lastly the sanity, the wholesomeness, the saneness of the attempt to use the laws of nature, as Sir. Horace Plunkett suggested, not merely some one drug or medicine, some one line, but to reinforce the laws of nature and so to use the powers that have alone been granted to us. The whole atmosphere and purpose and spirit has appealed to me as remarkably sane and sound. As I said in the opening, there may be criticisms, there must be suggestions that would be of value, but I think that if we cherish this alone we are liable to lose sight of these greater things, the larger purpose that dominates the whole, and I for one, as an observer and not as one who is vitally interested in the work of the institution, I am devoutly grateful for this phase, that I feel here that we can depend upon ^{the} saneness physically, intellectually and spiritually of the management of the institution. (Applause)

Dr. Kellogg:

Away up in the Northwest there is a big farm. If you wanted to go around this farm you would have to ride twenty or thirty miles in one direction, then several miles in another direction, and then go on around the rectangle. It is a farm of eight square miles, really a little country by itself. The king of this great farm, of this inland kingdom, is the guest with us here in this house. We will have the pleasure next of hearing from Mr. G. S. Barnes who presides over this great Dakota farm.

Mr. G. S. Barnes:-

Mr. Chariman and friends, and I might say, neighbors, because I have a great many neighbors who live in the same flat that I do on the Fourth Floor, and I feel very friendly to a great many of them, and I presume to those that know me best, they are rather surprised that I appear before you tonight. I

do not think any person in this audience was more surprised than my good wife was when she read the notice on the blackboard that I was to appear before you, and I noticed that she has not been quite so happy today as she usually is, and I noticed that she thought of me right up to the moment when I was about to come down the stairs, and she made this remark, "Now, George, you know you are not very well; you know that you have a little heart trouble, and do you think it is wise for you to go down there and make an effort tonight?"

Well one thing that has induced me to come,--perhaps, one of the main things is that my mother taught me in the early days to try and be in good company. That is one of the things she impressed me with. I looked at the list on the blackboard and I found some of the best company that I have had the pleasure of being in was one of the ones that was to take an active part, Sir. Horace Plunkett. I have had the pleasure of being invited with him to take a trip to Lansing, and I found it was very profitable to be in his society. I was entertained by the Governor, received at the Capitol, taken from there over to the Agricultural College, dined and feasted and taken through the building, and I made up my mind that I was going to hang to his coat-tails just as long as he would let me. Now that is one of the reasons why I appear before you. Now I am not placed in the same position that Sir Horace Plunkett is and that my friend Mt. Mason is--they are known orators. I am simply known as a common every day farmer, and who ever heard of a farmer being called to the front. But in our Section we have been very much interested in reciprocity, and James Hill was sent for to come down there and help us, and I feel very grateful to think that I am thought enough of here that I can say a few words which may embarrass my good wife.

In the first place I am not in the same position as my friends that have spoken here, for I have been shamefully abused, probably I am the one that received the most and the worst of anyone that is in this audience, and I feel it, and I have been here each night to listen to our President in hopes

that I could hear something that would not be aimed at me. As I am a farmer, and of course, being a farmer I try to be a good farmer, and I raise the meat, I raise the steers, I raise the pigs and I raise the chickens and I raise the things that we must not eat, and I sometimes get ashamed of it, and my wife, even she has got so humiliated that she said to me the other day, "George, don't you think you ought to change your business?" I said to her, "You know that you and I are a good deal alike in our religious point of view. We believe that the sinner gets punished pretty bad in this life. Now, perhaps, I am the one that is raising the articles to punish the sinners." I am reminded of how the Doctor talked about some of the things that I raise in his last lecture. He compared some of my fat nice little pigs to a mummy, and I heard him refer to-day to the Armour Packing House where some, I suppose, of my fat carcasses may be, as a morgue. Last night we had exhibited here in your presence, which I assure you I was a little alarmed at, and it looked very suspicious when the cork was drawn for fear it might drive us out. I do not know what he might do when this strip of beef was shown. This beef was the flank, I think, of an animal we do not eat. It is so though it cannot be eaten. The flank I do not think is thick enough after the skin is taken off to spoil, and I think the Doctor was really disappointed, and I think that on that account I could see kind of an expression of disappointment go over his face.

In the bible we are told in the commandment, which has been quite a stumbling block to me, that we must love our neighbor as ourselves. Taking this home, I have two kinds of neighbors. I have one that if one of my pigs got over on to his land, he immediately rushes over for damages. I have another that if some of my stock gets over on to his land, he never comes near me. I feel guilty, however, and I go over and see him, and he says, "Never mind, that the probabilities are that you will be paid off in the same kind, and it is all right." Now I look upon him as my neighbor. It is pretty hard for me to look at the other man as my neighbor.

Now I have been to this Sanitarium all told about six months, and I look upon Dr. Kellogg as my dearest neighbor. You will think that strange after the remarks I have made tonight, and perhaps I will have to explain. Some twenty odd years ago I broke down in health very seriously by overwork and

doing just what he teaches you here not to do, and I went to visit the great skilled doctor of the age, Dr. S. Weir Mitchell. I was broken down and in a nervous condition and my stomach was accordingly bad, and the doctor told me it would probably take me a month or two to get rid of the medicine I had been taking; that I did not need medicine, and it was there that he ~~gave me the exchange~~ ~~from~~ got me to change from medicine to massage treatment, the first that I ever knew of. And I was sent abroad, and it probably cost me in the loss of business and the money that I spent to get back and build up the business again, I should say, at least Fifty and perhaps, a hundred thousand Dollars. I returned, went into business and still I found that a very little would bring me back to that same condition. A little too much work, a very little worry and I was back where I was in the first place. I had heard of the Sanitarium and many of my friends who had been here wanted me to visit this place, but I looked upon it as a sort of a hospital, and I was afraid that I would come here and see so many invalids in chairs and in bed and in a rundown, sickly condition that it would not be just the thing for me, but at last, as a last resort, I came here. I was rather unfortunate in my arrival in not accomplishing just what I want to do. I had been lead in my business career to see the head of the concern that I had business to do with in order to get at just what I needed, and I came here and Dr. Kellogg was the only man that I wanted to see, and I expected to see him. I was taken into the office and I wanted to know how long it would be before I could see Dr. Kellogg. They said, "You will have to take another doctor, than later on you may see Dr. Kellogg." Well, I said, "I don't want another doctor. I can't see Dr. Kellogg, and if I can't see Dr. Kellogg I think I will go home." Well it resulted in my getting a Doctor and I am very happy to say that it was very fortunate for me that I saw that Doctor because he has been to me what few have ever been to me in the past. He has been my doctor; he has been my friend; he has been patient and he has worked and he has helped

with the balance of the good things that I have had here at this institution, to bring me back and restore my health.

Later I had the privilege of seeing Dr. Kellogg. Up to that time I had not had very much information as to what my trouble was. I was very anxious. The Doctor came in. Perhaps some of you have had the experience of his coming in. I was stretched out on a cot ready, and he came in and he went over me just like all of you that have had massage treatment, it was just like the finishing touches your masseur gives you on the spine, and he says, "Mr. Barnes, you have got a bad case of autointoxication", and he was gone. I rushed to my Doctor. I said, "Doctor, I am worse off than I thought I was. I said the Doctor said I have got a bad case of autointoxication. What is that?" He smiled and he says, "Well if it isn't any worse than that, we can cure you. I was taken from there up to have a test. I presume some of you had that test. I was taken to the table, a dietitian ~~EXX~~ gave me certain things to eat, and I quite well remember that among other things, ^{day} was one ~~that~~ I was not to have any salt, and I had forgotten just when she told me that I must not take salt, but through mistake I used the salt. She came along and discovered that I had used the salt, and she said, "Did you use that salt?" I says, "Yes", very meek. "Didn't you know you ought not to do it?" I said, "I forgot the time." She says, "I think you will have to go all over it again." I said, "I think if I do I will go home." She was a very kind hearted woman and she let me remain. A gentleman was sitting at the table who came on the same train with me, - a stranger to me, and after we got through we compared notes and we thought we had fallen in with a lot of cranks and we began to talk it over and the more we talked it over, the more we knew it was so and I wrote home to my family--I have two grownup sons--I appealed to them. I wrote to my wife and I said, "Do find me a place to go somewhere else." I said, "I came ~~HERE~~ pretty nearly being discharged from her for a pinch of salt." Well the result was that this new found friend of mine and myself

with me is now I am afraid to go back. I am afraid you have not done what you think you have! And I staid here a week to try it. I didn't take any treatment. I went home and I followed out as nearly as I could the Battle Creek Ideas in living and in other ways, just as nearly as I possibly could. My dear wife was not quite so sensitive at that time about the keeping of animals to kill and use as she is at the present time, and now it would be a perfectly easy matter, I think, when I go home to live right up because I heard her say to a person that she was going to follow and live in her house as nearly as possible to The Battle Creek Idea.

Now, my friends, a little word of encouragement that I like to give, and I talk to a great many new people, and I have learned to forgive Dr. Kellogg for his whims, which I have been taking to myself. When we stop to realize that every week that the Doctor speaks he is speaking to one-hundred and fifty newcomers to this institution. If you will look on the register, you will find that there are about one-hundred and fifty new people, and he has to talk to those people to keep them up to the plan. The only trouble with a few of us is, perhaps, we stay here too long. Now I have learned and I feel that he is my neighbor. I have not only learned that this institution is the greatest in the world for healing and curing the sick, but I find in this institution the most remarkable thing that has ever been known in my history of the care and attendance that we ~~received here of the good nurses~~ receive here of the good nurses that take care of us--and I learned through the the information office, that it takes about one person to the individual to care for us, to feed us, to doctor us and give us the good care that we have at this institution, and I must say that I have been here six months. I have been in all parts of the institution, and I have never seen anything out of line, out of what would be perfectly satisfactory in the best of your & families, from anyone of these good people that have us in charge. Your attendants in your bath-rooms and the attendants at your tables, and it is a most remarkable

thing to me because I have come in contact with so many of the laboring people that I know from home experience ~~it is~~ one of the most trying things that I have to contend with in my business is the help that I have around me. Now what is it that brings this about? To me it has been the greatest lesson of the good teaching of the bible of anything I have had during my whole lifetime. I think we can sum it up in the ^{good} teachings and the good influence that is thrown around them in this institution as christian people. I think that the influence that I can take home with me is worth everything. Now we hear once and a while a little criticism about the expense of this institution. I am happy to say that I can be one that can give a little towards what is paid out here for charity and taking care of those who are not able to pay anything. We must bear in mind that the most of you, I think, if you went to an hotel in the city, the chances are that you would stop at the best and the most of us would want to have pretty good accommodations and we would select a kind of a room and baths that we have been in the habit of having at our homes, and we would pay accordingly, and we would not think anything about the expense. It would cost me if I went to Chicago and stopped at an hotel and received the care I am receiving here--I would not get out of it short of \$12.00 a day for myself and my wife. Now we are not only getting the good living--it is good to me-- and the care of the nurses that take care of us in our rooms and in the building, but in addition to this we are getting some of the finest lectures that you could obtain if you lived in Chicago or New York from the brightest minds, and lectures that do us all good. Outside of that we are getting entertainment. Do you realize what pains has been taken here? One of the main duties of this institution is to furnish entertainment that we keep properly entertained, and they don't stop at cost. They get, as we all know, some of the best that can be had. Now I have a little memorandum here. They treat in this institution over 5,000 patients a year. They have from seven-hundred to eight-hundred from now until later, we will

for a month, probably more the next month when it runs up from ten to twelve and fourteen hundred, and with that they have to have about an equal number of attendants. Now in addition to that, you have in this institution a doctor that is glad to see you at any time when you call upon him to give you his prescription and care for you, and when you stop to think of the number of doctors that you have in the ladies' department, and when we as men stop to think of the number of doctors that we have in our department, and when we realize that the same patients that are coming here are probably about as big cranks as we were when we came, and when we think that ~~we~~ these dear people are taking care of 5,000 patients a year, these dear doctors, and do it in the way they do do it, we ought to give a helping hand and let us one and all decide tonight that we will try to do our best to encourage, not only the patients, but to encourage the doctors as well, that are doing so much for us in this institution. That, my friends, is why Dr. Kellogg is my good neighbor.

(loud applause)

Dr. J. H. Kellogg;

We have had the opinion of an economist about the Battle Creek Idea, and of a missionary, and of a farmer. They have all given us very helpful suggestions and criticisms and demonstrations, and now we will have the pleasure of listening to a lawyer. We shall be glad to listen to a lawyer's views of the Battle Creek Idea.

Mr. Coniff:

Mr. Chairman, ladies and gentlemen: I can give you a practical demonstration of what the institution can do for you in three weeks. I have no doubt those who spoke to me ~~x~~ tonight, at the last moment almost, to

take the place of Judge Owen, were surprised at the promptness with which I accepted the invitation. It is the nerve that I have acquired here within the last three weeks. I have got nerve enough now to even aspire to be a judge and to take Judge Owen's place in some other capacity. I am supposed, ladies and gentlemen, not to have anything particular to say tonight, but rather to sum up what has been said. I understand Judge Owen is accustomed to that and it devolves upon me tonight to demonstrate whether I am good timber for the Bench or not in the manner in which I do some summing up.

Sir Horace Plunkett spoke first of the Battle Creek Idea to such an extent that he reminded me of a little incident in "Get Rich Quick Wallingford". I suppose many of you have heard that. I thought we all came here to knock. I thought that each one of us here was supposed to say exactly what he tells his neighbor quietly and keeps as far from Dr. Kellogg and his own physician as possible, but when I heard Sir Horace Plunkett and the Rev. Mason and Mr. Barnes, like the Committee that went to tell Wallingford what a rascal he was, we are all going out to buy Dr. Kellogg a loving cup tonight.

Now I think the best summing up I could do is this:--and I got it out of all that has been said. I believe that there are among us those who feel that they are not doing as well as they ought to do, they are not doing as well as their neighbor who seems to be afflicted with the same thing, and therefore, naturally that is charged up to this institution; it is charged up to the particular physician who might be in charge of his case. Now that is knocking, it is permissible knocking, of course, it is natural. Now why don't you go and tell Dr. Kellogg that instead of telling me? I cannot help you. Why doesn't everybody who feels that he is not doing just as he ought to do here, that may either occur from treatments in the bath-room, or from being jostled in the

elevator, or because an explosion takes place that some of us might have known of in advance and didn't tell to Dr. Kellogg. The thing to do, my friends, is to go to headquarters. It wont do for me to tell my troubles to my neighbor. He can't help me. We are all good listeners and we are so so natural in our assenting to what our neighbor may say. I think we ought all to determine tonight to send our neighbor to headquarters, that is the place to have him go to. ~~Now it is rather~~

Now it is rather inopportune that I should be selected, never having been at the institution before, but my friends, if this institution will do for everybody what it has done for me, enough cannot be said of it. Sir Horace Plunkett said somebody complained of the institution because it makes us think too much of our insides. Three weeks ago I did Not think very much of mine. We were not on speaking terms at all. We were going in opposite directions, but now we are the best of friends. Why, I can whistle all the time. I could sing all the time,--perhaps not much to your gratification, but I could do it if you would let me. I could do almost anything. I am going home to disobey the saying of a good wife that often comes to me, that she hopes I will get serious before the children get old enough to imitate me.. I am afraid I am not going to do that after leaving this institution. In the gymnasium I run ahead of the music, and I am terrbly disappointed when some lady does not grab me when I am on the inside in the march. I feel that I am the only fellow there. Now that is real optimism; that is the thing that counts here; that is the thing that immediately reaches you the moment you step into this institution. You hear the music; you see the joyful faces. Why, a man tells me every day he is not getting any better. I said, "That is not so". I meet him every day. I say to him, "You look better, you walk better; so you are better." That is the spirit that prevails here.

Now Sir Horace Plunkett has suggested that somebody says they expect us to do all this when we leave. I doubt that, I doubt that. I think that

the treatment here means this: It means that out of this systematic method that has been instilled into us here, we get such a good start that we do not need all of it? If Sir Horace Plunkett has any serious doubt about this and will leave this level country and come down into the West Virginia hills, I can furnish him all the treatment at the same time. I will furnish him a very steep hill within a moments walk of where I live. I will give him the walk. I will give him the Turkish bath by the time he gets to the top of the hill, and I will give him gentle zepthers there that will beat any massage you ever was in your life, or had. There is the combination. We cannot, perhaps, have it in this level country. We are not expected to keep up all of these things any more than we are expected to take these menu cards home and order everyting on the bill-of-fare for every meal. Out of this systematic, classfied training thar we receive here, we are expected to select those things that agree with us. Just as the little child's brain is trained at college by many things which is never used in after life, but he is made methodical, he is given the proper start, then he can select from those things the thing which nature has made best for him, and when we go, let us keep up the optimism. I have a lday friend at home who complains a good deal. She thinks she is sick all the time, but occasionally I find her very well, and I say: "How are you?" She says, "I am find, but then when I feel very good it makes me sick to think I might get sick again." Now we don't want to go away with that feeling, my friends. We want to ~~inoculate, and inoculate, and inoculate~~ be inoculated, and inoculated so thoroughly with the cheerfulness that prevails here, that it will not leave us.

Now the only other thing I ought to call attention to is the fear that Mr. Brown has that he is raising an objective substance out in his country. Now the only consolation for that is ~~when~~ what we often say to those who are afflicted--those of us who feel depressed and feel aggrieved, feel

we have had tribulations--if we would only look around and see somebody else a good deal worse than we are. And I can give Mr. Branes a good deal of consolation that I heard from Dr. Kellogg's lips the other night--"Your meat is not in it with oysters." (Applause)

Mr. Brown complains of one neighbor upon who his pigs trespass who claims damages. He thinks the other fellow is his real neighbor because he lets matters go. Now, Mr. Barnes, if your neighbor ~~upon~~ on the left upon whom your pigs trespass does not want damages, what would you expect my profession to do? (Applause)

Now I believe that is all the summing up I have to do. I do not think there is anything else, but I have here with me, and I cannot refrain from giving to you, in another form The Battle Creek Idea. It will probably take me three or four minutes to give it to you. It is exactly the idea that prevails here. It was found among the effects of a man who died in a Sanitarium. I wont comment on it because it speaks for itself.

"I, Charles ^{W. P.} ~~Lonsbary~~ ^{Lonsbary}, being of sound mind and disposing memory, do hereby make and publish this my Last Will and Testament in order as justly as may be to distribute my interests in the world among succeeding men.

"That part of my interest which is known in law and recognized in the sheep-bound volumes as my property, being inconsiderable and of no account, I make no disposal of it in this my Will. My right to live, being a life estate, is not at my disposal. But these things being excepted, all else in the world I now proceed to devise and bequeath:

"I give to good fathers and mothers, in trust for their children, all good little words of praise and encouragement and all kind of names and endearments. And I charge said parents to use them justly and generously as the needs of their children may require.

"I leave to the children ^{successively} ~~successively~~, but only for the terms of their

childhood, all and every the flowers, fields and the blossoms of the woods with the right to play among them freely according to the customs of children, warning them at the same time against thistles and thorns. And I devise to the children the banks of the brooks and the golden sands beneath the waters thereof, and the odors of the willows that dip therein, and the **white clouds** that float over the giant trees. And I leave the children the long, long days to be merry in in a thousand ways, and the night and the moon and the eternal milky way to wonder at, but subject nevertheless to the rights hereinafter given to lovers.

"I devise to boys jointly all the useful idle fields and commons where ball may be played; all the pleasant ponds where one may swim; all sun-clad hills where one may coast, and all streams and ponds where one may fish, or where when grim winter comes, one may skate; To have and to hold the same for the period of their boyhood. And all the meadows with the clover blossoms and the butterflys thereof, all woods and other apputtenances, the squirrels, birds _____, strange voices in all distance places that may be visited, together with the adventures sometimes there found. And I give to said boy each his own place at the fireside at night, with all pictures which may be seen in the burning wood to enjoy without let or hindrance and without any incumbrance of care.

"To lovers I devise every imaginary world with whatever they may need, with the stars of the sky, the red roses by the wall, the bloom of the hawthorn, the sweet utterance of music and ought else ~~that~~ ^{they} may desire to figure to each other the lasting beauty of their love.

"To young men generally I devise and bequeath all boisterous, inspiring sports of rivalry, and I give to them a disdain of weakness and unbounded confidence in their own strength. Though they are rude, I give to them the power to make lasting friendships, and to them exclusively I give all various

songs and trained choruses to sing with lusty voices.

"To those who are no long children, or youths, or lovers, I leave memories, and I bequeath to them the volumes of poems of Burns and Shakespeare and of other poets, if there be others, to the end that they may live over the old days again freely and full and without tithe of diminution.

"To our loved ones with snowy white crowns I bequeath the happiness of old age, the love and gratitude of their children until they fall asleep.
(Loud applause)

Dr. Kellogg:

We have been so delightfully entertained, I am sure it would be better for me to say nothing at all, fearing I should introduce some discordant note, but just one or two words, I might say, in elucidation of some of the ~~thought~~ ^{facts} that have been offered here. One with reference to the program. Whether this program that is carried out here is a practical thing to be carried every-where else. Of course not. It is not expected that the people who come here are going to do at home everything that they do here. We do not expect that everybody---will. In the first place we hold up what we consider to be the ideals of right living. Now every one who becomes converted to the principles, who becomes convinced of the truth of these ideals, we think naturally he will do the best he can to conform to them. But there is a little more that might be said about that. This place is a sort of penal institution where people are punished more or less for their wrong doings. What our catholic friends from a religious standpoint might call a retreat where people retire to do works of supererogation. We do not expect that everybody is going to undertake to carry out the full program when they go away. And still we do hope, we have a sort of lingering hope that a considerable number of those who come to us here and spend a time with us will,

when they go away, endeavor to live up pretty closely to the dietetic rules of this institution, because we are trying to start a reform in the world, we are trying to start the beginning of a new and a better race of men. That is why we have our Physical Culture School that you saw exhibiting some of their agility in the gymnasium the other evening. The principal reason of that is to pick out a few healthy people. We do not expect to be able to make very much out of the poor sick men and women who come here. We hope to patch them up so they can live a little longer and a little more comfortably, but we cannot make you young again; we cannot repair all the damages which disease has done. So we have our Physical Culture Department here for which we select splendid young men and women, the very best we can get, with good sound bodies, and we hope to give them a good start, not only with a good physical development, but after that, in general ideas of good living, and we hope to inspire a few people who come here at any rate, with the rightness of these principles to such a degree that they will endeavor to carry them out at home so as to set an example to their neighbors and to start ~~in~~ a new order of things in their community among the people with whom they come in contact.

I must say a word with reference to Mr. Barnes's remarks. Some of his very gentle admonitions I appreciate very much and will try to profit by, but I must tell you it is one of the steady purposes of this institution, one of my own daily earnest studies is how to eface myself just as much as I can and to keep myself out of sight as much as I can, because I do not want this Battle Creek Idea to be based on me. I have from my boyhood known that I was only a frail body. I was not considered worth raising when I was a child, and, in fact, I have always expected to die very early, but I have gotten beyond that now. A lady told me today that I looked like sixty. Really I do not feel that way and I do not intend to feel that way for sometime to come yet, but the time will come when I shall have to depart. We all have to go

and my constant thought has been how to build this institution up, how to establish this system so that I would be not at all indispensable to it, so that I could slip out and get away when my time came to retire without making any shock, without making any disturbance. So the doctors ~~in~~ that have come into this institution have all been trained up in it from the very beginning of their experience. We have not a single doctor in this institution that did not grow up in it, that did not come into it in the first place getting the elementary ideas and becoming thoroughly in sympathy and in harmony with the principles of the institution, before gradually acquiring medical skill and knowledge necessary. Most of the doctors in this institution were trained in our own medical school across the road, but afterwards, of course, they were submitted to the same tests that other medical students are, so that they were known to possess all the qualifications required for physicians to practice anywhere, under any auspices. So we are working here you see, not each man according to his own idea or his own system, but each and all working in harmony with the same system. When a doctor makes a prescription, if the patient should go to another doctor, he would get essentially the same prescription. One might prescribe a wet sheet pack and another a wet sheet rub, but the two things would accomplish just the same thing. They are simply different means of accomplishing exactly the same thing. The prescriptions of diet and the baths and treatment, the general principles on which we work, are the same throughout the whole institution. This is one of the places where doctors do not tread on one another's toes/ It is one of the few places you can find in the world where there are a whole lot of doctors working together in the same institution, in the same work without any rivalry, without controversy, without any disturbance, without any private quarrels because we are doing the most thorough-going sort of keen work, and my plan is to get out of sight and keep out of sight just as much as I possibly can. I know in the first place that I am not

necessary. I could leave the institution today, and I feel rather grateful and rather proud that this is true--that I might drop out and go away and the work would go right on just the same. There would not be a ripple because the principles now are so well established and so well worked out and the system is so thoroughly developed that all in the world we have to do is to turn the crank, so to speak, because the thing is all here. The diet system has been developed, our system for examination and our system of treatment is all worked out so thoroughly that those who are here and working in that line ~~for~~ very soon become familiar with it, so we are all working in the same line, in the same way, so I am really not essential at all. I am glad my neighbor, Mr. Barnes found it out. He came here thinking Dr. Kellogg was the whole thing, but he discovered, within a short time that there was another man here who is a better man than Dr. Kellogg. When he got acquainted with him, then he did not care to see me at all and when I went into the office to see him I saw he did not care anything about seeing me, so I got away just as quick as possible, you see. That explains the brevity of that interview, and I have his own testimony to the fact.

But I must not prolong this interesting session we have had here. There are things that might be talked about a good while, but we have heard these very interesting remarks, and this very wholesome criticism, and these suggestions, and as I said, we shall try to profit by them, and we hope to have another symposium here.

How many would like to have another symposium in four weeks? Hands up, every one who approves of such a plan. I see that it is not necessary to take a negative vote as all are favorable, so we shall thank our friend, Sir Horace Plunkett, for having established a new order in the institution, for having added a new item to our program, The Sanitarium Symposium.

Now we will say goodnight. I thank you very much.

WOMEN'S DRESS

A Stereoptican Lecture at the Sanatarium Parlor,
Battle Creek, Mich., Thursday Evening, Feb. 22, 1912, at 8 P.M.

by

J. H. Kellogg, M.D.

I am going to talk with you tonight on a subject which is of universal interest at this season of the year. The first of March is almost here, and then you know the fashions change, so I am going to talk to you tonight about fashions- about ladies' dress and the awful consequences of the conventional dress. (Applause) That handclapping was all done by the gentlemen, I know, and they know that the ladies' dress needs to be reformed. Now, as a matter of fact, there is a chance for reformation in men's dress as well, and I would not speak upon this subject if it were not for the fact- I would not feel quite free to speak of it, at any rate, if it were not for the fact that at the present time a woman can, if she desires, dress more healthfully than a man can unless he makes a wide departure from the ordinary fashions. It is possible for women to dress as healthfully as the men dress, and a little better. There have been such great improvements made in women's dress in the last forty years that there is no longer any excuse for any woman dressing herself in an unwholesome way. If she does, it is because she is willing to sacrifice health and bodily comfort to miserable fashion.

Do you know why fashions change? Do you know why it is that fashions change every six weeks or every three months according to the state of society in which you move? Do you know the reason for it? It is not because clothes wear out- you know that perfectly well. It is not because you have to have new gowns so often. It is because there are certain manufacturers who do not know any other way in the world to keep their looms going. That is the reason, and because there are certain establishments where clothes are made

necessary. I could leave the institution today, and I feel rather grateful and rather proud that this is true--that I might drop out and go away and the work would go right on just the same. There would not be a ripple because the principles now are so well established and so well worked out and the system is so thoroughly developed that all in the world we have to do is to turn the crank, so to speak, because the thing is all here. The diet system has been developed, our system for examination and our system of treatment is all worked out so thoroughly that those who are here and working in that line ~~for~~ very soon become familiar with it, so we are all working in the same line, in the same way, so I am really not essential at all. I am glad my neighbor, Mr. Barnes found it out. He came here thinking Dr. Kellogg was the whole thing, but he discovered, within a short time that there was another man here who is a better man than Dr. Kellogg. When he got acquainted with him, then he did not care to see me at all and when I went into the office to see him I saw he did not care anything about seeing me, so I got away just as quick as possible, you see. That explains the brevity of that interview, and I have his own testimony to the fact.

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that do not know any other way to keep the money flowing into their tills as rapidly as they would like to have it flow. It is simply a commercial scheme, and absolutely nothing else in the world ~~than~~ but a commercial scheme to compel people to spend money for clothes that they do not need to spend. Why, it has gotten to a point where people that are right up at the top, in the head of the procession of fashion never can wear a gown but just once. They wear a gown once, and then they must have a new one, and perhaps it is fortunate for some poor people that other people are willing to spend their money in that way for it is one of the ways in which money is distributed. Now, take a look at this picture here. Is not that a graceful dress? Isn't it a graceful gown? It is beautiful, and notice how easy and how comfortable it is. You ladies say "Oh, such a ridiculous gown." Now, I want to say to you, that ~~in~~ everyone of you put on that kind of a gown when you know there is not anybody coming to see you, and you know you are not going to have any company and are going to have an afternoon all to yourself; then that is just the sort of gown you put on- a dressing gown, and how comfortable it is. When one wants real comfort, she puts on a dressing gown. When I go home and get ready to go to work, the very first thing I do is to get my harness off and get on a dressing gown, a suit of pajamas and a dressing gown; then I just go to work and I work until morning many a time because there is not the least thing to disturb me. There are not any disturbing impulses; my brain is absolutely free for work then, and these horrible suspenders and these miserable belts and these unnecessary pressures of all sorts, shoes, stockings and these things- one is entirely rid of the whole thing, and then can be natural and free, but now think of the awful harness the average woman is wearing. What terrible fetters she is subjected to. But these women do not know anything

about it. They are just as comfortable as their husbands are. These are Indian women from Old Mexico or the southern part of New Mexico. The first picture that I showed you was of the old Greek costume. You see pictures of them in all the old picture books. Here is an Eskimo lady and isn't that a fine dress she has on? Isn't it easy and comfortable- just adapted to her own country and her climate. It is a dress adapted to the conditions under which she lives and she is just as comfortable as her husband is. That little girl from India has a splendidly developed body, is able to carry heavy loads on her head, to toil away all day. Every limb and every muscle is absolutely free to move, has not the least bit of constraint. These Chinese women with those scowling babies on their backs are certainly not in the least degree hampered by their clothes. They are barefoot because they do not need shoes. Their feet are tough and hardy, and just look at those toes. They can pick up things with their toes, if they want to. A Chinese woman holds her work with her toes when she is sewing. She holds the seam with her great toe, ordinarily. Their toes are prehensile, so that they can seize things. The same is true of the Japanese. The Japanese surprise foreigners with the agility with which they climb about steep roofs. They run all over a steep roof where an American would not think of going. They cling to the roof with their feet which have not been spoiled with tight shoes.

Here is a lovely picture- an Indian woman. See what perfect freedom she has for every bodily movement. She is clothed in a garment of skin, graceful as well as healthful.

Those are three Egyptian girls who were at the World's Fair at Chicago, in 1893. I got their photographs at that time. The Midway Plaisance was a very interesting place to me because I saw people there of many different nationalities, and there were more than twenty nationalities represented there of people from uncivilized countries, and there was not a single example of an uncivilized heathen woman wearing tight clothes. Not one

of them wore corsets, tight clothes, or tight bands of any sort. These girls were wonderful gymnasts. There was marvelous power in these muscles of the trunk because they had absolute freedom of movement in those muscles, and these girls did not know anything about any prolapsed stomach or prolapsed liver. They knew nothing about troubles of that sort and could not have them with the kinds of dress they wore. See what splendid waists they have. Why, their waists are as big as men's- bigger, in fact, and they ought to be. A woman has naturally a larger waist than a man. I heard two ladies over here take a deep sigh. All the rest of them would have taken deep sighs, too, if they had had room, but there was not any room for a sigh. Now, it is a positive fact that women have naturally larger waists than men. I proved that twenty years ago. I was out among the Yuma Indians of the Southwest, and I got a letter from the Indian commissioners at Washington and I roamed around among the Indians out there in Indian territory, New Mexico and Arizona and I measured scores and scores of Indian women and Indian men, and I found that Indian women had the larger waists. The Indian man had a waist 45.6% of his height, while the Indian woman had a waist 47.4% of her height- almost half the height, you see. Well, I was not surprised at that because I had already measured the waist of a large number of ancient Greek models- the Venus di Milo for example, which is 47.6 of the height in waist measurement, and I found the Indian women down at Fort Yuma who had never worn clothes at all- well, they did wear clothes; they were very modestly clad in little bark gowns about 9" x 12", tied with a string around their waists, and they were exceedingly modest women, too. They had never worn any kind of clothing that could trammel the movements of their bodies, and these women had exactly the proportions of the Venus di Milo. You could hardly find such a thing among civilized women. If an artist wants to get a civilized woman to pose as a model for him,

he cannot get a woman who is suitable in all respects, so he gets one woman for a foot, another for a hand, another for the shoulders and another for some other part of the body. He often has to get a dozen different women to make up one symmetrical woman, but that is not so if you get out among these native people. You find splendid, complete women. This woman, for instance; what splendid proportions she has, and this woman; what a magnificent physique she has. That woman knows nothing about diseases. She is thoroughly well. I was so much interested in this subject that afterwards I went to Cairo, Egypt, and had an opportunity to study there the people from away up the Nile and from other parts of northern Africa and from different parts of the world. There I found that in Cairo- which is a wonderful cosmopolitan place, more so than any other place you can find perhaps in the world- ~~that~~ I had the opportunity to measure scores of people there, and I found the proportions just exactly identical with those of Venus di Milo, but you could not find such a thing as that among civilized women. The average civilized woman instead of having a waist measurement 47% of her height has a waist measurement somewhere about 35% of her height. The average woman who is five ft. and six inches tall ought to have a waist measurement of 32 inches. Did you hear the ladies taking a deep breath, or trying to, I mean, trying to take a deep breath ~~out~~ that thing? 32 inches- just think of it. I was talking to a girl one day about her waist, how she ought to expand her lungs, etc., how she ought to have a chance to breathe. She said "If I had such a gown would I breathe like that?" I said "Yes, of course you would." She said "Well, I will never do it in the world; I will never do it in the world." "Why not?" I replied. "Why, all of the girls would point their fingers at me and say 'See, she breathes like a man'". She thought women had not any right to breathe like a man, but that is one of the inalienable rights that women ought to be clamoring for. It is far more

important for women to have the right to breathe and the opportunity to breathe, far more important than for them to vote. If they would exercise their right to breathe as they ought to exercise it, it would not be very long before they would become so strenuous that the men would be tickled to death to let them have a chance to vote, but it is because ~~that~~ women have become recognized as the weaker sex. Why, you know when the doctors get together and have a convention and a banquet, the first toast that is always offered, or at any rate, it slips in somewhere on the program, is [“]woman- God's best gift to man and the chief support of the doctors.[”] Why, we doctors could never make a living in the world without the women to support us. Three-fourths, at least, of all the income ~~of~~ the doctors enjoy comes from women invalids, and women are naturally a lot ~~tougher~~ ^{healthier} than men, naturally a lot tougher than ^{men}. How do we know that? Why, because there are more boy babies born in the world than girl babies- a good many more; quite a large proportion more boy babies than girl babies, but the oldest inhabitants are always women. The last person alive in a million is always a woman.

When we get up to twelve years of age, there are more girls than boys, but there are more boys born than girls, but at twelve years there are more girls alive than boys. Now, is it because the mothers do not think so much of the boys and let them die off? I do not believe that, but it is because the girls are actually tougher than the boys, actually more enduring, and there is a reason for that, which I will show you pretty soon. Here is a woman of Algiers who has a splendid loose and comfortable garment and she is not ashamed of it, either. She has taken a great deal of pains to put a whole lot of nice embroidery on it, and certainly she is picturesque enough and she is thoroughly healthy and well.

Here is the European woman. There is nothing to complain about about her dress, and it is graceful, too. She has taken a little pains to see

that her garments fall in graceful lines. She combines beauty with utility.

These are women of Tunis. In Constantinople, I have seen scores and hundreds of women going about with just this sort of garments, and they are thoroughly healthy. Sometime, perhaps these garments will be worn in this country; in fact, garments on the same plan have been seen in the streets of New York City and London. In London, not long ago, I saw a number of ladies who had adopted this costume. It is a great deal more modest than the garments ordinarily worn.

Here is a woman of Alsatia. There is no constriction of the waist. It is a garment that fits the body, but does not constrict the body. There is no waist line formed here. There is no such thing as a waist line on the body, anyway, unless it has been made by the corset maker, or by the dress maker. The trouble is that when a girl gets to be about twelve years old, then the mother takes her to a dress maker and the dress maker says "Well, the little girl is getting old enough now so we ought to begin to shape her body", so they begin to shape it and from that time on the girl grows up like a cucumber in a bottle- grows in a mold. You have seen the experiment of the cucumber grown in a bottle. You may have a square cucumber or an hour-glass cucumber, or any sort of shape you want, according to the style of the bottle. So a girl's body becomes the shape of the prevailing fashions, don't you see. It is often the prevailing style of corset that determines the girl's shape. What a monstrosity that is. It is just as bad as what you see here upon the screen now. A small footed Chinese woman. Here is a little foot. That is the way those feet look. They have been bound down here until the bones are actually deformed and the toe is bound back under the heel so that a woman actually walks on the tip of her big toe. That is why she can wear such

a small she. The shoe has to be big enough for her big toe. That is all, for all of the rest of the foot is bound up here under the heel. Here you see the poor helpless feet absolutely paralyzed, absolutely helpless. They cannot move a toe, and cannot move the foot at all. It is all rolled up, packed up under the heel so when a woman goes out to walk she has to have someone on each side to steady her, and yet that woman is astonished that the civilized woman will abuse herself by constricting her waist. A Chinese woman once said to a missionary "You big sinner". "Why, why do you say that?" "Why" she said, "The Chinese woman binds her feet. The feet are of no account, but you bind your waist and here is where you live." The Chinaman believes his soul is down in his liver somewhere so he does not believe in binding it up. So ~~our~~^{the} idea somehow has gotten abroad in the world that women have got to deform their bodies in order to be beautiful, and that she has got to subject her body to torture by clothes that do not fit her, ~~body~~ that are not the shape of her body at all, in order to be beautiful and to be attractive.

Now, here is a picture of Queen Louise coming down the stairway. ^{has} Would anybody ever say that she ~~is~~ not a beautiful figure, that she has not a graceful poise, a beautiful figure and a beautiful dress? There is nothing about that that is ugly. Look at that waist. There is not ~~x~~ ~~w~~ the slightest constriction of the waist. As I said a little while ago, woman has naturally a larger waist than man, and I am going to show you pretty soon why. Now, that woman has no waist constriction. Is not her dress beautiful? Are not those lines artistic and graceful? There is nothing constricting in that dress. There is no necessity that there should be any constriction. Keep this figure in mind while you are looking at this one here, for instance. Now, that is copied from a fashion magazine. This photograph was made directly from a fashion magazine. It was sent out to the world as an ideal of what a woman's figure ought to be, so

straightway women began to cultivate a sort of kangaroo shape so as to be real beautiful according to the latest fashion plate, but the fashion plate did not set the model. The fashion makers did not establish the ideal model for the human figure. God made it. God determined what a woman's figure should be, and the fashion maker has no right to change it. It is the most ridiculous, preposterous and irreverent thing for a man or a woman to set up a model opposed to that of the Almighty himself who knew what a woman's shape ought to be, and the old Greeks knew. When that marvelous old artist two thousand years ago, or more, chiseled out this wonderful ~~sh~~ figure that no one has ever presumed to excel in artistic beauty. ~~He~~ Any artist would consider himself a master of his art if he could anywhere near approach it. That artist chose not a fashion plate for his model, but the woman herself- a natural woman, and this figure has a waist 47.6% of the height. Now you figure that out. Just multiply your height by .476. Well, to be sure, it would be better to divide your height by two. It would be just a little less than that, but not more than one or two inches, perhaps. Suppose your height is 64 inches- divide by 2 and you have 32, and that is your proper waist measure. If your height is 68 inches, your waist measure would be 34 inches, and what a splendid waist measure that would be. I see some of these women looking around here, actually scared at the idea of a waist as big as that.

I remember a lady from Chicago who came to visit our Training School some years ago, and she noticed a number of our nurses were not wearing corsets, and she said to the superintendant in a confidential tone when she got an opportunity "Say, I wish you would tell me- how do your nurses manage to keep their stomachs down?" She had the idea that if she did not have anything to put her stomach in fetters, it was going to rise and rise and rise and rise, and ~~it~~ ^{there} was no telling where it would stop, and there had to be some means of keeping the stomach under foot. It had ~~got~~ ^{got} to be kept down. Just see this woman. She is keeping her stomach down all right. A woman sometime ago said she had a

pain in her stomach, and I said "Where", and she put her hand away down here under her ~~rib~~ hip bone, and I made an examination and found sure enough that was where her stomach was, but it did not belong there. Here is another ~~fast~~ figure copied from a fashion plate. Just look at it, and you see any number of women on the street every day who are doing their very best to get themselves down to the proportions of the fashion plate because they think that is just the way a woman ought to look, but that is the way the woman ought not to look. Suppose you take that woman's clothes off down here to the waist. Just think how she would look without her clothes on. Just think of that. You see woman is considered to be nothing but a sort of form to hang clothes on, but you just get those clothes off a minute and just see what a monstrosity the creature would be if retaining the same shape of the clothes. Now, when they wear these clothes for sometime, after awhile the body gets to have that same shape. If there is something squeezed out of the middle here, there has to be a compensation somewhere. It is not squeezed out of the body. There is nothing cut off. It has to go somewhere, and it goes down, of course. Now, look at these plates here. This is an inside view. The outside view is bad enough. A woman trying ~~to~~ to constrict her waist only at the expense of making a monstrous protrusion at the lower part of the abdomen where things do not belong; things that belong up here in the waist are pushed down and you see just exactly what happens when you look at this figure which shows the inside view of the body. These plates are not diagrams, but are copied from Ziemssen, the great German anatomist. When I put this ^{printer}~~picture~~ across the chart here you see it falls just at the lower border of the ribs in both figures here, one showing the healthy woman and the other the woman whose waist has been constricted. In the healthy woman here, you see the liver is above the lower border of the ribs, and not only the liver but the stomach and the colon and the pancreas, which lie behind the stomach, and the kidneys which lie just above the lower

border of the ribs on either side ^{of} ~~and~~ the colon. Just think of it. All the great vital organs of the body lie right here in the center, right here at this point that is called the waist line- the liver, the stomach, the pancreas, ^{the colon} the two kidneys and the spleen. Six great vital organs lie right here in the center of the body and when constriction is applied, whether it is a tight band, or whether it is an iron cage or a whale bone cage, whatever it is, when the ribs are approached nearer together than they ought to be there is not room for these organs, and they have to go down. Now, this is not a diagram that you see here. It is an actual fact. I have seen thousands and thousands of just such women. It represents, in fact, about ^{four} ~~every~~ woman out of every five- represents the condition in which you find things. You see here instead of the liver, stomach, colon, pancreas, kidneys and spleen- all above the lower border of the ribs- you see they are all below. One-half of the liver is below the ribs. Almost the entire stomach is below the ribs. Both kidneys, the spleen, the pancreas and the colon are all far down below the ribs, and of course, there is an ugly protrusion of the lower part of the body, because everything has to be carried down there, belonging up here in the waist. Now, you see why a woman's waist is naturally larger than a man's waist. A woman has less heart and more liver than a man, or more liver and less heart. Do not forget about that. A great deal better heart, of course, but a woman's heart does not have to be as large as a man's heart because the fist is not as large. The heart ~~is~~ ^{is} always the size of the fist. If you have a big fist, you have a big heart. You have to have a big heart to back up that big fist, because with big bones ^{you have} ~~and~~ large muscles, and the heart is a muscle, itself; it has to ~~circulate~~ circulate the blood to back up the big bones and the big muscles and when the muscles are smaller, the bones are smaller, the heart is smaller, so it is no reproach to a woman if she has a smaller heart than a man has, and it is a real advantage to a woman that she has a larger liver than man has. She has a better chance to ~~purify~~ purify her blood than man has, keeps the blood purer under the same circum-

stances, has greater vitality, has a better chance to get through a fever if she has a fever, has a better chance to resist various abnormal conditions than man has. She cannot endure so much hard labor, because she has not so strong muscles, but she can endure vital stress, vital strain, better than man can. If you look over the statistics, you will see when children's diseases come along, they kill more boys than they do girls, and when typhoid fever comes along, it kills more men than it does women, and so all these infectious diseases, almost without exception, are more fatal to men than to women, and one reason why is because woman has a larger liver and that is the reason for it. Now, a woman has a larger stomach, and there is a reason for that. She has larger kidneys and there is a reason for that, also, and a larger pancreas. All these important vital organs that lie here in the waist-line are larger in women than in men. Why? Because the liver must sometimes do work for two. This is nature's provision for motherhood, you see, and the stomach must digest for two, and all these other vital organs must do work for two, and that is the reason why they are larger. They must be larger. It is inevitable that they must be larger. The circumstances demand it, require it. So woman has larger vital organs, a larger mass of material here in the center of the body than man has, and she necessarily has a larger waist ~~line~~ unless she makes it smaller. Now, for a woman who has this wonderful endowment, this exuberance of vital strength and energy, because of these splendidly developed vital organs, because of these great vital organs with which she has been endowed, now, I say, for a woman to proceed to cripple herself, to damage her liver, by compressing it until it cannot half do its work, ~~is almost~~ to force her stomach six inches down out of its normal place just so that ^{she} ~~they~~ can have a waist-line in just the place where fashion says it ought to be, to compel her kidneys to leave their normal place up here among the ribs where they are thoroughly protected and to fall down five or six inches where they are jostled about with every movement

of the body, and so become an easy prey to Bright's disease, to compel the colon which is so important as an absorbing organ of the digested food, to leave its normal place, to force it down until it becomes "U" shaped, a sort of cess pool in which accumulate and are carried about continually masses of rotting and putrefying material, sending floods of poisonous matters into the blood continually, over-taxing the liver, kidneys and other important organs, and so leaving a foundation for all forms of chronic diseases. I say, for a woman, just in order to conform to fashion, to abuse these splendid gifts and to destroy the advantage which God has given her as a vital being, is a monstrous crime, and the only possible excuse is ignorance. Ignorance is an apology which covers a multitude of sins with all of us, of course, but when women become intelligent, when women are once instructed upon this subject, they are no longer in ignorance, and after this hour that you are spending here tonight no woman in this room can go out and say she is ignorant, that in compressing her waist she does not know the harm ~~that~~ ^{she} is ~~doing~~ doing herself, but I am going to tell you more about it. Here is a picture of the skeleton. Just see what the corset—not the tight corset but the ordinary garment that the ordinary woman wears—that is what it does, and I have ~~seen~~ ^{seen} this thing carried to such an extreme that the ribs of one side overlapped the ribs of the other side, and more than once I have made post-mortem examinations in which I have found furrows in the liver, deep furrows in the liver, made by the compression of the ribs upon the liver. Now, the liver is a soft organ. It is a compressible organ. It yields readily to pressure brought to bear upon it, and when the ribs are compressed down upon it in this way, it changes in shape; it falls down, and this is the ~~form~~ form in which we sometimes find it when it yields to the shape of the ribs, so it is damaged. See how the corset interferes with breathing. This is an X-Ray picture of a woman without a corset and a woman with a corset. Here is a woman wearing her ordinary dress. Here is the chest and this is the shape of the waist. If you make a cross section of it, you would find it was an ellipse, a rather long ellipse, with the antero-

posterior diameter, about three-fifths ^{of the} lateral diameter. The cross section of this waist would be a ^{an} almost exact circle. The corset brings the sides together, and increases the antero-posterior diameter and makes the waist look as though it had been put on a turner's lathe and turned out of a block of wood. It does not have its natural, graceful, divinely modeled shape, but it has simply the conventional shape of the latest fashion plate, an artificial shape with no opportunity for the lungs to expand. They are tied up here. Suppose you got up some real cold morning and had to start your coal fire with charcoal, and you light the paper and your charcoal gets slightly ablaze, but it is very, very cold, and you cannot get the fire going any too quick, so you sieze a pair of bellows and undertake to work the bellows, to pump up that fire, and you find the handles of the bellows are tied together and in despair, you sieze upon the belly of the bellows and try to get a little movement and a little air out of the bellows into the fire if you can, to make the fire blaze. That is what every woman is trying to do, who is trying to breathe with a corset on. Here ^{are} the handles of the bellows, down here at the sides. This is the moveable part of the chest and the handles of the bellows work out and in laterally here. When the muscles are attached to the sides here and contract in taking in ^a deep breath, it is just like pulling apart the handles of the bellows, and when we let go, the handles come together again, and you are ready for the next deep breath, and that is the way breathing goes on. Suppose you ask the ordinary woman to take a breath. Suppose I should say "All the ladies will now please take a deep breath." What would you see? Every lady in this room putting her shoulders up this way. That is the only way they can get a breath. She is trying to pull apart the bellows, don't you see, trying to wrench apart the side of the bellows up here at the top. Here is a bellows, and if I want it to operate, I have got to leave the handles loose and give them room. A lady says her corset is not tight. Ask her to expand her lungs. They will ex-

pand sometimes one-fourth of an inch, or sometimes one-fifth of an inch. It is a very rare thing that a lady dressing^{ed} up for company can expand her waist one-half inch. Sometimes she hurries upstairs and you see her all out of breath. She has to take a deep breath and when she does that, she sets her diaphragm simply hopping up and down on her stomach and pushing that stomach away down. Everytime she takes a deep breath down goes the stomach. Now, you see if the sides of the body here could just come out that would not happen, but her chest cannot expand at the sides. It must expand somewhere so it expands downward, and the diaphragm has to push the stomach away down in order to get air enough into the lungs so she can keep alive, so she won't asphyxiate.

By the way, did you ever notice when anybody faints away in church, it is always a woman? Who ever heard of a man fainting away in church? I remember just one instance. It was not in church, either; it was at a public hall where I was giving a lecture on alchohol, and I drew some pictures on the blackboard of how a man's stomach looks when he has delirium tremens, and my drawing was so perfectly horrid that this poor fellow back in the back part of the hall fainted away. He had had delirium tremens once, and when he saw how his stomach looked when he had delirium tremens, it scared him so he fainted away and fell over on the floor. He came to, and he never took any more alchohol, you may be sure of that. When anybody faints away in church, it is always a woman, but the thing I want to bring to your minds is the fact that when people hurry around this woman to bring her to, you do not hear anybody- yes, you do- it is a leud whisper "Cut her corset strings." Now, that is the very thing that⁺ everyybody knows. Even the small boy there, or the small girl would know that the very first thing to be done was to get that woman's clothes loose just as quickly as possible so she could breathe. Don't wait to untie her corset strings, cut them. She might be dead before you could get them untied. You never heard

such a thing as when a man fainted away in church (if such a thing ever did happen) as simply running up and saying "Cut up the back of his vest, quick, so as to let him have a chance to breathe". You never heard of such a thing. Everybody knows that every man has plenty of room to breathe and everybody knows that every ~~man~~ woman has not room enough to breathe, so if she gets in a tight place, that is, gets in a place where the air is a little bad so she needs more air to keep life going, and there is not room enough for her to breathe, she is likely to faint away, so it is necessary for something to be done to her clothes in order to let air enough into her lungs. Isn't that a contemptible state of things? All women know that thing, yet they are willing to live in that kind of slavery and then are begging for suffrage. Now, I believe in woman's suffrage, but I confess I have not very much sympathy for these women who are so very much agitated in the subject of woman's suffrage when they do not seem to care a thing about woman's sufferings. Now, woman's sufferings is a thing that worries me a great deal more than woman's suffrage, because suffrage is a thing I am sure will take care of itself just as soon as the woman ceases to suffer these unnecessary troubles they bring upon themselves by their artificial and criminal mode of dress. I am not talking now about the fashionable woman; I am ~~talking about the ordinary every-day woman~~ not talking about the extravagant woman; I am talking about the ordinary, every-day woman who thinks she is dressed exact^{ly} right. She is the woman I am talking about for it is the ordinary dress that influences woman. Now, look at these splendid organs here. The dog is better off than man is because he has a liver four times as big. That is why he can eat beefsteak and seem to be healthy notwithstanding, yet that dog is a great deal better off if he does not eat beefsteak. ~~He is~~

Here is the gall bladder, just where it will get the pinch of tight clothing. That is the reason why ten women have gall stones to one man. That is the reason why ten women have gall stones when only one man has gall stones. Gall stones is a feminine disease, because of the abuse to which the gall bladder is sub-

jected, and this liver, this splendid liver to which we owe so much. That is the thing that stands between us and death. When we have a fever, or when eating a Christmas dinner for instance, now, that Christmas dinner you ate last Christmas unless you were here at the Sanatorium would have killed you if it had not been for your liver. It is because of the splendid work this liver does in destroying poisons and purifying the blood that a man is able to drink beer, that he is able to smoke, that women are able to ~~take~~^{drink} tea and coffee, and to eat mustard, pepper sauce, ginger and all those things with apparent impunity. for sometime, but bye and bye your liver gets used up to such a point that there is no longer any vitality left to do the work required of it, then one glass of beer or one cigar is enough to snuff off the little life that is left. Now, women are endowed with a larger and better liver than men, with a more splendid, efficient liver than men and they proceed to spoil it. You see that liver lies entirely above the ribs and when the ribs are compressed and brought together on either side, the liver must be squeezed and compressed and abused in such a way that it cannot possibly do its work. Now, suppose you ~~take~~ tie your arm up here above the elbow. I want you all to try a little experiment here just for once. It is not a very serious one. Simply take hold of your left arm with your right hand, put your thumb and finger right around the middle of the forearm and pinch it real hard, then try to shut your fingers clear up. You see it is hard work. You cannot shut your fingers way up without difficulty. If you had a real tight band right around your forearm here you could not shut your finger at all because the muscle is constricted, compressed and it needs room in which to move. It is exactly so with the liver. When you have eaten an early meal, the liver is one-half^{inch} thicker than it was before the meal. The liver absorbs or swells up on account of the food stuffs it must act upon. It is an important digestive organ. When the liver is compressed here, don't you see, there is ~~not~~ no possibility for the liver to do its work well, because it is under pressure. **Just** like your forearm, and it cannot work well when it is under pressure.

So ~~everybody~~ every one of these ladies, before they go to dinner tomorrow, if they have these corsets on ought to go and take them off before dinner if they want to give their liver a good chance. There is another thing. Here is this wonderful stomach that lies right here above the lower border of the ribs, lies right under the point of greatest pressure, right under that corset. When you put that corset on in the morning, it was before breakfast and you did not make any allowance for breakfast at all. You did not say to yourself "Now here, this corset is too tight. I must let it out one-half inch because I have not been to breakfast yet," and when you came to ^{eat} ~~eat~~ breakfast that stomach held a quart more than before breakfast, and what happened, you see, as each mouthful of food came down here, that stomach was laced up as tight as it could be so the stomach was pushed down a little and a little more and a little more. Every morsel of food and every swallow of water was a little wedge, wedging that stomach down, down, down, and that is why the stomach gets prolapsed. I do not believe there is a woman in the house here that has not got the stomach away down below the umbilicus. It is the most extraordinary thing to find a woman whose stomach is not from two to six inches below where it ought to be in a woman twenty-five years old, and for a long time the doctors did not know that was not the normal position of the stomach. It was only when they came to study the stomach of women who live in a native way that they found out anything about it.

Here is the normal shape of the colon. When the liver comes down and the stomach comes down, they push the colon down, you see, and the sides are brought together, and it is doubled up and makes a cavity in the middle here where material accumulates and produces the most awful kinds of auto intoxication, and that is a condition almost universal among civilized women. Here are some of these important vital organs, and the great blood vessels, the gall bladder and the liver turned up and the great veins and arteries down here in this part of the

body are all brought under compression by these abnormal dresses. Here is the spleen which is behind the pancreas, just behind the stomach, and sometimes the spleen gets pushed entirely out of place. I remember a woman who came to see me about a tumor she had in her abdomen. I examined it, and said "I guess you will have to have an operation. This is a big fibroid tumor here right down in the middle of the lower abdomen." But the next day she came to see me and I found this tumor went over on the right side of the body, and the next day it was on the left side of the body and to my astonishment, I found that tumor was rolling all around. It had the freedom of the whole abdominal cavity. There was something wrong about this. I spoke to the woman about it and she made a confession to me. She said "Doctor, one thing I did not tell you the other day that I think perhaps I ought to tell you. You know, doctor, when I was a girl at school, I had malarial fever and I got what they called ague cake, and when I got over it, I could not fasten on my corset. It would not come together, and I talked with a girl friend of mine about it and she said she had had the same trouble, and she said 'I will tell you how I did it. I put my corset on in the morning just as tight as I could and at night I laced it up a little tighter and I kept it on all night and the next morning I took it up a little tighter again and every night and every morning I took it up just a little and wore it all the time night and day, and by and by, I got my waist down to normal proportions. Made it natural again.'" So she said "I tried it and after about six weeks one morning when I got up I felt something pop down here under my ribs and my waist went down to natural size, and I have never had any trouble with it since." Now you can see just what happened. When something popped down there that spleen was turned out of doors and it had been wandering around the abdominal cavity ever since, and that woman had plenty of troubles. She had pain in her back, pain in her sides and she wondered why. It was all simply to satisfy the idea that woman should have a small waist, whereas, as a matter

of fact, women have larger waists than men and it is only these vicious fashion plates that have erected in the minds of women a false conception of this matter and a false idea that woman's waist should be small instead of large. These kidneys lie right up under the ~~waist~~ ribs. Here are the suprarenal capsules and those are the organs that keep a fine complexion. It is the duty of the suprarenal capsules to keep the complexion fine. These suprarenal capsules destroy coloring masses. There are produced in the body various coloring masses which tint the skin. Some of these coloring masses are produced by decomposition of the blood and some of them are produced in the colon by the putrefaction of certain food material by the action of certain germs grown there which produce a coloring matter known as Brenz Catechin. Now this Brenz Catechin is a very densely brown coloring matter, a dark brown coloring matter and it is the duty of the suprarenal capsules to destroy this Brenz Catechin and these other coloring masses produced in the body in excess and the poisonous coloring masses produced in the intestine and absorbed like Brenz Catechin. The suprarenal capsules destroy these, but now when the kidneys are abused, when they are forced down out of place, when they are compressed, when their circulation is interfered with, and they become diseased, these suprarenal ^{capsules} ~~catechin~~ become unable to do their duty, they become unable to destroy these putrefactive materials, these ~~poisonous~~ ~~toxins~~ poisonous brown coloring matters, then they accumulate in the body and they produce brown spots on the hands and dark circles around the eyes and brown spots that are sometimes called liver spots on the face and other parts and a general dingy tint of the whole ~~surface~~ complexion, and then the ladies go to the druggist and get some kind of cosmetic to paint on and cover up the spots, but they are not destroyed. They are there just the same, and this is a kind of dirt that is more than skin deep. It is not in the skin only, but it is in the brain, in the muscles, ~~of~~ in the heart, in the glands, in the blood. Every part of the

body is dinged by these poisonous coloring matters so it is not a simple matter at all. It is a serious matter. So it pays, ladies, if you want to be beautiful, to take care of these suprarenal capsules. You cannot take good care of them when they are under pressure and when the kidneys are under pressure. It is no wonder ladies have back aches and spine aches and spinal troubles they complain about when these internal organs are all being forced and dragged down out of place when every breath a woman takes when she is dressing up to go visiting, every single breath she takes produces a strain upon these organs, forcing them down out of their proper places. The best cosmetic in the world is to get room to breathe, is to get a good sized waist. The woman with a small waist is bound sooner or later to get a miserable complexion. Here is another copy from the fashion plate. Is it beautiful? Perhaps you will say those lines are graceful; that that woman has a very slender, graceful appearance, but stop to think a moment of where that poor stomach is, and where that poor liver is. They are ^{trodden} ~~driven~~ under foot. Here is another one- a copy from a fashion magazine, trying to make ladies believe that that is the way they ought to look, that that is the kind of shape they ought to have, and if you only buy your clothes of them, that is the shape you will have. So the woman thinks that is the shape she ought to have and she gets one of those shapes and tries to squeeze herself in it irrespective of the damage it does her and this is what it does to her colon. Just see how this colon has fallen down; it has been pushed down by the liver. This woman's corset squeezed that liver so it is forced down and it has *flattened* on the top here because the liver has thrown it down, and it dropped away down here and made this great loop so that the transverse colon, instead of running across it lies here in a snarl. Look at the kinks. Is it any wonder that this poor woman had a bad complexion, with the poor colon generating Brenz Catechin. Is it any wonder she had a bad breath. What horrible

stenches generate here in this cess pool of putrefaction. The wonder is that she lived when the colon is in such a state as that, when these foul masses are being absorbed in the blood; think of the enormous amount of waste thrown out through the kidneys and the liver which have to carry these stenches out. All of this filth that ought to be carried off from the body, discharged through the bowels is absorbed into the blood and it not only pollutes the blood but it taints the breath and ^{tints} ~~taints~~ the skin, and it ^{lays} ~~lays~~ upon the kidneys an enormous burden.

Here is another one. ~~Where~~ Were not those graceful lines. Were not those beautiful clothes? Here is the secum right behind here somewhere, and the colon has fallen down in front. It is forced down out of place. Here are several kinks here, you see, in different places. It is a wonder this poor creature ^{could} live at all but this is the natural result, the inevitable result of this improper treatment of the body. Now the consequence of this abuse of the ^{the} body is stomach, the liver and the colon and the intestines, but principally the stomach and the colon have become the most common seat of cancer, ~~the seat~~ because they are abused in this way, forced down out of place continually, continually congested, continually saturated with these putrefying materials. They become the seat of cancer, that awful disease which has never yet been conquered by human skill, which will be for many years yet a problem which the best physicians and the most skillful surgeons cannot hardly solve satisfactorily.

Now, here is a malignant ulcer of the stomach, a horrible ulcer of the stomach resulting from abuses of various sorts, of which those I have been speaking of

Here is another cancer. The whole stomach walls are infected with cancer; a horrid corroding ulcer occupied the ^{whole} ~~the~~ stomach. I might show you a great number of these. Women have nearly twice as many cancers as men. Cancer is getting to be so common among women that wone woman out of every seven in this room this morning will die of cancer. ~~W~~ One woman out of every seven over forty years of age dies of cancer. Now that is a terrible thing, my friends, a

terrible thing. I say the women in this room are going to die of cancer, but you do not one of you need to die of cancer. I do not think it is too late yet for you to turn over a new leaf and live right, dress right so that you will have just as good a chance to live as men have. Only about one-half as many men die of cancer as women and the reason why is because one-third of all the cancers are cancers of the stomach and colon. One-third of them ^{all} are cancers of the stomach and colon, and there is no reason why women should die of cancer more than men do, but unquestionably they do, and in my opinion, this unnatural, wretched, criminal mode of dress has something to do with it. Just see how people die of cancer, and how the death rate is increasing. The majority of cancer is increasing with amazing rapidity. Sixty years ago, nine persons in one hundred million died of cancer in the United States, and at the present time, one hundred fifty in every ten thousand die of cancer. This is something horrible to contemplate. In 1909, 67,962 people died of cancer in the United States- as many people as all the people of Peoria, Ill. and the population equal to the population of that city died in one year of this awful disease, and where one dies, four or five more are suffering a living death, getting ready to die. That must be considered, also. This shows a microscopic picture of what the cancer looks like when seen through the microscope, so called cancer as well as carcinoma of the stomach. Is there any reason why men and women ought to die of cancers any more than flowers? Roses do not have cancers; lilies do not have cancers. Why should men and women have cancers? Why should human beings have this awful disease? It is because of our violation of our laws of health. We had just as good a start in the world as the flowers. We are born with just the same power to live, and vitality, muscular power, clean living as the flowers have. That baby is just as beautiful as those roses. I am sure you will all say so, and you were all just as handsome when you were young. What is the reason of these awful changes, this ^{pigmentation} ~~pigmentation~~ of the skin, and all these awful deformities which are acquired by wrong habits of living?

There is a cause for it, and one of the principal causes is an improper mode of dress.

I hope you are all going to reform at once, and thank you very much for your attention.

cold bath 1.

insignificant 18

protein diet. Cow 23

QUESTION BOX AND STEREOPTICON LECTURE

At the Sanitarium Parlor, Battle Creek, Mich., Thursday, Feb. 29, 1912 at 8 P. M.

-by-

J. H. Kellogg, M.D.

Question. Would you advise the daily use of a cold bath for persons who are not vigorous, that is, using the bath in a modified form?

Answer. Yes. A cold bath of some sort every day is necessary. Everybody should have a cold bath every day in some form. To go on day by day, week by week and month by month without bringing cold in some form in contact with the skin is enervating, it results in debility, in a low state of vitality, because cold is one of the things that causes the body to react and this reaction is the gymnastics which develops the resistance of the body. Now, you know, a muscle can never be made strong without work. The only way in which a muscle can be strengthened is by exercise, by work. So the defensive powers of the body must be utilized, they must be called into play, into activity in order that they may be developed and the application of cold to the surface of the body is a means by which this may be accomplished, and one of the most effective of all means.) I must explain a little further about this--why cold applied to the surface is a matter of so very much importance. In the first place I want to call your attention to the fact that the skin represents every nerve center in the entire body. The interior of the body is all related with the skin. For instance, here is the face, that is connected with the brain. When a person smiles, it is because he is happy inside--smiling

represents a state of the brain, and when a person frowns, the very opposite is true.-- The same principle applies. However, the face is in sympathy with the brain because there are nerves from the brain that pass into the face. Now the heart which lies here in the chest has nerves which connect it with the skin overlying it, so the heart has a face as well as the brain. And the skin which covers the lungs is in the same way related with the lungs, and the same thing is true of the liver. The skin covering over the liver here is connected with the liver directly and the skin covering the stomach is associated with the stomach, and the skin over the loins here is associated with the kidneys, so the kidneys have a face, each kidney has its face, and in fact, each kidney has two faces, a face in front and one behind. The front face of the kidney is the lower third of the sternum. The lower part of the breast bone is related to the kidneys just the same as the skin behind. So of the abdomen, the skin covering the abdomen is related to the intestine. Now these are very important facts and are the foundation stones of the science of hydrotherapy. (Hydrotherapy rests upon this fact primarily, that is, a certain part of hydrotherapy, at least, rests upon the fact that the skin is related with every internal organ. Now there are two different relations between the skin and these internal organs. The first one is one that is purely mechanical in character. For instance, a man has a headache, there is too much blood in his head--what is the best thing to do for that headache? I suppose there is not a person here who does not know that a hot foot bath is good for a headache and will even stop headache. Why? By diverting the blood into the feet. When the feet have filled with blood, there is not so much blood left to fill the head, you see, -- because we only have a certain amount of blood in the body anyway. Now ^{every} ~~any~~ body knows if a man stands on his head he gets red in the face. Why does a person get red in the face from standing on his head? It is because the blood runs down into his head. He has less than he ought to have in his heels and more than he ought to have in his head. So there is on-

ly a certain amount of blood in the body, and this blood may be distributed in various ways. The blood vessels are never full. The blood vessels of the body are never full, though they are capable of holding twice as much blood as they do hold, there is always room for more. Indeed, they may hold much more than that in some parts. For example, here is a muscle which is lying idle. Now when that muscle gets to work--even before it gets to work when you simply think of putting it to work--when one says I am going to move my arm, before he actually moves his arm, the blood is going through that muscle in greatly increased quantities, and when the muscle is actively at work, six times as much blood is passing through the muscle as when it is idle. The amount may even reach ten times the quantity of blood that is present when the muscle is idle. So you see the muscle vessels are capable of holding a much larger amount of blood than they ordinarily do hold. Now there is a mechanical relation, as I said, between the blood vessels of the skin and the internal parts, because the blood vessels of the skin are directly related with the internal parts. It is like two farms lying side by side, and here comes an irrigating ditch between the two, and when one farm is using water from the irrigating ditch, the other farm cannot get as much water as it would if the first farm were not using the water, so you see ^{the} farms have to use the water in rotation. Often when they use the water from the irrigating ditch, at least when the season is quite dry, the farms take turns because there is not water enough to supply all the farms at the same time. Now in the case of the body, all the different farms can be supplied, ~~all the different farms can be supplied~~ ~~but if there~~ all the different parts of the body can be supplied. but if there is an increasing amount of blood going into one part, there is less going into another part. The blood vessels are like an irrigating system. Now the skin is connected with every internal organ. "What, you say, is the skin connected with the stomach?" Certainly it is, and when a boy has a stomachache and his mother put a fomentation over it, and perhaps, if the boy has been stealing into the pantry and getting too much mince pie that was intended for another

occasion, perhaps, he gets something else on the other side too, and both do him good, because they are counter-irritants. Whether it is fomentations in front, or percussion behind, it does him good, because it fills the skin with blood, it dilates the blood vessels and fills the skin with blood and so gets the blood away from his stomach. He has got too much blood in his stomach, so the fomentation or the spanking, either one, is good for him, and both together are especially good, because then he gets a double counter-irritant. Now in the same way when there is too much blood in the head, we can divert blood into the feet by dilating the blood vessels of the feet. As I said, every single organ of the body is connected with the skin. The blood vessels of the kidneys are connected with the skin over the kidneys. The blood vessels of the stomach are connected with the skin over the stomach. The blood vessels of the lungs are connected with the skin over the lungs. That is one reason why a fomentation does so much good in pleurisy, it gets the blood into the skin and out of the lungs. So with every single organ in the body, the skin overlying that organ is connected, very directly in most cases, with the blood vessel of that organ itself. You say, you did not suppose there were any blood vessels running straight from the skin through into the stomach, and there are none. There are no blood vessels running straight through, but they go around about. They come to the spinal cord and so to the brain, and then out from the brain, so there is a connection between the same blood vessels. It is all traced out anatomically, and it is a matter of a great deal of practical interest. (Now there is another connection which is even a more important one than this, and this is a nerve connection between the skin and these internal organs. The nerves that come out from the spinal cord and the brain are always distributed and in pairs. Every nerve divides into two parts, and one part goes to the internal organs and another part goes to the external parts. Here, for instance is the stomach. Now here is a nerve up here that comes out from the spinal cord on each side and it sends branches to the skin, one branch of which divides off into the skin and another

branch goes inside and goes to the stomach, and that is the reason why you have pain between your shoulder blades when you have sour stomach. When you have heart burn you have pain under the shoulder blade because here is the nerve with two branches, one internal and the other external. The internal branch is being irritated and the pain is expressed in the external branch because these internal branches are not very sensitive to pain, but the external branches are very sensitive to pain, so you feel the pain externally. So if you have an attack of indigestion, you are very likely to have a headache with it. What is the cause of that headache from indigestion? It is the reflex irritation we say. Now if we make an application to the skin, to the external branches of the nerves, and establish some change in the condition of the skin through the nerves, this same change is effected in the internal parts. Now to make that very plain by a simple illustration: Suppose it is a very hot summer day and you have been out taking a long walk and come back very tired and very much heated, and you come in with your face flushed and you feel very weary and exhausted. What do you do? Instinct tells you what to do. Instinct tells you to bath your face and hands in cold water. You do so, and you feel refreshed right away. Now why does simply bathing your face and hands with cold water refresh you so quickly. You have not lowered the temperature of the body; the temperature of the body has not been changed by such a short, simple application as that. What has helped you? It is because you have cooled off your face through the nervous connections with the brain. The brain vessels contracted at the same time. The applications of cold water to the face contracted the blood vessels of the face, and reflexly, the blood vessels of the brain are contracted in the same way. Now suppose you have got pneumonia. What does the Doctor do? If he is an up-to-date Doctor, he will put an ice-bag or a cold compress over that inflamed lung. Now what does he do that for? To relieve the congestion of the lung, that causes contraction of the blood vessels overlying the lung and internally the lung vessels contract at just the same time. It is not best to keep that ice-bag

on all the time, by the way, it is better to put on a cold compress and change it every twenty minutes. That is the best way to do it because it warms up and that lets the blood vessels open up again, then you put on the cold and it contracts, then you let it get warm and the blood vessels dilate, so by that means you keep pumping blood through all the time—you dilate, contract, then dilate and contract and that is the very best possible means of getting rid of the germs in the lung and effecting a cure. The same principle applies to every part of the body. So you see the skin is very closely connected with these internal parts.) (Now there is another thing that follows right on after these statements that I think I ought to tell you, and that is, that the activities of the interior of the body depend to a very large extent upon the stimulus of the skin, upon the constant stimulation of the skin. If one could be put into an oil bath at just the temperature of his body, or into a water bath at just the temperature of the body, he would almost stagnate ~~fast~~ after a while. We need these changes of temperature continually upon the skin to make impressions upon the skin, and these impressions are sent into the body and stimulate the nerve centers, and so keep the vital machinery in motion. This constant play of stimulus upon the surface of the body acts very much like the wind blowing upon a windmill--it keeps the wheels of life going. You know how it is with the mind--constant observation, observing things, impressions made upon our minds by music, speech, by sights and sounds of various sorts, all of these things serve to stimulate ideas and to stimulate intelligence and create a growth and development of intelligence. It is exactly in the same way that the physical stimuli that fall upon the surface of the body act upon the internal machinery of the body, helping the work of the liver, stomach and every other internal organ. The wheels of life are stimulated to motion and activity by the impressions that are constantly made upon the skin, so it is very important, you see, to have a healthy skin, ~~taxaxaxaxaxax~~ It is an exceedingly important thing.) (Why the skin is so important that one can live without it only a very short time. One can get along without his kidneys for

for more than two days. One can lose an arm, or a leg and get along and enjoy good health and live without it. One can lose his stomach and get on all right. I met a man on the porch a while ago whom we had had up in the operating-room before, and I said, "Mr. Jones, how are you?" "Fine, Doctor, fine," he said, "I have gained 17 pounds with my stomach in a bottle!" I have got his stomach in a bottle across the road in our museum, and he is getting along all right with his stomach in a bottle, and that man is enjoying good health, and the last time I saw him he weighed 185 pounds and is the picture of health. So he has been in splendid health for five years, although for five years before he had been a constant invalid. He is better off without his stomach than he was with it. So you see you can spare the stomach, but the skin is so essential to life, that we cannot spare it any length of time at all. You remember ^{the} story of what happened in Rome a few centuries ago when they were having a great celebration. They selected a nice little boy to be a cherub, and he was put up somewhere among the decorations to be a real live cherub, the real thing, don't you know, and he was covered with gold foil so he would look like a golden cherub from the golder city, and the cherub got along very well for a while, was very bright and chipper, but after two or three hours he began to get sick, began to show **signs** of being sick, and he was taken away and they tried to rescue him, but in spite of all **they** could do for him the child died. He was killed by covering his skin over with this gold foil. The activities of the skin are suspended by being **shut up in this way.** Now there are a great many people who live in just about that way. They do not take cold baths, do not take hot baths. I met a man sometime ago who asked me to make a prescription for him, and I didn't need to examine him very much to know what **sort** of prescription he needed. In fact, I did not need anything, but my nose, to tell me what was required in his case, and I suggested a bath. He had a cough and he had a cold, and I suggested a bath. "A bath," he said, "A bath, why, Doctor, a drop of water has not touched my back in forty years!" I suppose he washed his face and hands because they were outside where people could look at them. I

Suppose it might have been dangerous for this man to have had an ordinary bath. He would have had to be put to bed and watched very, very carefully because his skin had lost the power to react and he got so he had an instinctive apprehension that if he should take a cold bath it might kill him, and it might have killed him. It might have killed him because he had lost his power to react to cold water.) (Now whenever you find yourself in a condition in which you feel, "Oh, Doctor, I don't believe I can stand a cold bath," there is something the matter with you--you are not healthy, you are not well, you have not got resistance, you have not got the power to meet that cold bath, to react to it and enjoy it. You have not the power to do it, and you know it. You are instinctively told that you are not prepared to meet the contact of cold, and I want to tell you, you are no better prepared to meet an attack of tuberculous germs or of pneumonia germs or of ~~typhoid~~ typhoid fever germs, or of any other sort of germs that attack the body, than you are prepared to meet that cold. Your vital resistance is low, and the most important thing you can do is to train yourself up until you are able to meet cold and enjoy it.) Now I applied this thing to myself. I know very well when I have got to the limit of my rope, when I cannot go a step farther, I simply cannot stand a cold bath. I dread a cold bath; I do not dare to take a cold bath when I get to the extreme limit, then gradually in the course of three or four days I get myself trained up to the cold bath. When I got up this morning after working very hard for a few weeks back--since I got home from Europe I have not spared myself at all. I have been working day and night and putting myself through to the very limit, and this morning when I got up and jumped into the tub of cold water I enjoyed it immensely and came out of it feeling fine, and I said to myself, I have got up to par again. I am constantly applying that rule to myself, for what I am telling you I know from personal experience in the case of my own personal experience as well as the experience of thousands of people to whom the principles have been applied. Why, my friends, the thing we are working

for here in this institution is to get your resistance up. We have a regular graduated scale here of cold baths. Perhaps begin with hot baths if you cannot bear cold at all--begin with a very hot bath. But a very hot bath requires a reaction and produces a reaction as a cold bath does, although of a somewhat different kind, but it is tonic in its effects. So first the hot bath and then a cold bath, but it wont be a cold bath to the whole body, it may be a cold bath of the face and hands, perhaps, first thing, then an arm, then the other arm--rub it until it gets warm, then go on until the whole body is gone over and is in a glow. Now a person so weak that he could not react to a general cold bath, can be made to react in that way by taking a small surface at a time. There are twenty-one square feet of skin on the surface of the body of a man who weighs ~~ninety~~ one-hundred and sixty pounds. A person who weighs only one-hundred pounds would not have more than two-thirds as much skin, or perhaps, three-fourths as much. So we can take a square foot at a time, you see and give him twenty little baths, each one of one square foot, and make that part react, then we will go on until the whole body is gone over. But by and by we get the patient trained up through the wet-hand rub, cold mitten friction, cold towel rub, a half rubbing sheet, or the half sheet rub as we call it sometimes, the rubbing wet sheet, or the wet sheet rub, a cool or tepid spray, and so we go on ~~on~~ up until we get to the cold plunge bath. Now when a person has been able to climb up this ladder and has gotten to the top, he can spring into a bath of cold water for half a minute and just enjoy it immensely and feel no unpleasant shiver, no unpleasant cold, no unpleasant reaction, and when a person gets to the point where he can do that, he is getting vital resistance. He has got new power to avoid disease and to fight off old age and to make steam for business for his efficiency has increased, so you see it is a very important thing. Now I know half the people in this room could not stand a very cold bath. It might be even dangerous for them, because the thing that is good about the cold bath is that when the blood is first driven in by the application of cold to the surface of the body

it immediately ~~comes~~ back and the blood vessels are dilated and there is a ~~great~~ glow ~~and~~ an exhilaration, a waking up of all ^{the} internal vital energies, every organ in the body, every function of the body is working with exhilarated activity because of the stimulus of the cold, for a short application of cold is one of the most stimulating things that can possibly be applied to the body. That is the reason why (when a person faints you dash cold water in his face, or you put cold water on his chest, because cold is a great stimulus to the heart. The most powerful stimulus the heart can possibly have is this application of cold, and it is natural. It is arranged so in the order of nature because it is necessary when you come in contact with cold, in order that our lives should be saved, for more heat to be produced. For more heat, we must have more blood and to get more blood we must have a more active heart. The heart is the great pump at the center of the body and this great pump ~~must~~ work with greater activity in order to save our lives when we are exposed to cold, so the heart reacts to cold, it is the most powerful of all cardiac stimulants. I shall never forget an experience that happened with one of our nurses some time ago. There was a banker ^{here} from down in central Illinois somewhere, and he had a very weak heart. We put a cold bag on his heart and his heart was all right so he could jump and skip about and he was as lively as he ever was, and he was very happy about it. A friend of his in the bank got sick with heart trouble, and he was confined to his bed. He had an eminent doctor from Chicago down there to attend him and the doctor came down every three or four days to look after him, and he was having him use the digitalis and other things he had been accustomed to take which are sometime^s useful remedies. But this friend who had been here told him of the benefit he had derived up here from some simple treatment, and asked him to have a nurse from here, so he finally telegraphed for a nurse from here, and we sent a nurse down. After the nurse got there, he immediately went to work to do just what he had been taught to do here in such a case and the doctor came down next day from Chicago and found the man with

an ice-bag on his chest. "What, an ice-bag, and ~~an~~ ice-bag over his heart?"

"Yes," the nurse said, "that is good for his heart." "Well," he said, "I don't want him to have any ice-bag. How about this digitalis? Is he taking digitalis?" "No, he has not been taking any for the last twenty-four hours. He didn't want to take it. It didn't do him any good, so we put on this ice-bag". The Doctor said, "I don't believe the ice-bag will do any good." "Well we will take it off and then put it on again, so you can see the difference." So they took it off and the Doctor counted his pulse and it was weak and was 110. So the nurse said, "You watch, we will put the ice-bag on and see what will happen, and in ten minutes or fifteen minutes, the heart was going steady, slow, pumping great big strokes, doing its work splendidly and the count had come down twenty or twenty-five beats. The Doctor was delighted and he said, "Well this is a good thing isn't it, we will keep right on with it. He was a good honest man, but had not happened to know about that before. He had been used to carrying his remedies around in a little hand satchel and had not been used to remedies which required so much space and which were so inconvenient to apply. The Doctor said during the evening along toward night, he said: "Now just look here, young man, I have got an awful headache--I have these headaches coming on every week, don't you know something you could do for this headache of mine?" "Yes, we will give you hot and cold to your spine and you will feel better." And the Doctor got hot and cold to his spine and he went back quite a convert, I think, to the Sanitarium methods, although he had been fighting us for the last twenty years. Every patient he encountered he endeavored to laugh them out of Battle Creek Ideas, but he was finally converted. He got into a situation where he was glad to be helped out, and he went home, at any rate, converted to the ice-bag and the hot and cold to the spine.) Every one of these remedies that are used here in this institution have been tried out and tested on these hard, incurable cases that nothing else would do anything for. That is why they came into being. (The old-fashioned remedies

in the use of water, the principal remedies have been used among the peasantry of Germany and of other parts of Europe for five-hundred years and only gradually forced their way. They are remedies that men were led to employ by instinct. Now when a dog gets an earache, you know what he does. He puts his paw up to his ear. What is that for? It is to keep his ear warm. He was applying a fomentation to his ear in the very best way that he could. If he knew how to build a fire and heat some water and wring out a flannel, he would do that, but he cannot go quite so far as that, so he puts his warm paw over the ear. If a baby gets earache, what does the baby do? It puts its hand up to its ear. Suppose you have a toothache, you don't have to have a Doctor to tell you what to do. You put your hand on it to keep it warm. If you can get something hotter than your hand, it is a great deal better. I remember sometime ago I was passing by a place where there were some monkeys in a cage, and it was rather a cold morning, with the temperature down to about 50, and the old monkey was in one corner of the cage, and there were some hot water pipes about three or four feet up from the floor along the side of the cage. The old mother monkey was in the center and had gathered up some green guava that had been thrown in there and some of these little monkeys had been eating some of the guava, and one of them was evidently quite sick. The mother monkey had gathered them all together and was keeping guard over them. I saw one little monkey fellow sneak up behind and try to swipe one,---he did it just like a street gamester would do it, but the mother discovered it and she cuffed his ears and gave him a good mothering. The interesting thing to me was that one of these little monkeys had a very long face, was groaning, evidently feeling very bad, and he had climbed up the side of the cage and was hanging over that hot water pipe taking a fomentation to his stomach. That monkey by instinct knew that heat was a good thing for bad stomachs, don't you see. So, as I said, these remedies, simple as they are, have been used by the peasantry of Europe for hundreds of years, and many of these simple remedies come down from the very most ancient times. These natural remedies that have been so

much overlooked by the medical profession, I am sorry to say, are just coming into use in more recent times, or coming into recognition, I should say, for they have always been used. These natural remedies are really the most powerful of all because they work in harmony with nature and they do not incur any serious risk. So you see the skin is a very important thing, isn't it, and it is necessary for us to have healthy skins,-----skins that are full of blood, that are able to resist cold. Why does a person take cold, for example? The popular idea is because the pores of the skin are left open and the cold somehow creeps in through the little holes in the skin. That is not quite the truth about it. The reason why a person takes cold is because the temperature of his blood is lowered. You never take cold unless the temperature of your blood gets lowered half a degree or so, but when you get the temperature of the blood lowered ~~for~~ half a degree or a degree, then you begin to shiver, and what do you shiver for? You shiver to get warm, that is nature's method of warming you up, because when you shiver all the muscles of your body are set into motion, every muscle of your body is working hard to warm you up--because when you are using your muscles you are using in your muscles four times as much energy as the muscles ordinarily use in their work, and four times as much is converted into heat. Four-fifths of all the energy of the body goes to heat. So when the muscles are working hard, if the muscles, for instance, are doing what would be the equivalent of one calory in work, producing one calory of work, which would be equivalent to lifting one pound three-thousand feet high, that is one calory--at the same time four calories of heat are produced to warm the body up. That is why you get overheated when you run, when you hurry and when you are working very hard. You get all excited because you are producing so much heat. Now when one gets cold he begins to shiver, and this shivering is due to the fact that the shivering center--a little center in the spinal cord--has set his whole body into a spasm of work in order to make heat to warm him up. Somebody who made an expedition to the Arctic regions, in giving an account of his experience

up there--I remember reading it some years ago--said, "We got so cold we couldn't travel, and we sat down on a ^viceberg and shivered ourselves warm." They sat down on a ~~v~~iceberg and shivered themselves warm. He knew how to get warm. All in the world he had to do was to sit down and shiver. So it might be worth while to make a proper deduction from this. You find yourself in church somewhere sometime with a draft blowing down the back of your neck and you say, "Oh, dear me, I am going to take cold." Now just simply set yourself to shivering. If you find yourself anywhere taking cold, if you feel inclined to shiver, don't try not to shiver, but shiver just as hard as you can, and if you shiver voluntarily, you won't have to shiver involuntarily, don't you see. If you go to bed sometime and the bed is cold and you have been put into a spare bedroom somewhere, perhaps, if you lie there a while, you will begin to shiver, but don't wait to begin to shiver, just go to shivering yourself the minute you get into bed and pretty soon you will get your body warm. I know all about it by experience. When I was a ~~body~~ of sixteen, I was teaching school and boarding around and I was put into the spare bedroom every time, and I very soon learned how to escape the dangers of the spare bedroom. That is one way. (Suppose you are in church,) as I was saying, and you feel a draft on the back of your neck and the preacher is talking, just look right straight at the preacher and keep the muscles of the neck going in this way. Don't set them to going in the ~~x~~ other way, that would not do, but set them to going this way--nodding the head--and pretty soon you will get warm, for the muscles of your neck cannot be cold when they are exercising, and the preacher will think you are approving of what he is saying. Nobody ever takes cold moving around, it is only when one sits down that he takes cold. When one part of the body is exposed to cold, the only way to protect that part is to set your muscles right up hard--just set them going just gently, you don't have to make such a disturbance as to drive people out of church, or to attract any attention, but set your muscles right up hard, and you can do a whole lot of work. Now just try it for a moment--set up all the muscles of your body hard,

that is, make your arms rigid and your legs rigid, make every part of the body rigid --just try that and in a minute or two you will be bursting out in perspiration. You get so warm because you have set all the muscles of the body at work. Now this is all related to the skin. Remember we were talking about the skin--somebody asked me a question about the skin and I must go back and see what it was. It was about that cold bath, wasn't it? (Now why do we take cold. It is not because the pores of the skin are left open, but it is because the skin is so weak and so feeble and so relaxed that it has not the power to react and shut those blood vessels up so as to keep the blood out of the skin and into the interior of the body where it wont get cold. Now when we are exposed to cold, the first effect is for the blood vessels to contract and the man whose skin is relaxed cannot contract his ^{blood} skin vessels, they don't contract sufficiently, but they remain filled with blood and the blood cools off to^o much, then the person gets a cold--he is damaged by the exposure--while a person who is accustomed to ~~contact~~ contact with cold water, takes a cold bath every day--his skin vessels are well trained. Every time the skin ^{blood} vessels contract the muscles of their walls become more vigorous, and this daily training gives them the power to contract with vigor just the moment cold strikes. Now the cold is not what does the harm at all, it is the loss of heat that does the harm, and when the cold strikes the surface of the body the blood vessels shut right up at once so the blood stays inside and does not get chilled or cooled off, then no harm happens. So that is one important reason why we should apply cold to the skin. Another reason why we should apply cold to the skin, and do it daily, is because it is one of the most effective means of counter-acting one of the harmful influences of civilization.) (Now I expect I am going to shock some of you, nevertheless, I am going to say it. I am giving you notice so you can shut your ears if you don't want to hear it, but I am bound to tell you that one of the dirtiest habits, and one of the most dangerous habits of our modern civilization is the wearing of clothes. Now you say, "You would

not have us go without clothes, would you?" A newspaper said once that Dr. Kellogg advocated that clothes were filthy and dangerous, and that we ought to go without clothes and go into a wild state. I have not said that at all. I simply say, it is a dangerous habit, and a dirty habit, this wearing of clothes, and we must do something to counteract the evil effects of this habit. If you ever come in contact with people who do not wear clothes, or that wear very, very little clothes, just the merest bit of clothes, enough to satisfy their ideas of modesty---if you have ever seen such people, you certainly have remarked on the marvelously fine skin they have--no scurfy skins, no disfigured skins, fine as ~~as~~ silk, the finest skin that ever was. So in Egypt among the people from the upper Nile, they are people who had been brought up outdoors, I noticed that very carefully when I was in Egypt, the people were just as black as they could be some of them, but their skins were just as fine as ~~as~~ ^{silk}, because they were exposed to the sun and the air. You see we are not naturally indoor animals, we are not naturally clothed. The primitive man lived out of doors in a bountry so warm he did not require clothes, so the wearing of clothes is an artificial habit that we have acquired, and it is necessary in this climate, necessary for comfort, for warmth, for life even, and, of course, it is necessary to satisfy the demands of modesty of civilized society. Nevertheless the evils exist just the same. ^{Primitive man has} Now just think of it, here is a skin exposed to the light and the air--it is disinfected continuously, kept clean continuously, all the impurities that are thrown out by the skin--for the skin is twenty square feet of surface, and it is pouring out a perfect flood of some of the worst poisons of the body--they are being continuously poured out, and there is an oil that is poured out with them. Now then exposure to the air and the attrition of various things you come in contact with in going about among the bushes, lying on the grass, coming in contact with things, the skin is kept clean. In order that the skin should be kept clean there is a little exfoliation of epithelium going on continuously. You know fish have scaled and, like fishes, we are scaly creatures also, ^{some} more scaly than other, but we are scaly creatures

and these ~~not~~ scales are very fine, microscopic, but they are continuously accumulating on the skin and falling off. Now if you simply take a sharp knife and scrape upon the skin, upon the surface anywhere upon the body, you can pretty soon get a little fine white powder and if you put that under the microscope you can see ~~that~~: they are fine scales. But suppose the skin is protected as it is when you wear clothes. The clothes absorb the poisons that are thrown off and the oil and the excretions that take place, and sometimes the scales that are rubbed off are cemented together so by and by you have a varnish that is almost impenetrable, then fermentation begins to take place and putrefaction occurs and odors arise because of the retention of these impurities upon the surface of the body, or in the clothing. The only way in the world to keep clean is to change the clothes every day, and one is not likely to be entirely clean even then because the perspiration is taken up into the clothing. When one perspires, the perspiration goes into the clothing next to the body and it ferments there and decomposes there.) Why, I remember sometime ago a man who complained that his underclothing had been colored red while wearing it and he could not understand it, but on investigation, we found certain germs were growing in his clothes, excretions, mould was growing in his clothes. I remember another man who told me of a very wonderful experience he had. He put on a wet compress on his knee, and he used it day after day and day after day. He moistened it every day and put it back on and he developed all sorts of colors, first it was a green color, then it was a yellow color, then after a while it was a red color, and he couldn't understand it. He had had pain and trouble in his knee a long time--had been to several doctors and each doctor had given him a liniment and each liniment had a different color. First it was a green liniment, the next was a yellow liniment, the next was a red liniment, so he told me of the wonderful things these compresses had done for him, that they brought those liniments all out in the reverse order in which they went in. It got his red liniment out first, the yellow liniment next and finally got down to the green liniment and got them out, then his knee got well. Now this story was actually published

in a book as being one of the marvelous effects of hydrotherapy, or more particularly the heating compress. The heating compress does wonderful things, but I never knew it to pull out liniments from the body in that fashion. These colors were due simply to different kinds of ~~moulds~~ ^{moulds} that were growing in those parts. The compress in contact with the body was moist and the impurities of the body coming out into the compress fed the germs, the moulds there and these different species of moulds were growing luxuriantly through the stimulus of the heat of the body, and the old water-cure doctors used to try to make everybody undergo that experience if they could. They (used to put on a moist abdominal bandage as they called it, and they used to wear it weeks and weeks and weeks, and the man was not supposed to have really reached the maximum benefit until he broke out in ugly sores all around his body and these ugly sores were thought to be evidence that the disease was being brought out, but it was nothing in the world but an attack upon the skin by germs that were growing in that dirty bandage worn around the body. But by simply boiling the bandage every day, keeping it clean, we do not have that any more. So we need to groom our skins. What does a man who keeps fine horses do to his horses? The fine horse has his bath every day, he is curried every day, his hair is kept ^{fine as} as silk and his skin as supple as can be, but the average man is hidebound like the poor horse that has been standing in the stall and has not had any exercise for a long time. So his skin becomes dingy, spotted, he is like a poor old horse whose skin is hidebound. Now, many men have dry hair and a dry skin and that is one of the evidences of disease, and I will show you some pictures now and the reason why the skin gets into such an unhealthy state.--

Question: What is acute indigestion and why does it so often prove fatal?

Answer: Acute indigestion is generally the result of eating too much, and in acute indigestion fermentations may take place in the stomach or an excessive amount of hydrochloric acid may be formed there, and the pylorus

shuts up so that the material in the stomach cannot get out. That is why vomiting occurs. We did not understand that in the old days, but now ^{we know} what the trouble is, and the proper thing to do is to get the stomach washed out, as there are quantities of poisons there in the stomach, and you do not want them to pass down into the intestine, you want to get rid of them. In the absence of a stomach-tube, we can devise any sort of rubber tube that is not larger than the little finger, and it can be passed down into the stomach. The tube can be used very well with the ordinary fountain syringe--all that is necessary is to get it far back into the throat, then say swallow, swallow. The patient gets scared and says, "Has all that got to go into my stomach?" "No, no just simply swallow the tip end of it, that is all, and the rest will follow down all right." Get the patient over his fright and there wont be any trouble at all. The best thing for indigestion is to get in some water and wash the stomach out.

I have been asked to announce a ^{prayer} service which is held at 3 o'clock every afternoon. There is nothing sectarian connected with it. There is no particular church represented there, but it is simply a recognition that there is a great Father that cares for all of us and is looking after us and trying to help us. That is the principle of this institution, my friends. The power that heals us is not in the bath-room, is not in the consulting room--the power that heals sick people is in the man himself, the power that made us and keeps us alive is the power that heals, and the best possible condition for getting well is when we can come into perfect harmony, mentally, morally and physically, heart and soul and body, all into harmony with this great creative Power, then we can expect ~~it~~ it to do the greatest possible thing for us. I recommend this little afternoon meeting for everybody who wants to be cheered up. The great cheer, my friends, the great hope of the sick man is that God lives, that the same Power that made him lives to day and is interested in him and is not far away either, but is close by manifesting his power right within this body of ours every second.

But I have not told you all about that cold bath yet. You say, "Oh, I can never stand that cold bath." I will tell you how to take it so you can stand it. You don't like cold water. You don't have to have cold water, but sleep in a cold room. Everybody should sleep in a cold room. I would not be condemned to sleeping in a heated room for anything. You wake up in the morning feeling ^{awk} ~~un~~nerverted with no appetite, you feel distressed and miserable. Now there is not anybody here but what enjoys a sleigh ride. Now on a pleasant afternoon when the sun is shining what a delightful thing it is to have a sleigh ride. You feel dull, perhaps, and you go out for a sleigh ride for an hour, and it is just delightful and you come back feeling fine. Now you can have a sleigh ride all night. You can open your windows and cover yourself up warm and tuck your shoulders up well and breathe that cold air all night long and dream of jingle bells. That is the way I do. Then when you get up in the morning ~~just~~ ~~before you~~ take your cold bath by simply exposing the surface of the body to that cold air. Just get out of bed, loosen your wraps and expose the whole surface of the body, rubbing the skin vigorously for fifteen or twenty seconds, then get back into bed and get warm, then get out and do it again and ~~repe-~~ ~~atly~~ repeat this two or three times and each morning as you get used to it, expose yourself a little longer and a little longer and you will get all the benefits of the cold water bath but without any of the unpleasant shock connected with it. Stay in bed until you get well warmed up again, until a good reaction occurs, then get into a warm room and dress, that is the way to do it.

Now if you are going to take a cold bath, you don't need a whole bath tub. There are very few people I would recommend to get into a bath tub full of cold water, but take a towel, dip it in cold water, wash your face and hands first, then rub the body, rub it over the chest and that gets the heart to going then slap ~~the back~~ it across the shoulder. If you have a towel long enough, seesaw it across the shoulders first one way than the other, then across the middle of the back all the way down the limbs and so go over the whole surface of

the body once or twice, then dry yourself with a big Turkish sheet and you wont get cold at all. You don't want to get cold and get blue, for that is a bad kind of reaction, but you want to get warmed up right away quick, get a good reaction immediately, then have a little exercise and a little gymnastics to get your heart and your diaphragm going and that is the best means to insure good appetite and good digestion.

I wonder if any of you know who that is up there. (I suppose there is not a person here that has not sometimes seen in the papers, or seen on a store somewhere the words, "Keen Kutter". That is the "Keen Kutter" man up there, and he is a keen cutter I tell you. That is Mr. W. D. Simmons. This is a picture that Mr. Simmons himself sent me just the other day and he made a report of himself. I was telling you something about him a little while ago. He came here several years ago and looked as though he was pretty nearly at the end of his rope. He was really unfit for business. He had been working very hard, for he is the president of that great enterprise in St. Louis known as the Simmons Hardware Company.) What I am saying, I am not saying for the benefit of the newspapers. I do not suppose a business man ever likes to have much known about himself, but Mr. Simmons made no bones about this matter, and he was very proud to tell everybody how much good he got from what he learned at the Battle Creek Sanitarium, and I am sure he would not object to what I am telling you about him here. (He was broken down, not by hard work, but simply by the fact that he did not know how to eat. He was eating lots of big beefsteaks in order to keep himself up, don't you know. While he was here we taught him how to live without any beefsteaks at all, and he sent for his wife and children to come and they did come and they got used to it, and his wife took to it like a duck to water and they went home and established a Sanitarium regimen right in their own home, and when I called to see him a year ago at last fall, Mr. Simmons told me that his wife was doing it better than we could do it here. He said: you ought to come out and see how well she does it. I think she is a little ahead of you up there at Battle Creek. She serves your foods so nice-

ly that I think she is a little ahead of you." (Well his wife is a very able woman and she devotes her energy to feeding the husband in such a way as to get the most work out of him, you see. If every woman would think how to feed her husband ^{ed} up in such a way as to make him the most use to the work, how much better it would be than the way the thing is done at the present time. Woman is an Eve still, always tempting Adam to do something he ought ~~not~~ not to do. It is the same old trick and we are all suffering, and if you say to any man, "How did you come to get your stomach in such an awful fix as this?" if he really tells the truth about it, he will say, "She gave it to me to eat and I ate it." You see it was Eve who did it, so you see it is most important that the mothers of the homes, the wives should be reformed, should know about the better way of living. That is why we have this cooking school down here. I wish every lady in this house before she goes home would learn how to use the Sanitarium regimen at home. I want to tell you it would work a revolution in your home.) (Mr. Simmons looks as though he was a regular dynamo of energy, a dynamo of efficiency, and he is. This picture is the same picture that appears on the new catalogue they are sending out, so I am not allowed to publish it because it is copy-righted, but I can use it here. Mr. Simmons represents a type of man whose energy is spent intellectually in business. He is a graduate of Yale, a personal friend of Prof. Irving Fisher, and a man of great ~~scholarly~~ scholarly attainments, but he is devoting all of his energy and intellectuality ability to business and making a tremendous business. 2,000 clerks in his office alone, think of that, and all of them just as busy as they can be filling orders ~~all~~ from all over the world. Hundreds of men out on the road taking orders, soliciting orders--it is an enormous business and he is the master of all the details of that great business. Mr. Simmons made a confession to me. He said, "Once and a while I confess I have departed sometimes from the straight and narrow path, but" he says, "When I do I get the consequences and I am glad to get back to the Sanitarium regimen, and it always agrees with me." I am not mentioning that to you as an example for you to follow, but I want you to

see that he knows ~~that~~ the right way and he always comes back and he knows by experience this is the right way. In traveling about he falls into temptation now and then, and I suppose he finds it a little difficult to adhere strictly, anybody will; But I want to tell you it pays to adhere as closely as possible to the natural regimen, to the simple life.

Now here is ~~another~~ a man who represents another type. This is Clarence H. DeMar. He is a vegetarian and is one of my friends. This man is a Marathon racer, and I noticed about a year ago now or a little later, he made quite a good run in a contest in Massachusetts somewhere, and I noticed in ~~an~~ a paper an announcement that he was running a Marathon race, so I wrote him afterwards and asked him what he ate, or whether it ever occurred to him that it was a good thing to give attention to the matter of diet in connection with running. He wrote back that he ~~had~~ ate anything that came along. He said he had studied different diets and inquired of a good many people about it and he could not get any information that satisfied him that there was anything scientific known on the subject of diet, so I sat down and wrote him a few things; told him the advantages of the low protein diet, and he became so much interested he wrote me back that if I would tell him what to eat, he would eat it and stick right to it. ^{said he} He was going into training for another race last Fall, and that he would follow whatever prescription I made. So I made him a prescription--made out his bill of fare for him, and he followed it religiously, and he won the Marathon race, came out a long ways ahead of everybody else. He made the race of twenty-five miles in two hours and twenty-nine minutes. Any of you who know anything about races, know that is a pretty good speed to run twenty-five miles in less than two hours and a half. That means ten miles an hour right straight along. Now there is going to be a great race in Sweden next autumn or sometime this year, and the Marathon runners from all over the world are going to be there to compete for the world's championship in running twenty-five miles. This man's previous performance was so good that the American Committee of athletes that are selecting the con-

testants to represent America, and who have to select four, have selected him without submitting him to any tests. Generally these men have to be submitted to tests, but Mr. DeMar wrote me the other day that he had had word from the Committee that they were glad to accept him as a candidate for the Marathon race in Sweden this next summer without any tests at all. There were forty-one contestants and he was a long way ahead of the very best of them.) (Now in England this last year there have been a number of very great races. I think there are something like 130 different athletic clubs there, and in a contest in which ~~there~~ ^{they} were represented in the bicycle races there were ~~most men~~ who were low protein feeders, who ~~had~~ ^{ate} no meat, and they have come to be victorious nearly every time. There is one little club of nearly thirty athletes who eat no meat at all, and these ~~men~~ have the first prize, the second prize and the third prize, they have all the prizes there are for bicycle races, competing with all the athletes of Great Britain.) (So you see there is physical endurance as well as intellectual and mental superiority and efficiency as the result of right living. Now the whole thing is to live naturally you see, is to live naturally. If you had a canary bird or a dog, or any other sort of creature in your house you would try to feed that animal the thing that was good for it. You would not feed a canary bird the very same diet you would a barnyard fowl. You would not give a turkey the very same thing you would ~~as~~ a goose.) (Every creature has its particular diet and is adapted to it, and man has a particular diet adapted to him, but we have somehow got off the track, and got to following a carnivorous diet and becoming more and more carnivorous, whereas meat was never intended to be any part of our dietary at all; we are not adapted to it; we are not prepared to deal ~~with~~ with it. It introduces germs into our bodies that are foreign to our bodies, ~~of~~ ^{and} which our bodies are not prepared to defend themselves against, and so germs take possession of our interiors like tapeworms and other parasites and grow, multiply, ~~develop~~ ~~and~~ ~~produce~~ develop and produce poisons and these poisons produced by these meat germs, as Prof. Herter of New York calls them--it is these poisons that pro-

duce this dingy color of the skin and these ugly brown spots on your faces and on your hands, and that drive away the roses from the cheeks and produce the bad taste in the mouth and the coated tongue, that is where they come from. This is the origin of Bright's disease and rheumatism, and these other mischievous things that so many thousands of people are suffering from. It is all born of wrong diet.) Here are two men who have proven the ~~fact~~ full efficiency of the low protein diet and the ability of the low protein diet to sustain a man perfectly in health.

I was going to take up the subject of endurance and talk a little further about that. What endurance consists of, and why (the low protein diet) is better. I won't have time to go fully into the subject tonight, but I will say briefly, it (is better) in the first place (because it does not poison the nerves, but leaves them clear and strong.) (Endurance is really primarily a matter of nerve centers. The muscles are never used so long as to wear them out, but it is the nerve centers that become exhausted, and when one eats meat and other poisonous foods the nerve centers are drugged, they are poisoned so they lose their activity and ability to energize the body, and in fact, these poisons from meat act as fatigue poisons and produce a state of exhaustion simply as a result of wrong eating. Some of you know when you sit down and eat a big beefsteak or a big turkey at a Thanksgiving dinner you feel afterwards so loggy, stupid and dull you don't feel that you want to do anything at all sometimes. Give a dog a big dinner of meat and what does he do? He goes off and lies down behind the stove. He is not fit to run, he could not run. Hunters never feed their dogs meat, because they cannot run. Meat is a muscle poison, and poisons that are in the meat, that are present in beefsteak and in other meats, in the flesh of all dead animals are there in poisonous doses in such quantity that they ~~kill~~ kill.) (That is why the flesh is dead, because it was killed by the poisons which it contained. These poisons are taken right into the body and appropriated and circulated and produce their deadly mischief in every single organ of the body, especially the liver and kidneys) which are of all the organs of the body the

most readily affected by these poisons.) The liver is a great destroyer of poisons. This shows the circulation of the blood. Here is the left heart and here is the right heart. They work separately; they have separate functions, although they are bound up together in one bundle, still they are really two hearts, and there are some animals like the Manatee and the dugong in which the hearts are arranged side by side and you can see the two distinct hearts. The human heart really is just as much two hearts as that of the Dugong and Manatee. The right heart sends the blood around through the arteries to the capillaries which gather it up and send it back to the right heart where it is sent out and circulated through the body again. But all the blood does not follow this channel. [The blood that comes to the stomach, intestine, spleen lymphatic glands and other organs of the abdomen, this blood is gathered up in a separate vein by itself and is carried to the liver before it goes into the general circulation,] and this represents the liver, so everything you take into the stomach goes through the liver before it gets into the general circulation (and the mustard, pepper, pepper sauce and all those things are strained through the liver. That is why they do the liver so much harm; that is why cirrhosis of the liver is so common in hot countries where pepper and those things are used a great deal. The alcohol that is taken in goes right through the liver, and when a man smokes, more or less ~~nicotin~~ goes through the stomach and the liver is damaged by it, but it takes out the nicotin and the liver gets overworked and that is why you get bilious sometimes, it is because the liver has more work than it can possibly do, and while it is doing all that could be asked of it, it is not doing enough to keep you going.) Here is the heart and the lungs. These organs are also affected by these poisons coming from our food. [The stomach endurance depends in a large part upon the heart and the heart depends for its energy upon the blood that is circulated through these arteries.] (If these arteries are charged with poisons the heart itself is poisoned weakened and enervated, and the thing that keeps us from dying, that preserves our lives is the thyroid gland that destroys

these poisons. If it were not for the thyroid gland, we would be killed off early. This gland is most active in young persons, but it remains active during life. The thymus gland is very active in young people, and in infants before birth is very active, but becomes less active as we grow older. Sometimes this gland becomes too active, swells up and the person has Graves's disease or exophthalmic goitre.) Here is another picture of the same gland. This is a case of Raynaud's disease you see. This gland sometimes has to be removed in part, but we never remove the whole of it because it is necessary to life. Here is an experiment known as Eck's fistula in which the ^{blood from the} stomach and abdominal organs does not go through the liver so as to be filtered out. If this dog that has had this ~~an~~ operation is put ~~upon~~ a diet of bread and milk, it can live all right, but on a diet of meat it dies in three days, so a crippled liver demands very careful attention, and the exclusion of meat from the diet. [If you think there is something wrong with your liver, you may be sure for your case meat is a poison; you are not prepared to deal with it, and you ought to ~~cut~~ ^{cut} it out of your bill of fare. Now the reason why the skin gets pigmented, is because the suprarenal capsules have lost their function, their activity. The suprarenal capsules destroy the brown coloring matter which tints the skin and is produced in the intestine by the putrefaction of meat. Now when these glands have ^{been} ~~overworked~~ they by and by become unable to do all the work demanded of them and the poisons accumulate in the body and you get brown spots on your hands, pigmented skins and brown circles around your eyes.) Here is stomach that is dropped away down almost to the pubic bone. This is a condition in which we sometimes find the stomach and such a poor crippled stomach, of course, cannot half do its duty. It is certain to be a source of trouble. Here is a crippled colon away ~~down~~ in the pelvis instead of being up here where it ought to be. The wonder is that this person could live in that condition. Now if such a person eats meat, chicken, fish and things, fragments of these things lie down here rotting, decaying and putrefying and it is not any wonder they have bilious attacks; it is not any wonder they get Bright's disease; it is not

any wonder ~~that~~ most awful mischiefs occur and they have to be under treatment for something all the while. Here is ^a colon that represents what we commonly find in persons who have very **Obstinate** chronic inactivity of the bowels. Chronic constipation is produced by this condition of things by the tangled up colon you see. This is the transverse colon away down here. Here is the pelvic colon which is fallen over backward in such a way as to impede the movement of food material along the canal. Now in such a case it is necessary that the patient should wear an abdominal supporter to lift the bowels up. It is not necessary that an operation should be performed. An operation would do more harm than good, **but** it is very, very, important that the diet should be of such a character that it would not undergo putrefactions and produce poisons if it is delayed a little while. ^{we} What you want is to return to nature, to live natural, ^{by} live ^{the} simple, natural life. The corn we get from the field is pure food, it makes the ox strong and sturdy and efficient, and it makes the ^{man} ~~beast~~ strong and sturdy, and the fruit we get from the vine, the various fruits from the trees and bushes, and vines are filled with life, energy and vitality. They are better taken in the fresh state than they are cooked, for the cooking destroys some of the ^{by} subtle enzymes. These are natural foods stuffs. They are wholesome for us, - ^{foods} that we can take without the slightest danger of injury, and which are naturally adapted to us.) (But when we leave this natural dietary of fruits and grains, fresh vegetables and nuts, and undertake to live upon a flesh diet, a diet to which only scavengers are adapted, our bodies ~~have~~ rapidly deteriorate, disease makes its appearance, and here probably is to be found the great cause of the enormous shortening of human life that has occurred in a few generations. Human life has depreciated from a thousand years to less than one-hundred years. Old **Methuselah** lived nearly a thousand years, but it has come down now to forty years. See what an enormous loss. Now if we return to nature, we can acquire a large amount of this lost territory back again. I have not a particle of doubt that the average man can live one-hundred and fifty years if he only be-

gan living naturally at his birth. If we can get a few generations of people to living naturally, unquestionably human life might ~~be~~ brought back again so that the average human life would be one hundred and fifty, one-hundred and sixty years, or even more. There is no natural reason why a human being should not live two hundred years, but our average life is only forty years, and in some countries even less than that, simply because we live abnormally. So the study of every intelligent man and woman should be to find a natural way of life and to follow it as far as possible, and to try to bring other people to it. I hope when you go home, ~~from~~ my friends, you are all going to be missionaries of right living, and of efficient living.

I thank you very much for your attention.

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