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QUESTION BOX LECTURE

--Sanitarium Parlor--

Battle Creek, Michigan.

Monday, April 2, 1906.

8 P.M.

By J.H.Kellogg, M.D.

Q. Should people with rheumatism eat grape fruit?

A. Certainly: why not? A person who has rheumatism is suffering from autointoxication. I don't say suffering from uric acid disease, because I don't believe that. A person who has chronic rheumatism is not suffering from an accumulation of uric acid, but is suffering from autointoxication, from chronic poisoning from the absorption of poisons from the alimentary canal. That is my belief about it, and I think the evidence points very strongly to that thing. Charcôt found that people with dilated colons had enlarged joints. Enlargement of the joints is found in various forms of nervous disease. It is a nodular condition. It is an indication of chronic autointoxication. It has been found to be present in cases in which there was a defective action of the suprarenal capsules. The suprarenal capsules make a substance which in the body increases oxidation, helps to burn up the poisons. The little capsules of the kidney make a substance which destroys poisons, and so long as these capsules remain active the person can live, even though the activity of the kidneys is suspended. Prof. Brown-Sequard called attention to this a good many years ago, that a person might live for days and days with the action of the kidneys entirely suppressed, provided the suprarenal capsules continued their activity, so as to form a substance which in the blood destroys poisons. That is a very important point to know about. This poison-destroying property of the blood depends upon the alkalinity of

the blood. There are certain substances which make poisons. These poisons diminish the alkalinity of the blood. Meat decomposing in the alimentary canal, and things that produce decomposition in the alimentary canal will lessen the alkalinity of the blood.

When a person eats beefsteak, to make this perfectly plain and simple, part of the beefsteak is digested, dissolved, absorbed, and part of it in fragments goes down into the colon, remains there, decays, and the products of this decay is dissolved into the blood and lessen the alkalinity of the blood. They are acid products. This lowered alkalinity means lowered vital resistance. It means that various diseased conditions, nervous disorders, and chronic disorders of various kinds are encouraged.

Now a person who has marked rheumatism, then, needs two things, first to stop the formation of poisons in the alimentary canal, so that the diet must be corrected. We must stop the use of meat, stop the use of tea, of coffee, and everything else that has poisons in it. And second, it is necessary that this alkalinity of the blood should be increased, because with increased alkalinity of the blood will be increased oxidation, increased burning of the poisons.

(My throat troubles me sometimes. A good many years ago I was a lecturer on chemistry in the College, and one day I had the misfortune to have some little entanglement. I was distilling some chlorin gas in a tube, and by some accident it became entangled so the outflow ceased and the cork was blown out of the flask, and a large quantity of chlorin gas was thrown in my face just as I was taking a deep breath, and I received a severe injury to my vocal cords. I thought I had lost my voice forever, but my vocal cords were a little disabled, so when I become a little extra fatigued, or if I get the least bit of exposure to cold, the injury to my vocal cords reminds me of my accident. I will get over it in a moment.)

What is necessary is that the alkalinity of the blood shall be increased. ^{fruit,} Grape ~~juice~~, and fruit juices of all kinds are of the greatest value in increasing the alkalinity of the blood. Why? Because they contain what are called alkaline salts. Bases are combined with acids,--the citric acid of grape fruit, and lemon juice, and orange juice, cranberries and tomatoes. All these fruits contain citric acid, and this citric acid is combined with soda and potash in fruit juice, and when taken into the blood the soda is burned up, assimilated as food, used just the same as starch and sugar, and that leaves the alkali behind. And this alkali left behind serves to increase the alkalinity of the blood, so there is nothing the rheumatic can use of greater value to him than fruit juice. And grape fruit, oranges, all kinds of fruit juices, including apple juice and grape juice, are of great value. This is contrary to the general belief of the medical profession, I am sorry to say. It is contrary to what most doctors say to their patients. They say, Don't eat apples. Malic acid is very bad for rheumatism. Don't eat lemons or oranges or any acid fruit, because they will make your blood acid. It is true that directly after eating a large quantity of acid fruit, or drinking a quantity of acid fruit juice, for the first hour or two the alkalinity of the blood is diminished by the absorption of these acids, but in a little while the organic acids are consumed, and that leaves the bases behind. Then the alkalinity of the blood is increased, so the actual ultimate effect of the use of acid fruit juice is to increase the alkalinity of the blood, which is a matter of great importance.

I would like to mention just here a thing I might not get a chance to say again right away, and I think it is very important, as this is one of the seasons of the year when typhoid fever is very abundant, that fruit juices of all sorts are one of the most important of all foods for fever cases. A patient suffering from typhoid fever can almost live on fruit juice, apple juice, grape juice, orange juice, and lemon juice, and other kinds of fruit juices of any sort can be used to the extent of at least two quarts a day.

As I said, the patient could almost live on acid fruit juices.

Now let us see how much food we would get in two quarts of apple juice, for example. There are sixteen calories in an ounce of apple juice, and in four pints there would be more than one thousand calories you see,-- more than one thousand calories, because in a pint it would be sixteen times sixteen, or 256; so four pints, or two quarts, would be four times 256, or 1024 calories in two quarts of apple juice. If it were grape juice, it would be more than that, because in an ounce of grape juice there are twenty-four calories, and that would be 400 in a pint. In four pints it would be sixteen hundred. In two quarts, then, of fruit juice, you would have really enough food to support a laboring man almost.

Now the great advantage of fruit juice in fever is this. In fever there is a constant loss of the salts of the body. While the patient is eating nothing the salts are being continually ~~discharged~~ discharged from the body through the kidneys, and the result is the alkalinity of the blood must be lowered day by day. It gets less, and less, and less, and less. The fever goes on, so the resistance of the body gets less and less and less as the fever goes on. That is why the tongue becomes so coated, why fever sores and bed sores come later in the period of the disease, because the resistance is lowered. And that is why the patient gets weaker, and feebler, and feebler, and feebler, and his resistance steadily goes down. The alkalinity of the blood is continually being diminished, so we must keep the alkalinity of the blood up. If the fever patient eats nothing of course he is taking in no salts at all, while he is continually discharging salts, and there must be a lowering of the alkalinity.

Suppose we give the patient bouillon, beef tea, Liebig's Extract of Beef, ~~juice~~,--does that increase alkalinity? No. It would do the very opposite, because these preparations contain substances which decrease the alkalinity of the blood. They contain substances derived from the flesh of

animals which have the effects of acids upon the blood, so the use of these substances is very detrimental. Uric acid contained in beef juice and beef tea is found there in large quantities, and uric acid will lessen the alkalinity of the blood. So fruit juice comes in as an excellent food. It will supply the alkali needed in abundant quantity, and so increase the resistance of the patient, and is on that account an admirable food. The patient needs something besides. I think a combination of thin gruel, barley water, rice, or other ~~the~~ cereals, with fruit juice, is a perfect diet for a person suffering from typhoid fever, or any fever.

Q. What is the effect upon the general health of a floating kidney in a man? Does it effect the nervous system?

A. Now it may, or it may not. If the floating kidney produces pain, that would be a disturbance. If it causes backache or dilatation of the heart, or attacks of gastralgia, which it sometimes does, then it is a disturbance and ought to be remedied. If a kidney is floating it sometimes gets twisted over on itself, one of the edges is twisted, turned over, and so obstructs the outflow of urine. And the consequence of this obstruction of the outflow is the bloating up, and swelling up of the kidney, and great pain. That is what is known as Deitl's Crisis. Deitl's crisis indicates that there is an obstruction of the outflow of the kidney. The kidney is twisted on itself, and when it gets swollen up very very large, then it untwists again, and in that way it is relieved. In such a case as that it is necessary that something should be done to fasten the kidney up in place.

But the form of a loosened kidney which does the greatest harm is the ~~movable~~ movable kidney, that is not floating. That is, the kidney has got loose in its capsule, and it is constantly accompanied by pain. It may not be floating, it may not be moving about very freely. Such a kidney generally needs to be fastened in place. But the floating kidney has no mysterious influence upon the general health, and in the majority of cases it does not

do any harm. About every fourth woman who comes to the Sanitarium for treatment has a movable or a floating kidney, and once in a great while a man. About ^{one} ~~every~~ man in ^{every} ~~one~~ or two hundred has a movable or floating kidney. These are men who have worn their clothes tight. They have suspended their pantaloons with a belt,--have been blacksmiths, or soldiers, or sailors, or for some other reason have worn belts. Recently a French authority has been making a study of the subject, and he finds that a certain coefficient can be made out by comparing the dimensions of the body. Take the length of the body from the tip of the sternum to the pubic bone, and take the circumference of the body at the smallest part, and divide one by the other. For instance, in a patient I saw yesterday, I found the length of the body from the tip of her sternum to the tip of the pubic bone was 22.7 inches. I found the circumference of this patient was 24 inches. Divide 22.7 by 24, gives 92 and a fraction. That is a high coefficient; a very high coefficient. This patient was in good health. She had a waist that was large enough. But the lady who accompanied her, in her the co-efficient was away down low. It was small, about 77, and this patient had a floating kidney. Now you see that is exactly what you would expect. When the waist is small there is no room for the kidney there, so it has to go down where there is room; and the smaller the waist is the more likely the patient is to have floating kidney.

This authority said he could tell in advance by measuring people whether they had floating kidney or not. I am trying to find out if that is true. It is astonishing to find how many ladies have small ^{waists} ~~waists~~. The more astonishing thing is that ladies waists get smaller. I broke into a dancing school once and measured a whole lot of girls from ten, twelve, to thirteen years old, and you know I found the average waist measure of those little girls was 24 inches. What do you suppose the average waist measure for Wellesley College girls, from twenty years old and upwards, is? It is 23 1/2 inches. How does it happen that when the girl develops in size her waist

gets smaller--that she doubles in size in six years, but her waist gets smaller? How does it happen? One lady said "Don't you see, they stretch out." That answered very well for a retort, but it did not explain the phenomena. I know what the reason is. These city girls, when they get to be twelve or thirteen years old, the dress maker says to the mother, "Now then the little girl is developing, and we must begin to form her waist, because she is growing, and she is going to grow rapidly in the next two or three years, and we must be careful that she grows into the right shape, and we must begin to mold her form." So the girl is put into a bottle, like a cucumber, you see, and has to grow into the shape of the bottle, just as the cucumber does, and there is no room for her kidneys and things where they belong. They have to go down where they can. So the liver gets out of place.

liver

I saw a lady ~~that~~ was almost cut in two in the middle. I saw a woman who had a splendid body, but one of the kidneys had gotten loose, and it was clear over on the other side from where it ought to be. I thought it was a tumor, and was going to operate to remove it. She protested. She said she knew what it was. She said "When I was a girl I had malarial fever, when I was going to school--boarding school, and I didn't like it because it made my waist so big, and I said to a girl friend of mine 'What shall I do?' She said, 'I had the same thing, and I will tell you what I did. I wore my corset nights, and I took it up a little every night, and took it up a little more every morning until I got it down to where I thought it ought to be--"

that is to the fashionable size. So this lady said "I will try it."

She said "I used to tie my corset strings to the bed posts and pull as tight as I could, and one morning I felt something pop, and this lump came out there under my ribs, and it has been wandering around here ever since." That is a fact. So you see what does it.

Q. Is there any cure for granulated joints? What is the cause?

A. Yes. When a man gets well his joints will get well. Suppose you rode along the railroad and came up to a certain station, and you found the premises were all out of order, found the pumps were out of order, water tanks were empty. You found the cars were in general bad shape--seats were rickety, and the locomotives were not in good shape, but were getting out of order; the tracks were out of order, the ties were loose, and the road was very rough. You would say that railroad corporation was all run down. Now wouldn't you say the same thing if you found there was simply one part of it out of order? Suppose you find the locomotives poor, the cars poor you would say that is a cheap lot. Suppose you should go up to a farmer's house and you find the gate off the hinges, the barn door is gone, and the house has not been painted for some time. You say, That man must be in hard lines; he is getting into bad shape. That railroad issues some bonds, and by and by gets a large amount of cash on hand, and you see improvements going on everywhere. Everything is all put in order. It is exactly so with the body. The body is a corporation, and so long as the body itself is well it will keep every organ well. I wish every one of you would get that thought in mind. So long as the body itself in general is well it will keep every organ well. No single organ of the body can get seriously out of order so long as the body as a whole is well.

I remember once at a dispensary in London, where I was spending a little time with one of the leading doctors in London, some twenty odd years ago, a man came in, and the doctor said to him "Well, how are you? What is the matter with you?" "Well," he said, "Doctor, I am all right myself, but I have got an awful pain in my back." Now this man recognized the fact that he was all right in himself. His muscles and his nerves were strong, but he had an "awful pain in his back." That man didn't need any doctor at all. If that man had simply gone away his body would have taken

care of his back all right, and his back would have gotten well. Many people don't know that, and give the doctors great credit for what they don't deserve any credit for. The average man who gets sick with an acute disease gets well if he is taken care of, and all he needs is good nursing. Acute disease is like a race course,--One pretty soon gets right around to the starting point. Chronic disease is like a line straight ahead. Chronic disease does not have an end. It does not have its own cure for it. It ~~has~~ is a degenerative tendency. It is down hill all the way, straight ahead, never comes back to the starting point, never. But the body has the power to heal itself; and all the real healing power is in the body. So long as the body is well it keeps every part well. But if you have a disordered stomach you need not imagine you are all right everywhere else. If you were all right your stomach would be all right. When you get to the point where your stomach is all right, the rest of you will be all right. But you can not get your stomach right until the whole body is right. Now suppose you found a wicked man, who steals, and swears, and lies, and does every sort of wicked thing. Suppose this man should come up to a mission some night and say "Now I would like to get over this. I would like to be free from stealing, because it gets me into trouble. I don't care anything about the swearing, or the lying, or the gambling. I just want to get free from stealing." Do you suppose there is any such thing as freeing that man of stealing by any religious process. He might get punished and stop stealing, but by any religious influence that might be brought to bear upon that man he is not going to be cured of stealing. He can not be cured of stealing by any religious influence without being cured of the other things. It is impossible. But let that man be cured of all his wickedness, and the stealing, and swearing, and lying, and all the rest of those things will be dropped off altogether. It is exactly so with the body in regard to getting well. Getting well is being born again physically. It is being converted physically. It is putting on a new man. The Bible speaks about putting on "the new man." That is exactly what getting well is.

You have got to lift off the old man of disease and put on the new man of health.

I was talking one day with a man who had a bad stomach, had a bad liver, bad heart, bad lungs, almost everything a little bad. I told him his various troubles, and he said--

"Doctor, what is the name of my disease. I told my wife I would write her the name of my disease."

So I reiterated to him the condition of his liver, the condition of his stomach, the condition of his bowels, etc.

"Now, Doctor, what do you call my disease?" he said.

"I don't know of anything that would exactly fit your case except total depravity," I said.

"Oh," he said, "I see what you mean! -- you will have to get a whole new set of works for me."

"That is about it," I said.

He had been thinking of a watch which he had taken to be repaired and found it had to have a new set of works; nothing but the case was worth anything. When the chronic invalid is generally ill he must be thoroughly reconstructed. That is why the physiologic method is substantial -- because it produces reconstruction.

Suppose you feel weak, tired, perhaps you are over-worked. You go to a doctor, and say "Doctor, I would like a tonic. Give me something for my nerves. I don't feel up to my work." The doctor gives you some preparation--nux vomica perhaps; that is a special nerve stimulant. Or the doctor may give you a little dose of strychnia. Take a frog, give him a little dose of strychnia, and you can cut off his head. I had a frog here one time with his head cut off behind his ears. He was here upon the table. I gave him a little dose of strychnia,

then made a little tap upon the table, and that tapping made the frog give a great big jump right up into the air -- a dead frog; that is, a frog with its head cut off. When I put the frog on the floor, and stamped the floor, he would jump every time. That is what strychnia will do for the nerves. It excites the nerve center to such a degree that a frog will jump with its head off. That is what it will do for a tired man. Take a boat crew just going to a rowing race. If somebody should inject into every one of those men who are rowing an injection of strychnia they could put in some tremendous pulls even when they were exhausted. Even though they could not make another pull on the oars, if a dose of strychnia was given to them it would enable them to make a very tremendous output of energy, because strychnia helps to get a little more strength out of the body. But it is not worth much. Afterwards there would be a tremendous relapse, because strychnia does not give strength. All it does is to exhaust the nerve centers, and make it possible to get a little more force, a little more energy, out of the machine. It is like a whip to a tired horse. The whip does not give the animal any more energy, but simply gets strength out of him. That is what a stimulus always does. The physiologic method is entirely different. Its effect is to rebuild the man, to restore to the man the thing he needs to give him energy.

Suppose this is a nerve cell. Examine it under the microscope when it is filled with energy, when it has been rested, and you will see it is filled with little granules. That cell is all filled up with little granules, and when that cell has been open for some hours, until it is tired out, it is shriveled up somewhat, and the granules have disappeared. There are only a few left, just a very few, instead of a great number. That is the difference between a tired cell and a rested cell. Energy is stored up in the cell in the form of granules. What does strychnia do? It does not store up any granules. It draws out some more --

just simply effaces a few more granules, uses up a little more of the energy of the cell. Now the physiologic method is another thing entirely. The physiologic method helps the cell to store up granules. By correcting the diet, correcting the general habits of the individual, improving the condition of the blood, the building up processes of the body are increased. The resistance, and the vital activities of the body are improved to such a degree that the body is better able to store up energy, and the waste energy is lessened.

Q. Is there any cure for granulated joints?

A. Yes. The cure consists in curing the man, and when the man is cured the difficulty will disappear. We don't cure disease, we cure patients. "Cured to death" might be written on many a tombstone. There is many a man who has been cured, and cured, and cured of diseases, and when all the diseases were finally cured the man himself was in his coffin. That is not what we want to cure--the disease. It is easy to cure disease. Here is a man who has a pain. We can cure that pain with a dose of morphia, but where is the man? Here is a man with fever. You can cure his fever with a big dose of antipyrin, but where is the man? He is nearer dead than he was before. He is worse off than he was before. Here is a man who has a dry skin. Give him pilocarpin, and he will sweat profusely, but he is not better. The thing that cures is simply the reinstatement of the body itself, the reenforcement, the building up of the bodily powers. The blood heals. That is the only healing power in the body--the blood. Make the blood right, and the blood will do all the rest.

Q. Is there any cure for a hard liver?

A. No, there is no cure for a hard liver. It can be helped.

A man with a hard liver must do all he can to keep the way open. All the blood in the body must go around through the liver. The blood that passes through the stomach, through the spleen, and the pancreas, the intestines,

and the other structures in the abdomen must all, or nearly all, go through the liver. There are some little side doors through which some can leak out. If the liver is contracted these contracted passages must be gradually opened up, and they can be opened up by the application of the moist abdominal bandage. By the application of the moist abdominal bandage the blood vessels of the liver are dilated a little, and the other side openings through which the blood escapes from the portal vein are there dilated so that their movement through the portal vein, the movement of the blood through the portal vein is facilitated.

Q. I have had a coated tongue for ten years. Have had treatment from ten doctors -- (he gave each doctor a year, you see,) but I still have it. What is the cause? Is there any remedy?

A. Yes. I must tell you just what the cause of that coated tongue is. The blood contains substances known as alexins, the purpose of which is to kill germs and prevent germs from growing. Why does not everybody have a coated tongue? Why don't you always have a coated tongue? Because ordinarily germs will not grow in the mouth. Take a man who has an uncoated tongue, put germs in his mouth, and they will not grow there at all. That man's saliva is not a good soil in which germs can grow. They die. It is just the same as wheat or corn sowed in sand. It would die, because there is nothing there to promote the growth of the corn and wheat. Germs put into the mouth of a healthy man will die -- won't grow there. But now suppose that man's blood becomes deteriorated. When he has fever, or other conditions, the blood becomes deteriorated. He has perhaps a dilated colon, and poisons are absorbed from the colon until the blood is deteriorated. Or may be he has dilated stomach. The same thing happens to his stomach -- toxins are formed, these toxins deteriorate the blood, so the blood loses its germ destroying power; then the saliva which is formed from the blood loses its germ-destroying power, then the germs can grow in the mouth in

abundance. This is what makes a coat on the tongue -- simply germs growing. I used to have in my office constantly some sterilized potatoes in a jar. The patients would come in with a coated tongue, and would ask me what makes it, and I used to tell them I would show them. Then I would scrape off of the patient's tongue some of the germs, and put these germs on a piece of the potato, and I would ask the patient to come in three or four days afterwards; and they would come in and look at the potato. He would find the potato all covered with the same kind of a coat that he had on his tongue. The coat on your tongue grows just as the mold grows on the wall. In the early days, when the germ theory was not established, I had to give demonstrations of that sort to persuade people I was telling them the truth. The coat on the tongue is simply the growth of these micro-organisms. It is the same thing as mold growing on the wall. Decay of the teeth is the same condition, because germs are growing in the mouth. A person with nasal catarrh is in the same condition exactly,-- he has germs growing in the nose. A person with catarrh of the stomach has germs colonized in the stomach, and growing there just the same way.

Q. What are the causes of rheumatism?

A. Rheumatism is an intoxication due to the absorption of poisons from the colon, I believe,-- that is, chronic rheumatism. Acute rheumatism is due to germs. Certainly there is a cure.

Q. Does lemon juice produce an alkaline condition of the blood?

A. Yes, it does. Lemon juice produces an alkaline condition, and beefsteak produces an acid condition.

Q. Please tell me what causes a feeling of pressure in the legs from hip to knee to the back and outside of legs, causing a queer numb feeling in the flesh of leg, especially on the outside, and is aggravated by a moderate long walk, or by sitting for an hour or more? Is there danger of paralysis in this case?

A. This is a symptom which is frequently found with persons suffering from high blood-pressure. I am not sure there is danger of paralysis but these are symptoms which people sometimes have when they have paralysis. So you ought to have an examination by a neurologist, have a careful test made, and see whether there is actual danger of paralysis; and if there is, there will be some other symptoms besides those, and the doctor can find them out.

Q. What would you do for a child with sick headache, intense pain in back of head, and high fever?

A. That child probably has gastritis, and the child should be kept quiet in bed; take a large enema, and have towels wrung out of cold water wrapped around the abdomen, covered with flannel, and kept on for half an hour, taken off as soon as the cloth gets real warm, and then changed. The child should take no food at all for a day or two, except some orange juice, or some simple thing of that sort. The child needs rest. Its stomach needs rest, and that is the best remedy for the difficulty.

Q. What is the cause of the face flushing after eating, and also after a nap?

A. That is a very interesting phenomenon indeed. It is due to the association of the central nervous system with the sympathetic nervous system. I have known people to flush not only on the front side of the face, but on the back side as well. When this difficulty occurs in the nose, ~~it~~ ^{which} is the condition that occurs when one is just taking cold, it produces what is called choriza -- a great flow of serum through the nose, so that the handkerchief has to be used every few seconds. I remember several persons who, as soon as they began to eat, would find the saliva beginning to flow and the flow from the nose would begin at the same time, and make a very embarrassing situation. It is simply due to the association of the

nervous systems-- the sympathetic nervous system and the general nervous system.

Q. What is the cause of belching after meals?

A. It is increased motility of the stomach. The stomach contracts too vigorously. This symptom is generally present in people who have hyperacidity. The acidity of the stomach excites the stomach to contract, and the pylorus closes up so vigorously and so tightly that when the stomach contracts the food can not be forced out, so the gas present is forced upward. If the pylorus opened properly, and if the contractions were not quite so vigorous, the food and the gas would be forced down through the stomach into the intestine; but instead of that part of the gas is forced backward, because the pylorus closes too tightly. That is my theory at any rate.

Q. Please give cause and remedy for croup, and how to prevent it.

A. There are two kinds of croup -- spasmodic croup and real croup. Real croup is diphtheria, and you should get a doctor and follow his advice very closely. Ordinary spasmodic croup is a much simpler thing. If the child wakes up suddenly in the night with a croupy cough, put the child into a hot bath immediately, and it will get relief right away. If you can not give a hot bath, put on hot cloths around the neck, and afterwards put on a cooling compress, and keep it on during the night; but be sure it is well covered with mackintosh and flannel. If you do this, the child will get on all right.

Q. If meat and fish are injurious, why did the Lord feed the Israelites with quail, and the multitude repeatedly with fishes?

A. Well, now, it seems to me the Bible says something about that -- about these quails, that the Lord let them have quails because of the hardness of their hearts: and you know what happened to them when they ate those quails, -- they had tremendous bilious attacks. They were sick while

the quail was still in their mouths. They all got sick from eating quail. That ought to have been a lesson to them, and everybody else, that quails are not good food. The Lord gave them quail because they insisted on having quail.

As regards fish, the multitude, I suppose, were in the habit of eating fish. There was nothing else to eat. It was bread and butter combined. I would eat fish before I would starve to death. Fish are not the best food, but they are food. And no one I am sure can maintain that there was any taking of life when the multitude was fed with fish. There were some fish there, but they were so multiplied that they fed the multitude. There were no more fish killed, at any rate. One of the objections I have to eating fish is the fact that you have to kill the fish. Fish are made to be eaters; not to be eaten. They are eaters, not eatables, and they have just as good a right to eat as we have. And, besides, they are carnivorous. I would just about as soon eat a kitten as to eat a fish. Why not? Why not? Fish live on fish. The fish you catch you catch with worms and flies. You know that fish are carnivorous animals. Why isn't a dog or a cat just exactly as good as a fish? From a physiologic standpoint I don't see any reason, for the life of me, why one is not just as good as the other. In the Philippines and in Porto Rico there are people who are very fond of cats. You ask my boy Pedro here, who is a Porto Rican, and whom I think most of you know, as he is one of the call boys,--a boy with bushy hair, and he is one of my boys; he told me when he arrived here that he was very fond of cats. Why, he said, what is the difference -- when I protested that kittens were not the very best kind of food. Why, he said, I have seen folks eat squirrels. Why isn't a kitten just as good as a squirrel? and what could I say in reply to that? Squirrels eat birds and so do cats. Squirrels eat bread and milk, and so do cats. Squirrels eat nuts, and so do cats. My cat at our house was eating protose yesterday morning

and was fond of it, and called for more. So I confess I don't see where to draw the line between cats and squirrels, or between cats and fish. The Bible is a text book of morals. It is an encyclopedia, or a complete text book of morals. It also teaches a great many things about hygiene and eating, temperance, etc, but it is not a text book of hygiene or of physiology.

Q. What can a mother do to help a child sleep who is nervous?

A. Give that child a neutral bath at a temperature of 90 to 92° for fifteen to twenty minutes. Then put the child to bed, and it will go to sleep and sleep soundly.

Q. Ought a person with hyperpepsia to participate in horseback riding?

A. Yes: It is good for both hyperpepsia and hypopepsia; but the hypos can ride after dinner, while the hypers better ride before dinner.

Q. Is it good to take hot water before eating breakfast by one having stomach trouble?

A. If you have got catarrh of the stomach, drink a little hot water about an hour before breakfast to rinse the mucous out of the stomach, and it will do you good. But if you have not got catarrh, and have hyperpepsia, don't do it.

Q. What is the cause of, and the remedy for, nervousness in children nine and fourteen years of age?

A. If a child is nervous when it is somewhere from nine to fourteen years of age, it must have been very badly abused, very badly fed, or badly born. A child nine to fourteen years of age who has been kept in school too much, or has been fed highly stimulating food, with lots of mustard, pepper, peppersauce, ginger, and allowed to eat a great deal of pie and cake, or a great deal of "pizen cake," which I think is the better way

to put it, might be expected to be nervous. Or if such a child is allowed to drink tea and coffee it is sure to be nervous. The nerves are badly nourished. They are irritated, excited by the wrong diet. Some children do not sleep enough. They are over-excited from being overtaxed at school. That is another embarrassment to which children are subjected -- wrong treatment in school. The thing to do with such a child is to take it back to nature.

A French lady brought her children to see a great French doctor in Paris some years ago, and the poor puny weakened little things were just as miserable as they could be--awfully nervous, and she said, Doctor, what shall I do with them? He said to her, "Madam, roast them." You can imagine how horrified she looked. "Roast them in the sun." That is a good thing for these nervous children. Roast them in the sun, let them have all the fresh air they can.

I recommended for some children of that sort a while ago that their father should build a tight board pen, just as you would for a circus, a high board fence enclosing a space about four rods square. Put a sand pile inside of it, then take his little boys, put ^{trunks} ~~business~~ on them, and turn them loose in there just like savages. Let them roll in the sand and live out in the sunshine, -- play house, and live like ^{squirrels,} ~~savages~~, until the little ones get to be as brown as Indians. And in the course of the summer they will get as tough and hardy as squirrels, because they have had the same good chance to live.

Q. Please tell us something about the solar plexus or abdominal brain.

A. The solar plexus is a large mass of nerve matter that is closely associated with the stomach, just behind the stomach. This is the center of the sympathetic nervous system. This branches out all through the body, follows every blood vessel, runs to every little gland, then is

connected with the brain, and the brain itself even the thinking, is more or less under the control of the solar plexus. It is the seat of hunger, and it is closely associated with the control of the blood vessels. It controls the supply of blood to the brain, and controls the supply of blood to the heart. It controls the breathing more or less directly or indirectly; so it is a matter of great consequence that we keep the solar plexus in a good healthy state. A blow upon the solar plexus will produce death as quickly as a blow upon the head.

Q. Please explain how baths cure disease.

A. Baths do not cure disease. They help a man to get well, and when a man is well his blood cures the disease.

Q. What is the objection to the use of tea and coffee?

A. They contain poisons. The man who is sick and wants to get well can't afford to carry any sinkers. Tea and coffee are sinkers, and cigars are sinkers. The man who is seeking health is like a man who is swimming for his life. He can not afford to carry any sinkers along. He must drop them off. I heard of a man who was sunk by a belt of gold. He wore the belt of gold around him so he could not lose the gold, but when he was returning from the mines of Australia he was lost overboard, and the belt sunk him. So many people carry along some precious habit,--think they can not give up tea, or coffee, or something else; hang on to just enough to keep the nose under water. When you get a man almost to the top it may be just a little more would help out. It may be just one cigar a day that keeps him under. The thing to do is to throw away all the sinkers. Tea and coffee are sinkers.

Q. What foods are best for hyperpeptics and hypopeptics?
or

A. In hypopepsia avoid acids if they give you pain. Otherwise not. Avoid sugar because it has a tendency to increase the acid, and increase the production of acid. It is not the sugar that ferments and

sours in the stomach that makes you have sourness and acidity after eating sugar, but the sugar causes the stomach to produce too much acid. That is the reason. So you must not eat sugar. And you must not eat beefsteak. Why? Why beefsteak makes you very comfortable. You think you are all right. But the beefsteak will stimulate the stomach to make more acid. Pawlow proved that. And since Pawlow's experiments the gastric specialists everywhere have been compelled to change their teaching on that point, to change their prescriptions; and there is no great gastric specialist anywhere today who does not say that very same thing -- that persons who have hyperacidity must abstain from meats, because they excite the glands to make more acid, and so continually aggravate and intensify the disease.

What can you eat then? A starchy diet has somewhat the same effect. A milk diet has the opposite effect. A milk diet for a person who has acidity of the stomach is good, provided you take enough of it. If you take half a glass of milk, it will form large hard tough curds in the stomach, and the result will be that it will be a long time getting out of the stomach. But if you take two or three glasses of milk, and take milk very freely, the effect of milk then is to lessen the formation of acid in the stomach, and when the curds form they are smaller, softer curds, because the size of the curds and formation of the curds depend upon the proportion of milk used.

I got that idea from my good old friend, Dr. Stephen Smith, of New York. He is one of the oldest surgeons of the country, and a very eminent man,-- one of the officers of the Bellevue Hospital Medical College. Dr. Smith told me when he was a boy he watched his mother making cheese, and he observed that she carefully weighed out the rennet so as to have just so much rennet for so much milk. He said, "Mother, why, what difference does it make?" "Why," she said, "you see if I have too much rennet for the milk

the curd is too hard, and the cheese is not good; it is tough. If I have too little rennet, then the curds are not hard enough, and the cheese is too soft, so I must have just the proper amount." The same condition prevails in the stomach. When you take milk curds are formed in the stomach, and a person with too high a degree of acid has too much acid and pepsin for the quantity of milk, so you must take more milk. If you do not, the milk makes you bilious, makes you have a coated tongue, and you must discard it altogether, or take very little instead of so much, and chew it thoroughly.

Q. What is the cause of headache?

A. I can not tell you. There are so many causes of headache. The most common cause is gastric disturbance--disturbance of the stomach.

Q. What are the food elements?

A. They are the elementary materials out of which the food is made. They are starch, fats, and proteids. Starch and fats are fuel, just what coal is to a locomotive. Proteid is just what metal is to the locomotive. Coal has to be put on at every station. In other words, the locomotive takes ^A on a little at each station when it stops, but it goes into the round-house once a day, and if some nuts have been lost off, or some babbitt has been worn out, or some other pieces of the metal parts are worn, the repairman in the round-house restores these parts to the engine, and all the metal parts that have been lost and damaged are replaced. So proteid is the metal. The fat and starch are the coal. Consequently we don't need very much proteid. It does not take ~~it~~ very much iron and brass to keep the engine in repair, but it takes a great amount of coal; so the proteids should be low, should be small in quantity. About 10 per cent of the total calories should be proteid, ³⁰ ~~20~~ per cent should be fat, and the rest carbohydrates. Carbohydrates are sugar. Sugar, starch, and dextrin go together. Fruit acids are also included. Fruit acids of all sorts,

dextrin, starch and sugar are all carbohydrates. And 30 per cent of the total number of calories may be fats.

Q. What will help a person suffering from nervous prostration to sleep?

A. The best thing I know of is a neutral bath at 92° for half an hour before going to bed. Exercise in the open air is good, but not too much. The moist abdominal bandage will sometimes answer. Put on cotton stockings wet, long ones, cover with flannel stockings, so as to keep them warm. This is a splendid remedy, for it draws the blood into the legs, the brain is relieved, and the patient can sleep. Another thing that is better still is to go without supper,--go to bed hungry, or at any rate eat nothing but a little fruit juice. Don't eat bread and butter for supper particularly. Bread and butter is almost the worst thing you can eat for supper. There is nothing worse except pie and cake and such things as that. Pawlow's experiments upon dogs showed that bread and butter require a long time for digestion. Bread requires a longer time for digestion than almost anything else; and Canon of Harvard has been making an experiment with fats, and with other food elements, and he finds that fats remain in the stomach longer than any other food element. So you see when you take bread which requires a long time for digestion, requires more gastric work than any other food, and add to it butter, which remains a long time in the stomach, you are hindering your digestion more or less, and you have got something going on in your stomach all night long perhaps. So don't take bread and butter for supper. You may take some gruel of some kind, or some thin broth or fruit juice, or something of that sort, or stewed fruit, but don't take bread and butter.

Q. What will restore appetite when it has been annihilated for six months?

A. One of the things is to stay outdoors. The out door life is

one of the very best things I know of for that. The cold bath, or morning spray, or a plunge in a pool, and a swim, is an excellent thing. Breathing exercises are capital things.

Q. What is the cause of nervousness?

A. I confess I don't know. Once in a while I find a question I can't answer. I don't know what nervousness is, and don't know the causes of it. It is simply an indication, you might say, that the nerves are out of tune -- the whole body is out of tune. But that does not explain it.

Q. Is it best to exercise after meals?

A. If you have hypopepsia, exercise gently. If you have hyperpepsia, go to sleep if you can, and take a nap until the worst of it is over.

Q. What causes indigestion?

A. Generally big dinners, bad dinners; wrong eating is the principal cause of indigestion.

Q. Would you order a change in work for a neurasthenic?

A. That just depends. One of the most obstinate cases of neurasthenia I know of is the neurasthenia from which dudes suffer, and loafers. A dude, or a loafer, a fop, an idler, has the very worst form of neurasthenia. That fellow needs to be made to work and earn his bread and butter and salt if you can make him do it. Generally you can not make him do it. He needs to be thrown into the water somewhere and made to swim ashore. That will help him. On the other hand, a poor tired mother has neurasthenia because she is worn out-- worried out, and needs absolute rest. Sometimes such a person does not need physical rest altogether, but needs mental rest, and sometimes that is the only change that is required. The man who finds himself dreaming about his business at night, going through his daily problems, the problems in his life,--that man should have a change.

Gladstone used to rest himself in reading Greek and Latin, translating Homer and such things. That was Gladstone's method of recreation, or one of his methods. Disraeli used to rest himself by writing novels, and quite a number of eminent politicians have found rest in mathematics,--the study of mathematical problems. Lord Salisbury was a chemist, and he found recreation in his laboratory making chemical researches. A change of some sort is the very best kind of rest for persons who have active brains.

Q. Would you advise a person with autointoxication to engage in outdoor work?

A. Yes: Just live out of doors. That is one of the very best things you can do.

Q. What foods are best to produce flesh?

A. Fats and starch.

Q. What foods are best to reduce flesh?

A. No food at all. Water is a good remedy for reducing flesh. Reduce the diet. In other words, make your maximum diet about half what you have been accustomed to eat.

Q. Can a partial or an incipient decay of the brain cells be arrested in its progress when caused by a depleted nervous system, and built up so that health can be restored to the brain?

A. Yes, I am sure it can be. Such a state of things is due to toxins, as Metchnikoff has shown,-- poison in the body; and by suppressing these poisons the degeneracy can be stopped.

Q. Can a case of neurasthenia of six or eight years standing be cured?

A. Every case of neurasthenia, except hereditary neurasthenia, can be cured. I don't know of any disease which more readily yields to treatment than neurasthenia. It can certainly be cured. Neurasthenia is simply getting tired. I get neurasthenia awful sometimes. I remember some

time ago, about 3 o'clock in the morning, I had neurasthenia so bad I could not work any longer, and I had to go to bed and go to sleep. I slept four hours, and then I was well. Neurasthenia is simply a condition in which sleep does not cure. A healthy man is cured by sleep. When his nerves get tired out, sleep cures him; but a man with neurasthenia is not cured by sleep. He must have something beside sleep. He must have his nerve centers reconstructed, and that can be done by building up his whole body. That is the important thing, the whole thing. Make a new man, create a new man. Wipe out the old man of disease, and build on the new man of health in his place. That is why we have all the various processes which you find carried on here. You go into the bath room and get a hot bath -- we are sweating the old man out, you see. You go down into the Swedish movement room, and we shake him out. Go to the cold baths, they stimulate the forces of the body, and burn up the old man. You go up to the dining room, there you eat the material out of which the new man is to be made. The old Saxons said "Every man has seen himself on his own trencher." So when you sit down to the table, the things you eat today, tomorrow will be walking around and talking, and working in your muscles. So if you eat the right sort of food, a new body will be built out of the right sort of material, and will be the right sort of body.

Don't forget to get out of doors. I was glad to find a whole lot of people on the front porch when I came in today. I hope you will spend every minute you can out in this beautiful fresh spring sunshine. We shall soon have our Outdoor Gymnasium opened up, and get you out there. Work while you are in this institution. Work for health. Work, ~~maximally~~ ^{improve} every minute, and make every minute count. Don't spend any time loafing around the lobby. I am always sorry to see a lot of people sitting around the lobby. It is a very comfortable place, but really you can't afford to spend any time loafing. Put your time in to better advantage. There is something you can do every

minute. If you get a spare hour that you don't know what to do with, go to your doctor and say "Can't you give me something to do at this hour?" Time is so short. You will soon be away. Social duties will be calling for you. You will be gone before we accomplish half what we want to accomplish. We want to get you started so that by and by you will reach the Pisgah's top of health.

JHK v--m 5/15'06.

GRADUATING EXERCISES

of the

BATTLE CREEK SANITARIUM AND HOSPITAL

TRAINING SCHOOL FOR NURSES

**"Workers Together With Him"
Class Motto**

Tuesday, April 24, 1906, at 7:45 P.M.

Sanitarium Gymnasium

Battle Creek, Mich.

--PROGRAM--

MUSIC -- The Fairy Queen Tobani
Orchestra

PRAYER--

Elder A.T. Jones: Lord, thou hast been our dwelling place in all generations. Before the mountains were brought forth, or ever thou hadst formed the earth, ^{or the world} ~~the earth~~, from everlasting to everlasting, thou art God. And we thank thee that in the bonds of thy ^{ine} everlasting covenant thou hast given thyself to us to be our God, and make us thy people. We thank thee for this occasion tonight. We thank thee for this institution which thou hast planted. We thank thee for ^{the} divine principles, Lord, which thou hast given to actuate it. We thank thee for this company, Lord, which tonight finish their course of study and of preparation to go forth into the wide field to which thou hast called them, and we pray thee, Lord, that thy rich blessing shall be upon each one of them. Clothe each one, Lord, with thy salvation, we pray thee, that each one shall be a blessing wheresoever thou shalt bring him, and that thou, Lord, shalt cause each one always to triumph in Christ, and that thou wilt make manifest the savor of thy knowledge by each one in every place. We ask it only for thy glory, and the blessing of the people and salvation of our own souls, in Jesus' worthy name alone. Amen.

Dr. J.H. Kellogg:

Now for nearly a score of years the faculty of the Sanitarium have been appearing once or twice a year for the purpose of conferring diplomas upon their trained nurses who have finished their courses of training. First it was one course a year. Now it is two courses a year. And we are never so happy as when we come on these occasions. We have come tonight for this same purpose, and I am very glad we are able to bring such a splendid contribution to the army of men and women who are giving their lives to the helping and blessing of their fellows in the profession of nursing.

The program tonight begins with a solo by Miss Irene Jackson.

SOLO -- The Day is Ended. Bartlett.
Miss Irene Jackson.
Violin Obligato--Mr.R.E.Moore.

Dr. J.H. Kellogg:

We now have the pleasure of listening to an address by Dr. John Morse-- Preparation for the Life Work.

Dr. John Morse:

As the life work is all of life, the preparation for that work assumes a great importance. Unfortunately, the individual has no influence in the first requisite to a good preparation for life's work,-- being well born. This means much from the standpoint of equipment by way of a sturdy physique, a well balanced nervous system, and a fortunate mental tendency. Whatever the

inventory of one's inherited possessions may be, the finishing work of life building remains to each individual. How can this be most successfully accomplished? Many things suggest themselves, all of which may be grouped under one of three headings--physical, mental, and moral or spiritual.

In infancy, all of the energies of the body are used to increase and to maintain the physical stature and the powers of endurance. In later life, but little attention is given to the maintenance or the increase of this accumulated stock of physical energy, and the burdens are borne easily with eager desire for more to carry, or they are borne with halting difficulty, wearily waiting to divide the load as the physical powers are superabundant on the one hand, or pitifully insufficient for the daily demands on the other hand. The joy of possessing the strength to do without limitation or fatigue, or the pleasure of seeing such strength used, is only equalled by the sorrow for energies wasted in unworthy pursuits. Some one has said, "Youth is of no long duration, and, in maturer age when the enchantments of fancy shall cease, and the phantoms of delight dance no more about us, we shall have no comforts but the esteem of wise men, and the means of doing good. Let us therefore stop, whil'st to stop is in our power. Let us live as men who are sometimes to grow old, and to whom it will be the most dreadful of all evils to count their past years by follies, and to be reminded of their former luxuriance of health only by the maladies which riot has produced."

To one who has squandered his birthright of reserve energy, even though in a noble cause, the desire is great that others might be saved the humiliation of being obliged to yield to other hands and brains their tasks begun. The most distressing thing in the situation is the fact that when one ceases to be a burden bearer, he adds his own weight and his load to the burden of others. All desire to be strong and are willing to seek for strength if it can be obtained without too much self-denial. If we inquire for the highest motive in the striving for physical perfection, either in the ancient Spartan or the Indian of the far southwestern desert of today, we find the religious idea dominant. This is as it should be. We should never forget that the care of the body is a divine requirement. The Scriptural statements are plain -- "Whether therefore ye eat or drink, or whatsoever ye do, do all to the glory of God." "Ye are not your own, ye are bought with a price, therefore glorify God in your bodies and in your spirits, which are His."

No one can do the work in the world which he might accomplish if hampered by weakness. Much of the intellectual and scientific work that might be splendidly done for God and humanity still waits while people who see the opportunities strive feebly to do the tasks requiring a superabundance of physical energy to carry them through. I shall not dwell long upon the rules of diet and bathing and exercise. These principles are more or less fully understood by all. They have been crystalized into your lives by your personal practice and by teaching them to your patients and others. There is no gain-saying the methods which

have brought the glow of health back to many hearts and faces in this place. There is just a word of caution along this line in addition,--avoid ruts as you would a pest-house, I was about to say, but I remember that that term has no terror for a trained nurse; that the nurse would go willingly, yes eagerly, to relieve suffering there: --as you would a dungeon, I might say. Avoid ruts as you would a dungeon. Some one has defined a rut as a grave with both ends knocked out -- an endless grave, you see. The person who permits his life to get into a rut either from a physical or a mental standpoint, finds that he soon loses the power to do other things, and at last he loses the ability to do even the single kind of work which has been marked out and followed with such fatal narrowness.

Concentration --close application, is necessary to accomplish most in any undertaking. But there must be a variation,--periods of just as intense application along lines quite different in their requirements to the one which is in the main business of life. To one confined indoors the avocation must lead away into the open air, into wood and field; over hill and valley, mountain and plain. A study of trees and flowers, or of birds, filling the picture gallery of the mind with nature views which can be recalled at any time to cheer a weary hour, is most healthful recreation. Cowper speaks in the following lines of the pleasure of this kind of recreation:--

"Happy, if full of days, but happier far,
If ere we yet discern the evening star, -
Sick of the service of a world which feeds
Its patient drudges on dry chaff and weeds -
We can escape from customs odious sway,
To serve the Sovereign we were born to obey
Then sweet to muse upon the skill displayed -
Infinite skill in all that He has made, -
To trace in Nature's most minute design
The signature and stamp of Power divine;
Contrivance intricate expressed with ease,
Where unassisted sight no beauty sees;
The shapely limb and lubricated joint
Within the small dimensions of a point;
Muscle and nerve miraculously spun, -
His mighty work, who speaks and it is done."

Relaxation should be taken at intervals just as frequent and just as regular as the hours of toil. In this way only can the mental and physical equilibrium be maintained. Many a life has been wrecked because the individual has lived at such a high tension in a single line that the mental powers grew confused. Finally control was gone, and the mind wandered without direction through a tangle of chaotic thought. This pitiful condition is not confined to a few classes or professions. It includes victims from every grade of society, even those which seem to be most

favorably situated. The asylums of our land are being filled from country homes. These homes should be the most peaceful, healthful abodes of mankind. But the desire to gain wealth at all hazards keeps the mind limited to a weary, never-ending drudgery, while the universe of God pleads with them in countless ways to break the chain that drags them downward. It is not sufficient for us merely to go out of doors or to walk; it must be with pleasure and a purpose. It may be merely a walk to the office or the shop, or wherever the post of duty may be. But if all the senses are alert to conditions of air and earth and sky, the mind may safely settle down to steady concentration upon the daily task for any reasonable time.

Let us first be strong, let us also be wise, for the mental or intellectual preparation should not be underestimated. Next to health and faith in God it is of the highest importance. If it be obtained at the expense of either of these, it is too dearly bought.

In these days of abundant education nothing short of a College course, or its equivalent, should satisfy the youth who would make the most of his life. This does not mean years of study of dead languages, but it means a knowledge of the Bible - the history of God's dealing with mankind, a working knowledge of at least two or three of the most widely spoken modern languages, a comprehensive view of the natural sciences and of physiology and hygiene, or, if you please, the principles of the true science of healthful living, a mastery of at least one of the manual or domestic sciences, and a general knowledge of as many more as

~~many men~~ as possible, with all of music, poetry, and art required to fill the program.

I am not pleading that each individual should compass a university curriculum. A friend remarked, a few days since, that he had computed the time required to finish all of the courses offered by our University of Michigan, and found that forty-five years were required. Should a single individual take all of the courses I fancy he would be of no value to the community, and he might need a constant nurse to care for him. It may be said that many men who have been leaders of their times were not College men. This is true, but to them the daily routine was a University, and from their environment they received the culture which made them truly educated. After all, the essential is the spirit of teachableness -- receptivity for truth from any and every source. Most of us need the tension and pressure of school requirements to distill into our lives the sweetness of the knowledge which reveals to us the all-wise Teacher through the manifold wonders of His works.

The world of today --the problems to be solved, demand the highest mental training. At the great student volunteer convention held a few weeks ago, a member of one of the large Mission Boards said that in his opinion a medical graduate would need a literary degree to insure his acceptance as a foreign missionary by the Board which he represented. Fortunately, perhaps, this requirement is not universal, but it shows the tendency of the times. Our forests, our farms, our mining and manufacturing

industries have been taken possession of by the college graduate. This has resulted in increased production with less useless labor and expense. Our educational institutions are becoming more practical, for it is being recognized that school or college work is simply an introduction to the daily work of the world. Even if one is obliged to labor while pursuing studies, night schools and correspondence schools furnish ample opportunities for the needed instruction. Many of the training-schools combine labor and study in an ideal way. Besides the more rapid and comprehensive grasp of the needs of the moment, and the clearer idea of how to solve the problems presented, which proper mental training makes possible, it does something which is perhaps even more important in giving a stability of mental equilibrium and a power of self-control under trying circumstances not seen in the uncultured classes. Complete self-control is a most important art to master.

The habit of making the best of the ills of life should be formed by judicious parental assistance in the early years of childhood, and the habit should never be broken, but should strengthen as the trials and perplexities increase. The ability to see the amusing features of life has saved many a person from nervous irritation which would have caused a breakdown. The mind should be trained to treasure the beautiful, the pure, and the lovely, and, having recognized the lesson to be learned, to forget the discouraging incidents of life. The following lines, by Ella Wheeler-Wilcox, give strong expression to this thought:--

**"Talk happiness. The world is sad enough
Without your woes. No path is wholly rough.
Look for the places that are smooth and clear,
And speak of those to rest the weary ear
Of earth, so hurt by one continuous strain
Of human discontent and grief and pain.**

**Talk faith. The world is better off without
Your uttered ignorance and morbid doubt.
If you have faith in God, or man, or self,
Say so; if not, push back upon the shelf
Of silence all your thoughts till faith shall come:
No one will grieve because your lips are dumb.**

**Talk health. The dreary, never-changing tale
Of mortal maladies is worn, and stale.
You can not charm, or interest, or please,
By harping on that minor chord, disease.
Say you are well, or all is well with you,
And God shall hear your words and make them true."**

The anomaly of a college bred man who murders the King's English and tramples upon every rule of etiquette, suggests that a certain stress should be placed upon observing the proprieties of life, if one would do the best work. These may be called trifles, but they go to make up the perfection of the whole, and no one can afford to neglect considering the propriety of thought, word or action. How frequently one may limit their influence for

good by the lack of observing these rules. It sometimes requires a lifetime to undo, even to a slight extent, the wrong of a thoughtless word or act. Let us, then, make true politeness the rule of our lives.

Perhaps the most important preparation for life is the spiritual. We are here for God's glory, to carry his message of life and love to mankind. How necessary, then, that we should early acquire the habit of communion with Him through daily prayer, the study of His Word and His works which surround us. Aside from the steadfastness and stability of purpose which this habit produces there is the calm confidence which is stronger than words, to comfort and to cheer. As you go on your errands of mercy remember that your preparation is not yet completed, that you should never cease progressing toward perfection. Be willing to learn from "babes or sages." Take a firm grasp of the Master's hand, and it matters not how perilous or perplexing the situation may be, if you have learned to walk step by step with Christ, to keep company with God, there is no harrassing doubt or worry. May the desire so beautifully expressed by Bonar in his verses, "The Inner Calm" be abundantly fulfilled to each of you:--

"Calm me, my God, and keep me calm,
While these hot breezes blow;
Be like the night-dew's cooling balm
Upon earth's fevered brow.

Calm me, my God, and keep me calm,
Soft resting on thy breast;
Soothe me with holy hymn and psalm,
And bid my spirit rest.

Calm me, my God, and keep me calm;
Let thine outstretching wing
Be like the shade of Elm's palm,
Beside her deepest spring.

Yes, keep me calm, though loud and rude,
The sounds my ear that greet,
Calm in the closet's solitude,
Calm in the bustling street.

Calm in the hour of buoyant health,
Calm in my hour of pain,
Calm in my poverty or wealth,
Calm in my loss or gain.

Calm in the sufferance of wrong,
Like Him who bore my shame.
Calm 'mid the threatening, taunting throng,
Who hate Thy holy name.

Calm when the great world's news with power
My listening spirit stir;
Let not the tidings of the hour
E'er find too fond an ear.

Calm as the ray of sun or star
Which storms assail in vain,
Moving unruffled through earth's war,
The eternal calm to gain."

MUSIC --

(a) L'Ermite Gruenwald
(b) Menuet du Boeuf Haydn

Orchestra.

J.H. Kellogg:

We now have an address by Dr. Carolyn Geisel --

"The Christian Nurse's Opportunities."

Dr. Carolyn E. Geisel:

Of what use is opportunity to the man or woman who has nothing to put into it? What is opportunity? Metchnikoff says a man cares only to live that he may do his life work. Opportunity is the time and the place made open for some one to do--do something. And what is it that a nurse has to do? For you and for me who have suffered, the nurse's privilege and duty is to relieve pain. I am not going to talk about that at all tonight. I haven't a single word to say to this class of graduates, nor to you who already have graduated, nor yet to you who wait your graduation, I have not one word to say to you upon your opportunities for the relief of physical pain.

Many there be who have gone into the profession of nursing, the profession which you have espoused, counting it your opportunity to do this work, -- many I say have gone into that profession desiring to relieve pain and to be remunerated for relieving pain -- two things to be gotten out of it; or rather, the one to give and the other to get; to get daily bread, and give relief from physical suffering; -- good as far as it goes, but for you and me, brothers and sisters, you who have enlisted under the banner of the Lord Jesus Christ, it does not begin to go where your opportunity must reach. Your opportunity of life, your opportunity reaches away on into the endless eternity of God; and if it stops this side of it, you have failed to fill your opportunity -- you have fallen short of filling full the time of privilege the Master is according to you. Listen, then, nurses! Forget that there are other people here now, and listen while I say to you

that every human being who comes under your care, every unweaned soul in a suffering body, that body represents to you an eternal opportunity, an opportunity for which you must answer in the great roll call day up yonder. Listen! Men have preached, missionaries have labored, and the mighty Christ has died that the soul that comes under your care might spend his time in eternity with God. And it lacks what of salvation? It lacks the touch your hand can give, the touch that no other hand yet has given, the touch that no other hand can give.

When the body is broken with pain, and the will is all broken and emptied out, so to speak, the soul waits with eager longing for the tender touch that shall direct his face Godward. No human being in all the world ever longed for the peace that passeth understanding as does that human being whose body is racked with pain, and who waits perhaps the still small voice which says, It is enough, it is enough: You may rest until the Judgment call. Or waits perhaps that other voice that shall say to him, You have suffered long enough. Go back to the activities of life. And, listen to me, if that soul goes back into the activities of life, and onward into the eternity of God, unprepared, and goes away the same soul that you touched in his beginning, then I say you have failed of your opportunity -- fallen away short of the thing God expected you to do. Leave your finger-mark on that soul: -- no, not that, not that: prepare that soul to feel His finger-mark, that it may know that God has touched it, so that he shall step back into his place and the activities of life renewed in Christ Jesus, a new creature, or go

into the long restful sleep, there to wait the Trumpet's call. And who shall be able to answer the question-- am I in Christ Jesus, clothed with his righteousness?

You who tonight shall take into your hands your diploma knowing the work of days, the hard work of days is ended, and you are equipped -- listen! you are not equipped unless Christ so liveth in you that every patient of yours shall feel the influence of the gentle Jesus, and be made tender and warm and strong and true by the touch of the hand that draweth him. Then, with the diploma in one hand, and the other hand freely clasped in His you go out to meet us who suffer and to guide us into the straight and narrow path, then indeed is the army of the Lord recruiting tonight, and then indeed are you filling the opportunity to which God has called you. But without Him-- without Him you who graduate from the Battle Creek Sanitarium are not filling your opportunities.

Indeed, I believe you know that. I believe you have become so well acquainted with our Jesus,--not alone in these days that you have spent with us, but in the days you lived even before you came to us; so well acquainted, too, I believe that you are warm;-- that you will be able to guide your patient into the eternal quietude with God. Can it be done? Was it ever done? Well, you all know that at least once the work of a nurse was done for a suffering soul who knew not God--done here at the Battle Creek Sanitarium. O my brothers and sisters, you boys and girls, who have in your hands the diploma that means that the Battle Creek Sanitarium stands back of you, with its sanction, let me say to you that God standing back of you with His sanction can do through you what was done once

by a Battle Creek Sanitarium nurse for me. You know it, you brothers and sisters. And it is no small joy to me to stand before this audience tonight and say that the work of directing my soul unto a knowledge of God, when to know aright is life eternal, was done by the gentle hand of a nurse. And I know, and so do you, very well, that had she failed in her duty I might have gone to the Judgment bar of God without him.

Beloved, you have taken up, it seems to me, the grandest calling the Master could possibly have given you. Just one parting word or two, then, from the grand old Book -- the fifteenth verse of the second of Second Timothy: "Study to show yourselves approved unto God." In days past you have studied hard to please your instructors. Through days that are past you have done well in that particular -- to please those with whom you are associated here. From this night on stand alone with God, and study for his approval in his own way; and then in eternity there shall be, not a little black band on your caps, but a glittering band of stars in your crowns. May God be with you always.

SOLO--

(a) Hebe, Lord Henry Somerset
(b) Like unto a Flower, List

Miss Gladys Baldwin.

REPRESENTING THE CLASS-- The Successful Nurse.

Miss Rose Barber.

As the duties and responsibilities of life confront us, and we are called to take our places in the surging mass of humanity, two paths will open before us -- one leading to success and one to failure. This question now presents itself: Which one shall we follow? It is a question which one person can not decide for another, but which each one must decide for himself.

One needs first to have a fixed purpose or aim in life, and then bend all his energies to bring about the result corresponding to this aim, in order to terminate successfully in the thing he attempts. The question of what constitutes the successful nurse is receiving a great deal of attention, and is being extensively discussed at the present time. Formerly the nurse was considered of little value, and was more of a housemaid than a nurse, but as medical knowledge has increased, and the importance of good nursing has been more fully realized, the standard of successful nursing is being constantly raised, and those contemplating nursing as their vocation must strive to reach even a higher standard than has yet been raised.

Some of the qualifications for successful nursing are gentleness, kindness, firmness, patience, perseverance, and a faithful performance of duty whether pleasant or unpleasant, difficult or easy. Let us consider these for a moment.

Gentleness and kindness: Who, more than the sick and suffering require to be dealt with in this manner? Those who are strong in health and happiness will see more in life if they are treated kindly, and much more need has the person upon the sick bed of these considerations. If what we do for them is done in this spirit, twice the good will be accomplished. Hunt says "Even power itself hath not half the might of gentleness." As the Master went about healing the sick, always gentle and kind, his heart overflowing with love and pity for them, just so must we, as nurses, be about our Father's business, doing our work, not as dull labor, but as sweet service to Him.

With this gentleness and kindness must be a tender firmness that will command confidence and respect. The nurse must carry with her an air of assurance which will be seen in her at all times -- in her walk, her every move as she comes and goes. This will not be disagreeable to the patients, but will increase their confidence and trust in the nurse.

Patience is endurance without murmuring. Many times you hear this expression, "My patience was tried to the utmost," and in ninety cases out of one hundred you will find there was no patience to be tried. The nurse must be patient. When everything seems to go wrong, the sick one has grown peevish, fretful, and complaining, she must keep her equilibrium, and have her storehouse of patience so full that she can draw from it to meet any

emergency and still have an abundance left.

Next in the line comes perseverance, which is surely a secret to success, no matter what line of work. Some nurses resolve well, but do not persevere in their efforts to attain the object sought. Others persevere for a time, but become discouraged by many difficulties that meet them on every side. There must be no such word as discouragement to the one looking for success. She must make each difficulty that might be a discouragement to her a stepping-stone. She must learn to look upon them as blessings in disguise, and so they will prove to be. The nurse must be persevering. She must not weary in well doing. If every effort seems unavailing, and hope is almost gone, even then do not give up. Persevere! Success will come to you yet. And it may be that last little thing you did, when you were just on the verge of giving up, will accomplish the desired result.

Not the least factor in successful nursing is the faithful performance of duty, whatever the nature of it may be. The nurse's duty begins with her God. Her first duty is to Him, her Maker and Creator. This includes the duty of the nurse to herself. She can not rightly and successfully do her work unless her own health is preserved. As she goes about her work day by day upon errands of mercy, waiting upon the sick, coaxing them back to health, speaking words of cheer and comfort to them, much greater will be their dependence upon her if upon her cheek they see the glow of health and in her eye the sparkle of abundant life. They can not help feeling this indescribable, indefinable

force or strength given from the strong to the weak, from the helpful to the helpless. They will long for what she has, and will be encouraged to strive with that aim in view. If they see health before them with its many blessings, they will be attracted to it, just as we are attracted to any other luxury of life. Many times we come in contact with patients whose lives have been so nearly sapped out by disease that they have lost all interest in life or desire to live, and if they can be made to realize its opportunities, and to desire its blessings, half the battle is fought.

Another phase of her duty is specifically and conscientiously to carry out the physician's orders. The observing nurse will be quick to note any changes or any new symptoms in her patient, and will at once report to the one in charge. She will honestly and earnestly do everything in her power to hasten the recovery of her patient. But this is not all. The true nurse will also note the spiritual symptoms, and if the invalid is despondent and feels like giving up the battle, she will come with her words of cheer and encouragement, renewing again the patient's hope. Cheerful words to the despairing are like bread to the starving. There was once a great fire in a building and it was almost ready to fall. Seeing a little boy in a window several feet above him, a fireman quickly placed a ladder and went up to rescue him. When he had almost reached the top the smoke became so thick he was nearly suffocated, and was turning to come down, when some one in the crowd saw him hesitate

and said to the others "Cheer him!" They gave him a good hearty cheer, which supplied him new courage. A moment later he reached the boy and carried him safely down the ladder. The nurse's duty is to cheer others when they are almost overcome by the smoke of discouragement, of sin and sorrow, that they may be encouraged to go on in the conflict of life and come out victorious. If she succeeds in all this, and bears in mind that Christ is the Giver of all good gifts and to Him belongeth the glory and honor, then indeed and in truth will she be successful.

The class of April, nineteen hundred six, have not been preparing these two years simply to stand here tonight and receive these diplomas, but that they might go forth to the sick, sad, and distressed on earth, and bring them back to spiritual and physical health. We want that true success which comes only as the result of true service; not a service of self, but of others. Christ said "I am among you as he that serveth, and I lay down my life for my sheep." This is the climax of service.

There are so many "lonely hearts to cherish as the days are going by," the world needs less frowns and more smiles,--smiles from lips and faces warmed and glowing from hearts of faith and true love. As we separate and go our various ways I hope it may be with such smiles and hearts full of service, in spite of the many discouragements which we will expect to meet. When our pathway seems hard, we have this assurance that our Heavenly Father will hear and help us, for He trod the way before us, and we are "Workers together with Him."

CLASS SONG-- Workers with Him.

PRESENTATION OF DIPLOMAS by the President,

Dr. J.H. Kellogg.

We now come to the most interesting part of this program. Not that these students have been working for diplomas, -- that is the special thing they have been looking forward to, but the diploma represents something, and the thing which the diploma represents is a thing well worth seeking. The most important advance that has been made in medical progress within the last half century, an advance which makes possible, and which alone makes possible the greatest advancements which medical science has presented to the world in the last fifty years in surgery and in the various branches of medicine is the *creation* graduation of the profession of nursing.

When I first visited Mexico, about twelve or thirteen years ago, and when we first began to do medical work in Mexico, or soon after that time, I was very much surprised to find that there didn't exist in the Spanish language the word "nurse" or its equivalent. There was no such word in the Spanish language as "nurse." There was no such person in Mexico as a nurse--a trained nurse. The word which was used for a person acting in the capacity of nurse,--that is, taking care of a sick person, was the word "servant," or a word that corresponds to our word "servant." But what we mean by a "trained nurse" could not be expressed in Mexican in such a way they could understand it.

I was delighted to find when visiting Mexico a few months ago that they now have in Mexico a word for a "trained nurse." A trained nurse is a "medical servant,"--a specially qualified expert, a trained servant. That is what they are called in Mexico at the present time, because they have come to find out in Mexico what the word "nurse" means, and what a nurse can do.

I was very much interested some four or five years ago when I received a letter from the leading physician in Mexico, Dr. ~~Isiaga~~ ^{Isiaga} ~~FF~~, of Mexico City, asking me if we would send him some suggestions, or an outline for the training of nurses. He told me that the Mexican Government, the President of Mexico, President Díaz, had authorized him to organize a training school for nurses, and that he had become acquainted with some of the Battle Creek Sanitarium nurses in the city of Mexico, and he was satisfied that in order to make this course complete it was necessary to incorporate the course of training and the principles which are carried on in which instruction is given here at Battle Creek. And he not only did that, but he improved the opportunity which was offered him to employ a Battle Creek Sanitarium nurse to make out his curriculum. And a graduate of our school made out his curriculum and instructed the teachers who were to take charge of the various departments. They employed him for some three years. So I am glad to say that the system of training nurses in Mexico -- I trust they will follow the ^{model} ~~mette~~ created at the great Hospital of the City of Mexico, based upon the Battle Creek system of training so far as it can be.

I am glad of this, because I believe that the training of nurses, the systematic training of nurses at this institution represents the most advanced work which is done in that line; that it represents the foremost line of progress which has been secured in the training of nurses for the care of the sick.

When this work first began in this institution, some twenty years ago, the course of training consisted of three months. I remember with what difficulty we began; with what difficulty we found students who were willing to give three months of time to the study of the care of the sick. The training of nurses had only just begun in the United States. There were only two or three training schools in the United States. The Battle Creek Training School is one of the oldest training schools in the United States. There was a training school established at Bellevue Hospital in New York, and there were training schools in one or two other places modeled after the English training schools, organized by a lady who came over from England for that purpose. But the Battle Creek Sanitarium was the first Sanitarium training school, and the first one of its kind that was ever organized. I am glad to tell you we now have thirty or more of these training schools in different parts of the world, operated on essentially the same plan. I am speaking of this because I think it is important that this audience -- many of them who are here for the first time, and strangers here from all parts of the United States, I think it important that you should know that the Battle Creek Sanitarium Training School, and others modeled upon it, is a different thing from the ordinary hospital training school.

It includes all the hospital training school does, for we have a hospital work connected with the Sanitarium, have hospital wards and a large number of surgical cases, and sick patients of various sorts, patients suffering from acute illnesses of various kinds; and in addition to that there is an extensive system popularly known in the United States as the Battle Creek Sanitarium system, or the Battle Creek Idea, as it is sometimes called, and among scientific men, and better known as "the physiologic system;" -- a system of physiologic therapeutics which has been developed here, and perhaps was first organized here, although the various themes which make it up were not originated here, but here for the first time in the history of the world all these various natural methods, these physiologic methods were brought together and organized into a system, and this system is taught to nurses. The carrying on of this system would not be possible without trained nurses. So, as I said before, it would not be possible to present to the world at the present time, ^{medical science} in its most advanced phase without the aid of the trained nurse. The physician can not do it. He can not even know it all. The trained nurse knows something the physician himself does not know -- the average physician, at any rate, the ordinary physician; and I think I may say that no physician knows exactly what a thoroughly trained nurse has the opportunity to learn, unless he has himself had the very same opportunities as the trained nurse.

Now this careful training represents a large amount of study,-- a longer and more thorough course of study, more classes, more training, more drill, more discipline; I think I may say ten times as much -- well, at least five times as much as that which is required of ordinary nurses. There are so many things to learn in addition to what ordinary nurses learn. These nurses must learn about medicines, about the use of medicine, about drugs of various sorts, and after that comes a long list of things to learn about water -- two hundred different kinds of baths to be given, two hundred different methods of applications of water, and many hundreds of combinations of these different methods. Several hundred different kinds of mechanical movements to learn of the Swedish movements; massage, electricity in a great variety of ways; applications of light, and of other physiologic measures. A whole lot must be learned that the world generally does not know about dietetics and the preparation of foods for the sick. The system is so entirely different. There is so much that is never thought of, but the nurse must make a special study of all these things in addition to those things which the ordinary nurse learns.

So these students here tonight have come up through great tribulation. They have had a most thorough course of discipline and training, and not a few have fallen out by the way; for it is not every young man and every young woman who is capable -- physically capable, or mentally capable, of receiving the instruction and the training which is required of nurses in the Battle Creek Sanitarium Training School. I do not need to speak

of the efficiency of these nurses. The fact that they appear here tonight, after having had the long practical experience which they have had in the Battle Creek Sanitarium, after having passed through all the different departments --the bath rooms, the surgical ward, and the bed-side training in the rooms, and all the different departments of this institution, after having passed through them all, and passed under the critical eye of all the various teachers, and not only the teachers, but their patients as well, and having come up here to this platform, we know that they are thoroughly qualified; and I am sure that their future career will show that they have been thoroughly trained and thoroughly qualified.

And I wish to say also on behalf of the faculty, and I think I might say also on behalf of the patients with whom they have come in contact, that they have the thanks, and the credit, and the gratitude of those under whom they have been trained and with whom they have co-operated-- their teachers and those who have received their administrations.

I am almost daily in receipt of letters containing statements from people, statements from patients, from those who have received treatment here, to the effect that "I owe my life," or "I owe my health to my faithful nurse." Sometimes, once in a great while, a patient writes to me and says he is very much obliged to me for what I did for him, and he thinks he owes his life to something I did for him -- to some operation, or something. But while that is true, ten times as often I get a letter from a patient who will say -- Tell my old nurse that I owe my

life to her, or, I owe my life to him. I never will forget him; or, I never will forget her, as long as I live. It is so frequent that I get that sort of message. So I know that these nurses are qualified, and I feel personally under obligations to them all for the faithfulness with which they have done their work, for the fidelity with which they have stood by the physicians with whom they have co-operated.

In looking over the class roll tonight I find we have a fine large class this time -- some twenty-nine. And if you look up at these little notices along the balcony here and count up these names, you will see that there are fifteen States represented in this class. Very few of these young people come from a neighborhood. I do not know that there is a single one of them that came from the same town, but they have come from different cities, just as our patients have come. They have come from distant parts, have been brought here by various circumstances, so that they might receive the advantages of the training. And we expect that they will very likely return perhaps to the homes from which they came, to the same places from which they came; -- not all at once, of course, I hope, certainly not immediately, but in due time, and we expect they will carry with them the things they have learned here-- carry with them the principles of the Battle Creek Sanitarium; carry with them the ideals of the Battle Creek Sanitarium; and that they will not forget to hold up the standard of the Battle Creek Sanitarium, and to plant this standard in the neighborhoods and communities from which they came. I will read the names:

Evangelina Ashton

Rose Barber

Florence Edna Craig

Pauline Fredrice Doring

Georgia Filley

Harriette Gertrude Garlock

Mary Elisabeth Hickey

Mrs. Alta Hansen

Carlton C. Keller

Henry Oberg

Clara Pearl Reynolds

Emma Dorenda Robinson

Anna L. Scott

Vina Mae Smith

Christine Benedict

Lucy Lillian Comstock

Harry Olson Drake

Edward D. Embury

Inez Gibson

Iva I. Hass

Lillian May Hickey

Mrs. C.G. Helt

Henrietta S. Moorman

Mildred Oliva Pariah

Margaret G. Ramsey

Georgia A. Sanders

Marie Elizabeth Steffenson

Grace Madeline Sheldon

Gertrude Seaton

More than two thousand years ago the father of medicine, or one of the fathers of medicine, Hypocrates, one of the greatest physicians who ever lived -- And he was a Sanitarium doctor, by the way, although he didn't have that name, for he employed the Sanitarium methods and principles even away back over three hundred and fifty years before Christ. This great physician Hypocrates prepared a pledge, an oath, which is known as the Hypocrat~~an~~ Oath. Not a hypocritical oath, but a Hypocrat~~an~~ Oath, an oath which every student which studied medicine under a tutor or preceptor -- In those days there were no schools of medicine. A physician took a young man as a student and trained

him into his profession; and every last person who entered the medical profession in Old Greece was required to take a very solemn oath in the presence of physicians -- men who were already in the profession. When I graduated from Bellevue College thirty-one years ago this spring, with one hundred and ninety-five others, I stood up and held up my hand and took this very solemn oath.

Now it has been the custom of this institution for many years to ask our nurses on entering this profession, the responsibilities of which are exceeded by those of no other, are equal to those of the medical profession, the responsibility of human life, eternal as well as temporal interests in the case of these nurses, and as Dr. Geisel has so well pictured it tonight, -- it has been our custom to ask our nurses to take a pledge which has been prepared. And I will read to you this pledge, and I will ask this class to listen while I read these words. We don't want one of them to arise and take this pledge in the presence of these men and women unless they mean every word, unless they are honest with reference to every word, unless they can take it seriously and expect to stand by it for all time.

MISSIONARY NURSES' PLEDGE -- I think we may properly call it CHRISTIAN NURSES' PLEDGE.

Realizing the serious nature of the duties and the grave character of the responsibilities of the professional nurse, and especially appreciating the solemn obligations of the Christian nurse, I hereby solemnly pledge myself, by the help of God, faithfully to perform the duties of my calling, sacredly

to regard its obligations and responsibilities, conscientiously to teach and practice the principles taught me by my instructors, to keep inviolate the professional confidences which may be reposed in me by those under my care, and to labor earnestly and truly for the relief of human suffering and the amelioration of human woe, and especially for the moral and physical uplifting of those of my fellow mortals who may be in need of my assistance, wherever duty may call me to labor.

Now all of you nurses who are willing to take this oath, this pledge, rise to your feet. I am glad to see every nurse has arisen. Now in behalf of the Board of Trustees of the Sanitarium Medical Missionary and Benevolent Association, an incorporate institution, I take great pleasure in conferring upon these nurses these well-earned diplomas.

(Presentation of diplomas)

I feel very grateful to this large audience for sitting so quietly during these exercises, and hope you have enjoyed them, and that you will go away with a better idea of the work of the Battle Creek Sanitarium nurse.

The audience will now please arise and be dismissed by Elder Taylor.

BENEDICTION--

Elder C.L. Taylor.

Heavenly Father now we have reached the time of separation, we pray thy special benediction of grace upon these workers who tonight have finished their course. We pray thou wilt grant

unto them the Spirit of the Master that throughout all their life work they may be earnest, tender, consecrated, patient and helpful in their service to mankind. We pray the benediction of thy Holy Spirit upon those others who are still in training, upon all our workers in this great institution founded by thee. We ask, Lord, the benediction of thy healing power upon the sick who are in this institution tonight. O Lord, we pray thee work in us all to the fulfillment of the glorious purpose of life; and we ask that we may be kept in the love of truth, in the patient watching for the coming of Him whom we love, that when he shall appear we may be like Him, that we may have an abundant entrance into that heavenly kingdom, where there is no more sickness, or sorrow, or pain or death. We ask it in His name.

Amen.

v--2

QUESTION BOX LECTURE

At the Sanitarium Parlor, Battle Creek, Michigan, Monday, May 7, '06

at 8:00 P.M.

By J.H. Kellogg, M.D.

Sick people never get out of questions. They always have something new. There is always something more to be said.

Q. Is not sixteen hundred calories of food, perfectly ensalivated or Fletcherized, of more nutritive value in every case than two thousand calories eaten in the ordinary way?

A. Before answering this question I must show what a calory is. If you burn a pound of coal, get all the heat that is in that pound of coal out of it, it will give off heat enough, if it is real good coal, to vaporize about ten pounds of water; and it takes to vaporize a pound of water a little less, or somewhere about, roughly speaking, a thousand heat units. Now a heat unit is the amount of heat required to raise each pound of water one degree in temperature. It takes one-tenth of a pound of coal to raise one thousand pounds of water one degree in temperature. One pound of coal will raise ten thousand pounds of water one degree in temperature, or half a ton of water one degree in temperature. Now the body is a furnace. Food is fuel, the same as coal, in that regard. It is burned in our bodies and produces heat energy; and this energy which is produced, or rather the food which produces the energy is estimated in calories just the same as the heat in coal is estimated in calories or heat units.

A man requires more or less heat units or calories, according to the amount of work he does, his size, and his conditions. When I was down in

Connecticut a few weeks ago Dr. Benedict got hold of me, shut me up in an iron box, in Dr. Atwater's big box, and kept me there ten hours. He kept me walking up and down for five hours steady; would not let me stop once. They had a little peep-hole that they kept looking in at to see that I was going, so kept me going for five hours. I didn't mind that so much, but then I had to lie down and keep perfectly still for five hours. That was punishment. I fell asleep for one hour, and when I woke up they knew it, for they immediately shouted to me through the telephone--You are awake now! What time did you go to sleep? they said, and they could tell what time I went to sleep. Fortunately, I knew myself that I was going to sleep, so I opened my watch when I went to sleep and knew what time it was, so I knew I slept just an hour. I was measured while I was in that iron box,--all the heat thrown off from my body, the heat from my breath, from my skin, the evaporation of water, everything was measured; the oxygen I used, the amount of carbonic acid gas I produced in breathing, this was all carefully measured, estimated by the most intricate and delicate apparatus. There was half a regiment of people outside watching everything, watching the different machines. One man was watching what came from the skin, and watching the temperature. Another man was watching the oxygen. Another man the machine for measuring C.O. 2. They had a whole laboratory, and twenty people were kept busy the whole ten hours watching everything that happened to me inside that calorimeter. The results were all figured up a few hours after I got out, and I found when I was asleep my body threw off fifty calories of heat. I said a calory is the amount of heat required to raise water one degree. That is a British thermal unit. A calory is four times as much as the British thermal unit. That is, fifty calories or two hundred British thermal units. When I was lying still reading or writing, it was 175 calories. When I was walking up and down in my case it was 90 calories. I figured that all up to see how much it would amount to in twenty-four hours. We will suppose I was asleep for eight

hours, so they multiplied it by eight to get eight hours, so seventy-five by eight would be 600. Ninety times eight is seven hundred and twenty. Add that together, and we will see that it amounts to seventeen hundred calories in twenty-four hours. So that is the number of calories that my body was actually consuming. I ate ^{some} Bromose tablets and four oranges inside of the cage. That was my rations for the day. That was all I did have to eat that day. I took these with me, and they were weighed when I went in. The oranges were put in to me through the food hole, through a little window, and the Bromose tablets I had in my pocket when I went in, so they were weighed with me, and the whole amount of calories I consumed was 1720. That means I ought to eat every day food containing 1720 calories. We don't get all of the food out of foods, so I ought to eat ten per cent more than that. That would be 1720 plus 172, which would be 1892, or 1900 calories.

Now I find by making a careful study of my food, carefully weighing it-- I have weighed my food for several months, for a whole month at a time, and I have found at the end of a month that the average amount of food I have taken was just 1900 calories per day. If you look in the table in the little yellow book called the Sanitarium Diet List, which you will find at the Dietitian's office, you will see that a person of my weight-- I weigh 125 pounds net -- ought to eat just about that number of calories. That is just about what is put down in the book. I think possibly it may be a trifle less than that, but that is about right.

Now that was a surprise to Dr. Benedict. Dr. Benedict thought I would require twenty-six hundred calories. He said his estimate was at least 500 calories more than mine. But my experience shows that I can get along with that without any difficulty, and I think one reason is that I take a little more pains in chewing, perhaps, than some others do. Certain it is that 1600 calories a day, well chewed, will be worth more to a person than 2000 calories bolted. Prof. Benedict told me there had been careful studies of many persons who had been there, and that he frequently found that food

which was hastily chewed, belted, was discharged from the body almost in the same form in which it had been taken in,--no good extracted from it, no food value gotten from it; it was entirely lost. It had simply been lying around as so much rubbish in the colon and decomposing.

Q. How deep does the eustachian tube lie? Will pressure from the outside reach it?

A. When a doctor wants to touch the eustachian tube he takes a little tube about five inches long, passes it through the nose, turns it upward, and passes it right into the eustachian tube of the ear. You can feel it yourself by pressing up in this little notch. You can feel a sensation in the ear when you press upon this little point just behind the angle of the jaw.

Q. How may catarrh of the nose be cured?

A. Well, sometimes it can be cured by a simple operation. Not infrequently catarrh is due to obstruction of the nose. When one side of the nose is obstructed so you can not breathe well through that side, that leads to a state of catarrh, because mucus will accumulate, dry scabs or germs will be retained there, and these germs will set up putrefactive processes which produce toxins and poisons which irritate the mucous membrane of the nose, and so catarrh is induced. One thing to cure catarrh is to keep the nose thoroughly clean. Cleansing it with douches or sprays, and washing out the nose I think is more or less detrimental. The best way to keep the nose clean is to cleanse it thoroughly with the handkerchief, then with a coarse spray remove the mucus, then apply an antiseptic oil which will be retained in the nose. This is about all that can be done by way of local treatment, except to remove the obstruction if it is a very bad case. I have met a great many people who have had chronic catarrh cured thoroughly by removal of the diseased parts, which had become overgrown, and become like enlarged tonsils, or like a corn, a callous, a bunion, an obstruction, a foreign body that needs removal.

Q. Is there any cure for cataract of the eye except operation?

A. Practically none.

Q. Can it be arrested if taken in time?

A. I am seriously doubtful about that. It is barely possible there may be a case now and then in which by manipulation, massage, fomentations, and other means the nutrition of the eye may be improved and the cataract may be arrested, but these cases must be extremely rare. I don't think it worth while to trust to anything of that sort.

Q. What is the cause of adenoids? Will they grow again after ~~treatment~~ an operation? What is the treatment?

A. Adenoids are little masses which grow in the back of the throat, in the back part of the nose, the upper pharynx. These adenoids are simply hypertrophied glands similar to the tonsils. They are really somewhat like the tonsils. The tonsil and the gland become enormously enlarged, so these glands of the mucous membrane high up behind the soft palate become enlarged and grow until they become vegetations or adenoids. I think they are due to infection, to low vital resistance, due to germs which are constantly present in the nose and mouth.

Q. Is angina pectoris in its early stages curable?

A. No, and yes. It is a disease of the blood vessels. The disease can be arrested. It is one of those diseases which come from flesh eating. There is no doubt about it. Flesh eating is one of the most prolific of all causes of early degeneration of the blood vessels, and this condition sometimes comes first in the heart, and then it is angina pectoris. Sometimes it is first in the brain, then the patient will have a stroke of apoplexy perhaps. Sometimes in the base of the brain, then it will be senile gangrene. If it is in the kidneys it is Bright's disease. If it is in the liver it is cirrhosis of the liver, or it may come in the spleen or any other part of

the body. Chronic degeneration, or degenerative disorders constitute a primary cause of angina pectoris.

Q. What mode of life would you advise?

A. The outdoor life; a great deal of sunshine, moderate exercise, but no violent exercise. The frequent warm bath at night; not a hot bath but a warm bath,--a bath at 92° or 96° or 98°, and the constant living out of doors when it is possible. A very moderate diet, a very plain diet,--simple food thoroughly masticated. No flesh food at all, no condiments, no mustard, pepper, peppercorn, vinegar. Pepper has been found to be more active than alcohol in producing this degenerative condition of the blood-vessels. Be careful not to become excited physically or mentally.

Q. What is the best food for a person suffering from gastritis when he wants to get well and gain flesh?

A. Any one who has gastritis I am sure wants to get well, and it would be very likely he would want to gain in flesh, because a person with gastritis is in a state of starvation. He is like a boiler that has a very poor tank. He can not get up steam on that account. The stomach is a place where the food goes in, where fuel is taken into the body, and if the stomach is in a state of inflammation the food can not be properly digested, and the result is the whole body will be impoverished, the whole body will be weakened, and the bodily forces and functions will be more or less interfered with.

A person with gastritis must avoid all kinds of irritating foods. He must first of all avoid all irritating condiments,--mustard, pepper, peppercorn, vinegar, ginger, cinnamon, cloves, all-spice, cayenne, capsicum, and all the rest of the things that burn and sting and blister when they go down your throat. And in addition it is very important that one in this condition should avoid, first, highly seasoned foods of any kind; rich foods,--pies, cakes, pastries, ice cream; all sorts of rich food and highly seasoned food. Why? Because in gastritis the amount of gastric juice which is

produced is very greatly diminished, and consequently the stomach can not digest foods which contain a great amount of fat, as fried foods, very rich foods of every sort, for they lessen the formation of acid and of gastric juice. Pawlow, of St. Petersburg, proved that on dogs. When he gave a dog a great deal of fat or rich food, like Saratoga chips and things of that sort, the dog did not make as much hydrochloric acid as when he had good plain wholesome food. We have a dog over at the College that we are making experiments on now. We are going to show you one of these days how we make the experiment, so you can see for yourself the proof of this fact. We call this dog Pawlow. He is a very interesting fellow. Some time we are going to introduce him to you. We are training him up for public exhibition at the present time. He has not yet rehearsed quite often enough to make his first appearance. He will be along shortly, and I will tell you some interesting stories about him.

In order for one who has gastritis to gain in flesh he should eat food which is most easily digestible. Sugar is to be especially avoided, because it irritates the mucous membrane. Cane sugar is an exceedingly pernicious thing in gastritis, for the reason that it will produce catarrh in a perfectly healthy stomach -- produce a condition of temporary catarrh in a perfectly healthy stomach. If you have gastritis or gastric catarrh you can readily see that sugar will certainly aggravate it. One of the worst cases of gastric catarrh I ever saw was the case of a woman who was very fond of candy. She had been here for a week and I saw her in her room one day, and I saw two five-pound boxes of candy. One consisted entirely of peppermint lozenges, double extra strong, and the other was filled with chocolates and mixed candy. And I said "For pity's sake! What are you going to do with this!"

"Why," she said, "eat them."

"Well," I said, "how long will this last you?"

"Well," she said, "about a week. Not more than that."

This woman had been for years addicted to eating candy at this enormous rate, and there was good reason why she had gastritis. Plenty of people have become candy-drunkards, so to speak. I confess I was one of that sort of folks myself when I was a boy. From the time I was twelve until about fourteen I was addicted to candy, not quite, but almost as bad as this lady. I was never without a pocket full of candy. I could not go by a candy store without going in and getting a pound. Unfortunately, my father when I was quite a small boy had a general store, and he introduced me to the store when I was about eleven years old to assist in waiting on customers. I helped him sometimes when clerks were short, and I was a very excellent clerk. I waited on customers very accurately; and I was the best customer of all myself. I never went by the candy jars without helping myself, and I kept my pockets well lined with candy, and my stomach too. The consequence was when I was fourteen years of age I had about as bad a case of dyspepsia as anybody you ever saw in your life. If I had not found out how to eat, how to take care of myself and my stomach when I was fourteen years old, some forty years ago now, I should have been lying in my grave long long ago. I suffered all the tortures that any dyspeptic on earth ever suffered. I knew all about it. So when I meet a person who sits down and tells me all his peristaltic woes, I know how they feel, for I have had them myself. But I found out what to do and how to eat, and I began to eat properly. My mother had the reputation of being a good cook, and up until I was fourteen years of age I ate everything bad that you can possibly imagine. I have a very distinct recollection of the very rich mince pies, and the cake and the cookies that I thought were delicious, and the fat pork sausage, and some of these things which some of you have tested out more recently than I have, for I have not tasted anything of that sort for forty years. I dismissed them as a matter of conscience, because I found out they were harmful, damaging; and whether it

did me any good to dismiss them or not was not the question with me. I found out they were unwholesome, so I simply said, I will have no more to do with them, and dismissed them; and I am sure I got as much good from dismissing sugar as anything else. I made up my mind cane sugar was not good, candy was not good. I was told so, I believed it, and I stopped the use of it, and I found out after several years that I actually lost the appetite for it, so that I do not have any taste for sugar. It is obnoxious to me. Candy became really obnoxious to me.

I see some of these ladies wonder how that could ever be. But it ought to be. If you have got gastritis be sure you must forswear everything of that sort forever, just as long as you live; discard it forever. You never can get well enough so you can go back to the use of these things. Hot things, burning things, sweet things, fat things,--these are the things that a person with gastritis should avoid. And half of all the chronic dyspeptics have gastritis; at least half of all chronic dyspeptics have got catarrh of the stomach. When such stomachs are washed out a great quantity of mucus comes along with the breakfast in cases of persons who have catarrh or gastritis, because of vicious eating.

Another thing: A person who has gastritis must eat very slowly and masticate the food very carefully,--not swallow anything that is not liquid before it goes down. Anything that can not be made into liquid form should be returned to the plate, because all these things --- suppose you are eating lettuce, for example, or celery, and swallow these things in chunks. A great many people eat these things in just that way, and eat their other food in that way, too; they swallow their food in chunks, about as big as pills. They chew the food up until it is in little chunks about like pills, then down the pills go. The food all goes down in that way, and the consequence is the stomach has to labor for a long time with these rough substances.

Now the way the food gets out of the stomach is something very interesting. I saw it going on just a few days ago when I was operating on the stomach. I saw the thing going on right under my eyes, and it was a real interesting thing. Suppose this represents a stomach. There is a little depression on either side. Here is what is called the pyloric sphincter. This is shut up while the food is being digested. Down here is another little thickening of the muscle wall on either side here, and that is called the pre-pyloric sphincter. Now between these two it has little circular muscles, a band around the stomach, the longitudinal muscles of the stomach. These longitudinal muscles operate in this way. When the food which lies in this part of the stomach has been converted into liquid form some of it goes over into this part of the stomach, and when the food goes over into this part of the stomach this muscle contracts and shuts off the rest of the stomach, and brings the stomach up into this shape, like that, so the stomach is really divided into two parts like that;--the liquid part in here is shut off from the rest. Now it has come into here. Now how are you going to get it here? These longitudinal muscles contract right down against this side. In other words, they shut the stomach up, compress it lengthwise, and that forces the liquid contents out through the pylorus. You see as these longitudinal muscles contract, draw up this way, it serves to open this, and that sort of turns it inside out that way,--turns the contents down into the intestine.

I saw that thing done recently while operating on a patient. The stomach had a large amount of fluid in it and I had to operate on this end of the stomach, and I wanted to open the stomach and empty it. I emptied it by means of the stomach tube, but there was a lot of fluid left. So I compressed the stomach with my hand, forced the liquid down into this end of the stomach, and ~~instantly~~ just as soon as it struck this end of the stomach these muscles shut up. I saw the longitudinal muscles, saw them pucker up the stomach, and the stomach contract itself down into a little mass and force the liquid down into the intestine. The thing was

done in about twenty seconds. It was a wonderfully interesting sight to see that thing going on.

Here is a person who has gastritis. That is the thing I want to make clear to you tonight. That is the condition of things which exists in gastritis, and it is very important you should understand it in order to appreciate the importance of chewing. Here are these longitudinal muscles that are so important in emptying the stomach, which run lengthwise of the stomach. Now the muscles become weakened by a chronic inflammation, so they lose their strength, tone, and power, and the stomach gradually settles down so that it becomes an enormous pouch. You can see what would happen to these muscles. These muscles become attenuated, over-stretched, and the very same thing happens to these muscles that would happen to a piece of rubber -- a rubber cord which had been over-stretched until it had lost its elasticity. So these muscles lose their elasticity, and they lose their power to contract upon the liquids and force them down into the pyloric portion of the stomach, and then force them out; and when the stomach tries to shut up here it is so distended it can not shut up entirely, the two sides can not meet, so it can not grasp the liquid; so when the peristaltic wave travels along the liquid comes right back again, and these longitudinal muscles become so weak they can not contract upon the pyloric portion of the stomach and force the liquid out into the intestine, so the stomach has no power to deal with liquids. So a person having gastritis should avoid the use of a large amount of liquids at meals. Be careful not to eat a very large amount of liquids at meals. Take food in a dry form.

Q. What foods are good for a person suffering from gastritis?

A. Starchy foods, as I said to you, are most easily digestible, because fats diminish the formation of acid, which is already deficient, and sugar aggravates the catarrh, or produces a flow of mucus producing irritation. Proteids can not be well digested for the reason that there is

not enough gastric juice to digest proteids. So we are brought down to carbohydrates, or starch and dextrin. Dextrin is not irritating to the stomach. We must have some proteid. Now there are some proteids that are better than others. Meat is the worst of all proteids for the person who has gastritis. Why? Because meat enters the stomach more or less in chunks. You can not make it liquid in the mouth. It is fibrous. You can not possibly reduce it to a liquid form. And when it is taken into the stomach it requires gastric juice to reduce it to liquid form before it passes out of the stomach, and it is one of the foods which is hard to digest. Another thing, raw meat, uncooked meat, can not be entirely digested anywhere. The fibrous material of the raw meat can not be digested anywhere except in the stomach. So when you take meat in a rare form into a dilated stomach, fibrous tissue, the connective tissue which holds the fiber of the meat together, the muscle; if you take a piece of meat and scrape the pulp all out of it, what you have left is connective tissue. That connective tissue in a raw or a rare state can not be digested anywhere at all but in the stomach; so if the raw stomach has lost its power, and has lost its gastric juice by gastritis, so it has very little there, then when you take such food into the stomach it can not be digested, but lies there in chunks, and it never is reduced to a liquid form in the stomach, so it can not be made liquid in the mouth or in the stomach; consequently it remains there a long time, decays, putrefies, and a person gets bilious in consequence. When it gets to the duodenum it produces irritation; in fact produces irritation all the way down, because it can not be digested. In the colon the same thing occurs. It is a mass of connective tissue, and portions of gristle that have been swallowed, and membrane, these things remain there in the colon and decay, set up putrefactive processes which are a very common thing as a result of gastritis.

There are two things which are very wholesome in these cases. One is vegetable gluten in the form of gluten biscuit, gluten meal or flour. And gluten gruel we find to be one of the very best things possible in these cases, for the reason that gluten is divided up into minute particles, is already in liquid form, is digested in the stomach, and is readily passed on into the small intestine where it can be digested.

Perhaps the best of all forms of proteid for these patients is buttermilk or kumys,--milk in a form in which the curd has already been produced and broken up, in which soft curds are formed; milk that has been curdled by the addition of a little lemon juice. Casein is one of the most easily digestible of all forms of proteid. Some people for some reason can not eat casein. Cow's milk is not a normal product for human stomachs anyway. Milk is splendid food for calves, but not for humans, for the reason that it sometimes seems to undergo a certain kind of putrescence that produces auto-intoxication and extreme biliousness. Whites of eggs are also very hard to digest, if they are hard boiled, for the reason that in this hard-boiled state they never can be thoroughly converted into a liquid form in the mouth, and they are swallowed in chunks, and enter the stomach in large lumps, or in smaller lumps, and are never digested in the stomach; can not be digested in the stomach. Meat is very very hard to digest, and can not be digested in the stomach of one who has chronic gastritis. So we are brought down to vegetable glutens chiefly. Vegetable proteids in the form of gluten, and this is an extremely useful food in cases of this sort.

I might perhaps mention also that fried meats, proteids which have been fried and have fat mixed with them, are the worst possible thing that can be put into the human stomach of a subject of gastritis.

Q. Are potatoes good for gastritis?

A. Potatoes are mostly starch, and are a splendid food for such patients, but you must take care to thoroughly masticate the potato. Don't swallow it in chunks in any way. Potato which is very thoroughly chewed, or mashed potato, is one of the most easily digestible things for a person with gastritis.

Hard boiled yolks of eggs are more wholesome than any other form of animal proteid, and are a very good means of taking fat. The whites of eggs, if taken at all, should be cooked at a temperature not above 150° . I should advise you, if you order eggs at all, to order soft boiled eggs, or as we call them, jellied eggs. We have a new cooker that we have just got perfected in the kitchen, so eggs can be cooked at a temperature of 150° , and when they cook for five hours at 150° the white of the egg is still jelly; it is still so soft that it can be completely broken up by the tongue; by pressing the tongue against the roof of the mouth it can be broken up into liquid form, completely broken up, requires no mastication by the teeth at all: but when boiled at 212° the white of the egg is hard and tough like leather, and requires a long long time for digestion. But the jellied white of egg is very quickly broken up, and quickly digested. If you want the yolk hard, call for jellied eggs. The white will be jellied in fifteen minutes at a temperature of 150° , but the yolk will still be liquid. If you want the yolk hard--and they are more easily digested in that form than any other-- then call for long jellied eggs, the jellied eggs with a hard yolk. Scrambled eggs are very hard to digest, because the yolk of the egg is boiled. The white of the egg is cooked at a temperature of 212° . Eggs in the form of cake and gems, used for raising the gems, eggs in the form of rolls, or in any form in which the egg has been exposed to a temperature of 210° or more, are very hard to digest. The white of the egg is cooked at such a high temperature it acquires a leathery consistency, and it requires a long long time to digest. The

difference is enormous. For instance, here is a bit of fibrin which is coagulated. This will digest in a minute. Put a bit of this into hydrochloric acid, into gastric juice with plenty of hydrochloric acid in it, healthy normal gastric juice, and a certain quantity of it will digest in a minute. Simply take that fibrin and boil it, and it takes a whole hour to do the work that could be done in one minute in a natural state. That is the difference. That is one of the advantages people get from the use of raw food. There is no doubt about it. There is some advantage in the use of raw foods, because the proteid is in an easily digestible form. That is why raw nuts are sometimes more digestible than any form of cooked food. That is why raw eggs can be so easily digested, while cooked eggs and cooked meats of all kinds can not be easily digested. When animals do live upon meat they take the meat in a raw state. If a man is going to eat meat he ought to take it in the same way in which animals take it. Meat does not require cooking in order that it should be more digestible. The more meat is cooked, the more difficult of digestion it becomes. Meat, like ripe fruits and ripened nuts, is more digestible when it is raw. Poached eggs is the same situation. If I eat poached eggs I eat nothing but the yolk. The hard boiled white is very hard to digest. If swallowed these lumps of hard boiled eggs can often be found in the fecal matters,--large lumps of hard boiled whites of eggs in just the same form as they were swallowed. They have passed the whole length of the alimentary canal without being digested at all. The best form in which to take eggs is jellied eggs, cooked at a temperature of 150°. You can do it very easily yourself at home. There is no secret about this. You want plenty of water, say a wash-boiler half full of water, poured into the wash-boiler at the boiling point. Perhaps you have got a big tin boiler that will answer the purpose. Fill it two-thirds full of boiling water, then put the eggs in it with the water at 150°. If you don't have a thermometer, water which is a little too hot for you to hold your hand in,

so you can just barely put your fingers in the water without burning; put the eggs in a pail in water at 150° , and wrap the whole thing up with a big blanket, set it aside and leave it there for an hour or two, or all day.

A very good thing is to have a water stove. The water stove is my invention, and I feel quite proud of it. If you want to do the most perfect cooking of fruits and eggs, have a water stove. You can actually cook oatmeal with it, though I don't advise you to do it, because oatmeal requires a much higher temperature for perfect cooking. This is the way to make a water stove.

Make this of tin, have a wooden box outside of it, and fill the space between with sawdust. Here is a space that we leave open. Fill that up with saw dust. And we want a thick cover that we can put over the whole top of it. This is to be filled with water or foods down here. There must be a little frame work arranged so that you can put in your various kettles or pails, or whatever you are cooking with. The temperature of this will be 150° . Fill it up with hot water once, and you don't have to fill it again with hot water, because you simply put down underneath it a little kerosene lamp, and that will furnish all the heat necessary to keep the water at a temperature of 150° , because the heat will be well retained. So if you want to cook apples or fruits of any kind, just bring them up to the boiling point on the stove, then put them into your water stove, put down the cover, and leave them there over night, and in the morning they will be beautifully cooked. Put your eggs in at night and cook them until morning. You never can ever-cook them.

It is only necessary to have this little water stove standing beside your cook stove somewhere, or if you have a little gas jet, one gas burner, you can make that do everything; all you have to do is to bring it up to the boiling point, set it on the water stove, and that will do the rest of the cooking, and all the heat you need is enough to keep the water warm. For instance your cooking dish will go in at 212° . The heat will pass into the water of the water

stove, so you will not have to heat it, but only to keep it warm. You can do almost all your cooking with a water stove. You don't use but very little heat, and by this means you utilize it all, you see. You heat the water until it is 212°, then put it into your big water stove, and the heat is retained, and it is retained there until it has cooked whatever is put in it. In the cooking of fruit, for instance,--apples, raspberries, or strawberries, in cooking them in the ordinary way a great share of the flavor is driven off with the steam. The aroma is driven off with the steam, because it is cooked at such a high ~~with the less high~~ temperature. But with this plan of cooking it will be retained. I have been experimenting, and this idea occurred to me some time ago. I have had one made, and we have been experimenting with it down in the kitchen. It is very easy to make the experiment. Get a great big wooden wash tub, which will answer for the outside box, and a foot bath for the inside, so you can use the big wash tub for the outside and the small wash tub for the inside. Then by simply putting a metal cover on the top of the small tub, you can put your berries, or double boilers in there. By having just the right quantity of water you can sit them in without any frame work to support them. And on top put a big thick cover, or put some blankets over it; and you can retain the heat over night.

Q. What causes a blurring or seeming waviness of vision at times?

A. Call on Dr. Byington and ask him to examine your eyes. It may be the beginning of a serious disease. I would advise you to have it looked into right away.

Q. The stomach and intestines of animals living on a vegetable diet are vastly different from those of carnivorous animals. Man's stomach and intestines closely ~~resemble~~ approximate those of carnivorous animals but differ vastly from herbivorous. Is it not presumably, ^{so} intended? Consumption is present in herbivorous but not in carnivorous animals. Why?

A. Now there are two very serious questions. The first question

is, which is the better diet for man, grass or beefsteak? That is the meaning of the first question, isn't it? Man's alimentary canal is not like that of grass-eating animals. That is, a cow has four stomachs. Man has but one. A cow's stomach is ten to twenty times --- The alimentary canal of an animal of these habits is twenty times as long as the animal is. Man's alimentary canal is only ten times as long as the man is. Dr. Woods Hutchinson, of California, recently had an article published in one of the popular magazines. The people who have heard of Hutchinson, the great food specialist of London, perhaps mix this man up with the great Dr. Hutchinson of London; but he is an entirely different man. He lives in California, in a little town; has no particular prestige. He certainly has not given any proper study to the subject of diet or he would not have written such a foolish article as recently appeared in McClure's. He said man belongs to the carnivorous class because his alimentary canal is only five times the length of his body, and that is just the proportion of a dog's alimentary canal. But if he put him on all fours, like a dog, he would find his alimentary canal twice as long as if he counted in his hind legs. His colon is ten times as long as his body instead of five times. Now look at the complicated character of the intestines. This argument is a good one. Man can live on flesh better than on grass, and if you turn him loose, take away nuts and fruits, deprive him of nuts and fruits, so that he has nothing but grass, leaves, and herbs to live upon, he will starve to death; he will be compelled to eat flesh. That is why the squirrel sometimes eats birds, because the squirrel must have nuts. The squirrel has a simple stomach--one instead of four. The dog has a simple stomach, the monkey has a simple stomach; man has a simple stomach. Now all these animals who have simple stomachs are compelled to have nuts and fruits, or else flesh. Man has a stomach like a dog, that is true, and man also has a stomach like a monkey. Now a monkey lives on fruits and nuts, and a dog lives on meat. So far as that argument goes, man has opportunity to take

his choice,-- to choose the fruits and nuts upon which the monkey lives, or the meat upon which the dog lives. If he wants to know which is best, however, he should make a little study of the effects of these foods upon the animals which subsist upon them, and upon himself. Experience shows the monkey has good sense because he lives on fruits and nuts. Feed him on meat and he becomes a bad monkey, and pretty soon a dead monkey. So meat does not agree with monkeys. A dog can live on cooked grains and cooked vegetables. Potato, gluten meal, corn meal, bread and milk, is a splendid diet for a dog. When the dog has a diet of bread and corn meal mush, for example, it is a good dog,--has good wind, is a speedy dog, has a keen scent, and is a valuable dog. But when you feed the dog meat he very quickly becomes a cross ugly dog, unintelligent, and is good for nothing. He is not good for hunting, for he has no wind, and has no scent. He is a worthless dog. We judge from that that meat is not good for dogs. It is no better for dogs than for monkeys. Dogs can easily be trained not to eat meat. They can easily be raised without meat. I have raised them without giving them any meat. I have taken almost every kind of carnivorous animal I could get hold of, and trained every animal all right except a bald eagle, which was too old to be reformed. He was a very old eagle, had been in captivity for twenty years or more, and I failed to reform him. But a wolf that I had, that came from the Northwest, took to protose right off. He seemed to be as fond of protose as of beefsteak. I must tell the whole truth about that.

This wolf lived very well on protose for several months; was just as ~~am~~ amiable as he could be; let little boys and girls play with him; had no opposition from him; got along very nicely. But one day he worked his way out and disappeared. A few hours afterwards I heard a very loud ominous ~~knack~~ kind of knock, and I said, Come in. As the door opened there stood a very tall man with a very red face, looking very angry. He said,--

"Your wolf upset my hencoop, killed six chickens, and has eaten them up. I want four dollars from you, please sir."

I said "All right, here is the money," and asked no questions, and he disappeared. An hour or two afterwards a couple of boys came in bringing my wolf. They said they found him down the street. They picked him up, carried him in their arms, and brought him home. That wolf was taken sick about three hours afterward, and died.

Now you see what happens to the backslider. Remember that the next time you go home and see a chicken pie on the bill of fare.

Now these animals all thrived on a non-flesh diet. I had a fine large st. Bernard dog. I saw him one day eating an English walnut. He cracked that walnut and took the meat out with his long canine teeth, and I found out then what canine teeth are for. A friend of mine, one of our nurses, who was a missionary down in the South Sea Islands, told me that one day she saw a dog, a chicken, and a baby all eating the same cocconut,--making a meal from the same cocconut, a green cocconut. The dog was able with his tusks to tear off the husks from the green cocconut, to open it up and crack it open, and then the chicken and the baby were able to feast upon the gelatinous meat of the cocconut. It is really very delicious. If you have never eaten a green cocconut you don't know how delicious that white jelly on the inside is when it is just in a creamy state. I suppose the world once teemed with these splendid great nut trees. Enormous great lucious nuts which would make a meal for a lion or a panther, and the leopard and the bear. We know that is true because there were great nut pines that used to grow in the country, an enormous extent of firs covering the country at one time,--enormous great trees, and they bore enormous great cones, and in these cones were nuts. We find them still in the Appenines,--great enormous cones with nuts almost as large as acorns. Nothing could be more useful than the so-called canine teeth of the dog in breaking open these cocconuts which are held together when they are in a partially ripened state; and when they are just

formed the kernels are tightly closed, and the tusks of the dog form a very fine instrument in tearing open and getting at the nuts inside the hard shells, so they are easily eaten. I believe that all so-called carnivorous animals were originally nut eating animals--eaters of nuts and fruits. Take a dog into the forest, leave the dog and the man together, with nothing but leaves and grass and herbs, and both would starve to death. Supply them with an ample supply of nuts and fruits, and both would live and thrive on nuts and fruits. But if there are no nuts and fruits, then both the man and the dog are compelled to resort to flesh as a means of subsistence. That is the whole truth about that, and I believe it is the exact truth about it.

Q. With my right ear on the pillow I am often awakened with acute pain, though I seldom have common ear ache. What is the cause?

A. I would advise you to see Dr. Byington at once and have your ear examined.

Q. What is the cause of too great blood-pressure?

A. Narrowed arteries is the cause. The arteries become too small, so the blood pressure must rise in order that the proper amount of water may be brought in. Suppose you have got to water your garden with pipes. In the summer time, along in August, you know, when everybody is out watering their lawns, the water pressure goes down so low sometimes you can hardly get any water out of the pipes. Now if you had the power to do it, you would like to telephone to your pumping station and say Give us more pressure: I can not take so much time watering my lawn and sprinkling the road! and if they were goodnatured they would put on a little more steam, give more pressure, and you would get the water faster. The arteries are the irrigating system of the body. The heart is the great pump. It pumps the blood out through all these irrigating canals, and they supply the tissues better, so that growth can go on. Saliva is made by the salivary glands, bile is made in the liver, gastric juice is made in the stomach; and all these tissues,

the laboratories of the body must be supplied with material which comes from the blood, and the blood vessels are the pipes through which it is furnished. Now when these arteries are contracted by disease,--that is what happens in arteriosclerosis, the consequence is the heart must raise its pressure, must pump harder to raise the pressure so that the proper quantity of blood can be supplied to the brain and to all the other parts. There are many interesting things about it, but we will pass on tonight.

Q. Do you think fruits and vegetables that have been canned and are one year old are as good for sick and well people to eat as the fresh article in its season?

A. I don't suppose there is any difference as far as wholesomeness is concerned, for when the thing is cooked and put up in the can it is thoroughly sterilized, and time does not materially change it. There may be other conditions which are worth considering.

Q. Is horseback riding good exercise for one who has heart trouble?

A. It is a very good exercise for one who can take moderate exercise, who is not able to walk very far; that is when it is a gentle exercise, gentle horseback riding, but not violent riding.

Q. What is the cause of black spots or moving figures before the eyes at times?

A. When you rub the eye a little, and irritate the lid, you will sometimes rub off some little scales from the inside of the eye, just as you rub little scales off the skin. The eye is lined by a membrane as the body is covered with skin, and sometimes some of these little specks are loosened on the inside of the eye, and when you turn the eye in different directions you can see them, because they shut off the rays of light which are passing through the ~~catian~~ eye and the retina.

Q. Can anything be done to retard the growth of cataract?

A. Fomentations, hot and cold applications, bathing the eyes, especially building up the general health, will help to retard it. Flesh eating is without doubt the cause of cataract. There is no doubt about that. There is no doubt that the excessive use of cereals is a cause of cataract, because that tends to diminish the alkalinity of the blood, and so increases the tendency to arterial degeneration.

Q. Is deafness caused by measles curable? If so, how?

A. It generally results from catarrh of the middle ear. Inflammation extends up to the middle ear, and this is one of the most curable forms of deafness.

Q. What is the ~~best~~ remedy for neuralgia in the ears?

A. Hot applications are the best palliative measure. But the real cause should be sought out and removed.

Nearly everybody who comes to this institution has too high blood-pressure, but nearly every one who stays here for a time finds it diminished within a short time, finds it reduced ten or fifteen points within the first ten days or two weeks. The ~~main~~ change in diet is the thing that does it, cutting off those substances which have been raising blood-pressure. Meat eating is the great cause of high blood-pressure, because it contains uric acid. Uric acid irritates the blood vessels, causes them to contract, and so raises the blood pressure. Dropping out of the diet all these irritating things, condiments, pepper, meat, tea, coffee, mustard, and those things that raise the blood-pressure particularly, dropping them out, lowers the blood-pressure. ^{Baths} ~~also~~ also lower blood pressure.

Q. Is high blood-pressure a premonitory symptom of apoplexy?

A. Certainly. High blood-pressure means you are in danger of apoplexy every minute. If you have got a blood-pressure of 200, you can just be sure that apoplexy is coming, and if you live long enough you are certain to have it, if you don't die of some other thing. Pneumonia is more likely

to carry you off than apoplexy. The thing to do is to get that blood-pressure down as quick as you can. If the blood-pressure is ~~more~~ above 145 you may be sure it is too high. If it is below 90 it is too low. Nobody's blood-pressure should ever rise at any age above 145. If it does, it is because the blood vessels have changed, have become hardened and shriveled.

Q. What treatment will strengthen the throat of a person suffering from chronic laryngitis?

A. Gargle with hot water two or three times a day. Apply a hot heating compress at night. Wring a small towel out of cold water, very dry, and put it on the neck, cover with one layer of mackintosh, and then with flannel, and in the morning bathe it with cold water. Bathe the neck in cold water every morning. Live out of doors.

Q. Can the enlargements of finger joints in rheumatism be absorbed to a very considerable degree by adopting a strictly anti-gout diet?

A. You can not expect they will be entirely removed. Extensive deposits in the skin can ~~not~~ be made to disappear in a very short time, but deposits around the joints do not yield so readily, although I have seen cases in which these deposits have entirely disappeared.

Q. What can be done to prevent attacks of quinsy?

A. You must have the tonsils treated. If you have repeated attacks of quinsy it is because there are little pockets in the tonsils, germs gather there and live there, and when you get a little over-taxed, get a little cold from having eaten too much beefsteak, or something of that sort, these germs get the better of you, begin to grow, thrive, multiply, and spread out all over the tonsil, and you have an attack of quinsy. You should have that little pocket destroyed, or have the tonsil removed.

Q. What causes trembling in the hands when the rest of the body seems to be normal?

A. That is a neurasthenic symptom. It is also one of the first symptoms of paralysis agitans; but it is generally a neurasthenic symptom.

Q. Have been vibrating ear drums on several occasions with the mechanical Swedish machines down stairs, which seems to improve the hearing somewhat, and also seems to clear the inner eustachian tubes. Is there any danger in this practice?

A. No. If you call on Dr. Byington he will show you a vibrator which is especially used for that purpose, for the ears, and which is of very great value, and perhaps will be more effective. But the vibrator will certainly do no harm.

Q. What parts of the body do tobacco affect?

A. Every part. The man who chews tobacco or smokes tobacco, and uses tobacco in any other form, his whole body is contaminated with it, and the whole body is injured. There can be no possible doubt of that. This is one of the things which has been positively and certainly established. We might state this question this way: Suppose a man should lose five thousand dollars, what part of his property would be damaged? A man is worth we will say one hundred thousand dollars. He loses five thousand dollars. What part of his wealth would be damaged if he lost five thousand dollars? Tobacco is the thing that takes away from man his vitality, it impairs his constitutional vigor, injures his vitality, just as the loss of five thousand dollars would impair a man's working capital and his business. So the use of tobacco, by expending energy in a useless way, by weakening and contaminating the blood, weakening the whole body, injures the whole man; and the heart is particularly injured. The brain, nerves, kidneys, liver, and heart are especially damaged, also the stomach.

Q. Can you explain the cause of the condition of the stomach you told about last Friday that was tied with cords, and is there any chance for a recurrence of the same trouble?

A. Those cords were due to the adhesions of scars forming.

Q. Is there any way to definitely ascertain the size of the liver?

A. Certainly. Come to the office and I will tell you just how big your liver is. I will mark it out and make a picture of it outside, so you can see where it is and all about it. Physical diagnosis nowadays has been brought to such a point of perfection that you can mark out the heart right where it is, how large it is, show the lungs and know just how large they are, locate the liver and the spleen, and all the important organs of the body, including the stomach. Nearly every one of them can be definitely located, and its condition, form, and size can be easily determined.

Let me remind you again, friends, that we have a great beautiful out doors here in Michigan that is worth looking at, and Mr. Brigham, who is a man of science, well entitled to the title of "professor" if anybody is, is going out every afternoon. The Sanitarium management have hired Mr. Brigham, pay him a regular salary to do this thing for you, just for the purpose of introducing you to the outdoors. He goes out, takes these afternoon walks, and does not charge anything for it. He is on a regular salary just the same as the doctors are. Gets as much pay as some of our doctors do for doing that thing for you, and it will do you just as much good to go out with Mr. Brigham and take a walk out in the country and study nature, you will get just as much good out of it as you would get sit down in the office and tell the doctor that same old story of peristaltic woes and nervous wretchedness that you have already told him sixteen times; and it will really do you a great deal more good to get out with Mr. Brigham than to tell that story over again to your doctor. So drop in in the morning and say to the doctor, "Good morning, Doctor! You know all about me: I am going to walk with Mr. Brigham."

I met a man last evening who said to me, "Doctor, look here. I want to show myself. I came here a few months ago and all thought I was going to die. The doctors had given me up, and I came here. I was so weak that when I got down town I could not get back. It used me up, so that when I got home I was just completely exhausted. Now," he said, "yesterday I walked twenty-two miles, and I am going to walk farther today." Think of the change in that man. It is a wonderful thing. That man was suffering from diabetes. He won't object to my telling you. He had been suffering until he had gotten to that condition where he could not burn the sugar up. That is all there was to it. The starch and other things had been converted into sugar, and the tissues had lost power to burn up that sugar. I said to him "Walk and swim. You must swim, because you must burn that sugar up; you must educate your body to burn the sugar up."

Some years ago a medical student in Paris was in the gymnasium in the evening, about 9 o'clock, and to his astonishment he found his old white-haired professor was there working at the pulley weights and the other apparatus, and doing all the things possible for him to do. He said

"I am surprised to see you here. What are you here for?"

He said "I am burning up my sugar."

He had the same disease, chronic diabetes, and for twenty years he had been working to burn up the sugar, and had kept himself alive. This patient brought the sugar down from a very high point, so high that he was in danger of his life every minute from diabetic coma, he has brought it down where it is very small. It is not very much consequence now, and he is on almost as safe ground as anybody else. In a little while he will get his body where he can burn up all the sugar, and then he will be cured.

Now what is true of sugar is true of other tissue poisons, wastes of all kinds. Exercise burns them up. Let me tell you a little experiment Bouchard made. He took a man who had been sleeping all night. In the morning

he took some of the urine — his extract of tissue, by the way. Urine is simply extract of tissue. Take a piece of beefsteak and squeeze it, and get out what is in it; soak it in water and squeeze out all there is in it, and you get the extract of it. You call it beef tea, beef juice, and beef essence, or something of that kind. But the kidneys do that very thing. The blood circulates through the tissues through the body, then goes around to the kidneys, and the kidneys take out of it what has been collected from the tissues, and the urine is extracted and washed out. Dr. Flint, of New York, made an analysis of beef tea bouillon, made an analysis of urine, had a chemist make an analysis of the two, and they were almost exactly the same thing. That is why we don't serve beef tea on our table up here. Beef tea and urine are practically the same thing--simply extract of tissues. Now this extract of tissues, or urine, Prof. Bouchard injected some of it into a rabbit and he found it took an ounce and a half to kill that rabbit. An ounce and a half of urine killed that rabbit. Then he took another rabbit of the same weight, took urine from the same patient at night after he had been exercising all day in the open air, and it took nearly twice as much urine to kill a rabbit of the same weight. Why? Because it was not half so poisonous. That is the reason. The urine of the day was two-thirds as poisonous as the urine of the night. What does that mean? It means that when a man is out in the open air the oxygen burns up the poisons. Now if you keep the poisons burned up it will keep your brain clear, keep your blood pure, lessen the work of the kidneys and the liver, and so it will help you to build up that strong, vigorous, healthy body that you want to carry home with you.

HEALTHY LESSONS FROM THE EARTHQUAKE

Lecture at the Sanitarium Parlor, Battle Creek, Michigan, Monday, May 14 '06

At 8.00 P.M.

By J.H. Kellogg, M.D.

I promised to talk to you tonight about health lessons from the San Francisco earthquake. Earthquakes are a very serious thing. They certainly remind us that we have a very shaky foundation. But earthquakes are not new. They are old as the hills, at any rate, for the earthquakes made the hills, or helped to make them. Earthquakes have been happening all along during the memory of man. As long as history gives a record of anything we find mention of earthquakes. And earthquakes have sometimes been much more terrible than the one which happened at San Francisco not long ago. The earthquake, for example, that happened at Lisbon about one hundred and fifty years ago, destroyed sixty thousand people, possibly more. Then there was an earthquake in China a couple hundred years ago which destroyed a hundred thousand people; and that terrible volcanic eruption in Martinique which destroyed forty thousand lives. And we remember that great tidal wave which rolled in upon the coast of Japan and destroyed twenty-seven thousand people in Japan. So there have been much more terrible earthquakes than this one, and earthquakes which have perhaps destroyed more lives. The thing which has perhaps attracted more attention than the destruction of lives in San Francisco has been the destruction of property, and that is very curious. I can not understand it. If a ship goes down and fifteen hundred or more people are drowned, which has happened more than once;-- when a large number of people have been drowned and a great ship went down,

there isn't anything like as much said about the loss of the ship as there has been said about the destruction of San Francisco property. Perhaps there has been three hundred or four hundred million dollars worth of property destroyed. That is an awful loss, but it is insignificant compared with the value of lives that have been lost. The thousand or more lives lost in San Francisco are worth a great deal more than the buildings that went down. Who ~~They~~ would be willing to exchange a thousand lives for three hundred million dollars? Even the richest man in the world would give all he is worth to save his life if ^{it} came to the question of his life or his property. He would readily let his property go to save his life. Most men would. I don't know whether Mr. Rockefeller would or not, but I am sure most men would. His property has become so immense, he might consider himself of small account compared with the property, because there are a great many people interested in his property beside himself.

Now there is another side to it. Altogether another side to it. The property loss ~~of~~ to the city was large, but there is a greater loss going on all the time. I understand a few days before this great loss in San Francisco, before this thing happened, three or four days before a woman went up and down the streets of San Francisco and proclaimed that the city was going to be destroyed. I saw an account of it in a newspaper. I don't doubt it. I suppose it is true, because it has been reported from various sources, that a woman went up and down the streets of San Francisco and predicted that great city was going to be destroyed. The city was destroyed, and a thousand lives went out.

Now I am going to make a prediction, and it will absolutely come true. I know it will come true. I have positive knowledge that tomorrow one hundred thousand people will die. One hundred thousand lives will go out tomorrow. That is a good many more people than were lost in San Francisco. It is sure to be. I will tell you how I know it. The average length of

life is forty years. Now think how many people will have to die in a year in order that a thousand people will be dead in forty years. Twenty-five, isn't it? In other words twenty-five people out of every thousand people die every year. Well, now, how many people are there in the world? Somewhere about one billion, five hundred million. That is about the number of people. And twenty-five people out of every thousand people die every year.

Down in Mexico, when I was there a few months ago, I found the average length of life there was only seventeen years. Not forty years, but seventeen years. That means that in Mexico sixty people die out of every thousand. What is true of Mexico, is true of other semi-civilized countries, most of them where conditions of life are not so favorable as in this country, for the reason that they don't take so good care of the children. It is the babies who die in Mexico in such great numbers. More than half of all the inhabitants of Mexico die before they are a year old. More than half of all born die before they are a year old, so the average length of life is only seventeen years. Multiply this by twenty-five and see what it would be. It would be thirty-seven million, five hundred thousand dying, dying the world over. Adding the larger number who die in uncivilized countries, we can say in round numbers with perfect safety that forty millions of people die every single year in this world of ours. Of this forty millions how many would that be dying every day? There are three hundred and sixty-five days in the year. You figure that out, and you will quickly see that it is over one hundred thousand; that is more than one hundred thousand dying every day. Divide this by twenty-four, and you see that means more than four thousand people dying every hour. By dividing four thousand by sixty, we see it is sixty-six people or more, dying every minute, and that means more than one person a second. You can easily remember that. One person dies every second. Every time the clock ticks a life goes out.

Now what is a life worth? You can not put an estimate upon life, and yet the State does put some sort of estimate upon life. A man's life is supposed to be worth five thousand dollars. Why? Because five thousand dollars at six per cent is three hundred dollars a year. That is a dollar a day. And a man is supposed to be worth at the very lowest estimate a dollar a day. A competent mechanic, who earns two dollars and a half a day, is worth more than that. He is worth two dollars and a half instead of one dollar, so he is worth seven hundred and fifty dollars a year, and that will pay interest on twelve thousand five hundred dollars, wouldn't it? So a man whose services are worth five dollars a day is worth twice that, or twenty-five thousand dollars. So I think we can say the average worth of life, if we are going to put an estimate on it, would be ten thousand dollars. I don't know that that would be quite fair, if we make that estimate apply to savage countries; still, the life of a savage is as precious to him as the life of a millionaire is to him;-- he loves life perhaps just as much, perhaps enjoys it more. So I should say ten thousand dollars is perhaps a low estimate of the real value of a human life.

Well now one hundred thousand people die every day. How much money does that represent? Supposing each one is worth ten thousand dollars, see what that would be. That is one billion dollars every day. Each day enough human lives are going out so that their money value amounts to a billion dollars, or twice as much as all the money loss of San Francisco. So now we see that the loss of San Francisco seems really insignificant when we consider the enormous loss that is going on in the world ~~frankfort~~ every single day from disease chiefly; and at least half of it, at the very most liberal estimate, we might say that at least half of all this disease is easily preventable.

Now look at this country, what happened just last year alone. Four hundred and sixteen thousand people died of pneumonia last year.

Four hundred and thirteen thousand people died of consumption last year.
One hundred and thirty thousand people died of apoplexy last year.
One hundred and ten thousand people died of cancer last year. Now just look at it. I could add typhoid fever ninety-one thousand, croup fifty-one thousand, rheumatism seventeen thousand, diphtheria sixty-four thousand, and so on. I could easily figure it up and show you that a million people die of entirely preventable disorders. So there are a million people dying every year, in this country alone, of diseases which are easily preventable. A million people died in the United States last year of disorders which are entirely preventable. Every one of these million people was worth ten thousand dollars, so multiply a million by ten thousand dollars, if you please, and see what an enormous loss that is. Ten billions of dollars' waste last year on four diseases, all of which might be prevented. How big is the national debt at the present time? Does anybody know how much it is? It is something over a billion, isn't it? About eleven hundred million, if I remember rightly. So more than the whole of the national debt of the United States is wasted every year in the United States alone on four diseases.

The whole world looks on in pity and sympathy at the San Francisco earthquake. That is right. It is an awful catastrophe. But here is this insidious thing, disease, creeping in among us and all the while carrying off our friends, carrying off our brightest minds, and we are somehow getting used to the funeral dirge. We are getting used to the funeral procession. And the thing is going on in every little town and in every great city. And in a city like New York, or Philadelphia, or Chicago, there is a whole regiment of men digging graves all the while. There are one hundred thousand new graves made every day, and half of them at least unnecessarily. And this enormous loss that comes from it is double the loss that came from San Francisco, so there is something greater to think about--- when we come to think of the losses we suffer, there is something even greater than this

catastrophy at San Francisco. But we have to have such catastrophies once in a while to call our attention to the value of human life; to the awful waste that is going on continually.

Now there is another thought that occurred to me, that the people of San Francisco might get some good out of this. One thing is certain they have discovered. When three hundred thousand people were driven out of their homes in the morning, had to stay out of doors nearly all of them all that day and the next night, and the next day, and the next night, they discovered it was safer outdoors than indoors. That is always the case everywhere, as a general principle, that the outdoors is a great deal safer than the indoors. People don't get consumption outdoors. Consumption is an indoor disease. Indians didn't have consumption until they built houses and went into them. The North American Indian or South American ~~Indians~~^{monkey} could not live six months in such houses as most of you live in at home. The conditions of life are such as to breed disease. Our homes are veritable hotbeds of disease. Every carpet carries beneath it millions of death-dealing germs, and every time the housewife comes around with the broom she stirs up these enemies of life that are continually in our homes. We are cultivating disease continually.

When the people in San Francisco build their ^{new} houses they are going to make them earthquake proof, I understand. Now I would recommend them to make them disease-proof also. They could do a whole lot to keep disease out of these houses, as well as to keep them from being shaken down by an earthquake, and one thing would be to let more sun in them than they used to have. Most of them had their windows built in such a way that they would look well outside. Architects fixed the windows to make the house look well outside. It would be a good thing if they would make their houses so the sun could shine in everywhere. You sometimes speak of people who live in glass houses. I really hope the time will come when we will all live in glass houses, then we could live in the light. The Bible says something about walking in the light. The houses can be made in such a way as to let

the light in all the time and at the same time not allow people to peep in. They have glass made that cracks the rays of light so the eye can not follow them, consequently houses could be made so they would be filled with light continually. A house constructed that way would be free from disease continually, because the sunlight shining in would disinfect every little corner. Sunlight is the most powerful of all disinfectants.

Another thing the people of San Francisco could do would be to construct their houses so there will be a great deal more fresh air. That is what we need here just now. Unfortunately the fresh air is barricaded out, but we will just open these windows and let in a little more. The majority of people don't appreciate the value of cold air and fresh air. I met a lady today who just came from Florida, and I said--

"How do you stand our cold weather up here?"

She said, "It is just what I have been longing for for a long time;" so I think she appreciated fresh air.

The strongest, most vigorous, and enduring people in the world are not the people who live in torrid countries, but the people who live in colder countries, where they have the benefit of the tonic influence of the fresh air. The people in San Francisco have great advantage over the people in this part of the world, because they can have fresh air if they will all the time, yet we find people barricading themselves against this most important of all health-giving forces.

Another thing San Francisco could do to make for a healthful city would be to suppress the saloon. Suppose they should do that. They are going to build a beautiful city. They have already got the city laid out. An architect, Mr. Burnham, of Chicago, I understand, had the plans all ready for them to rebuild. But it almost seemed like one of Nero's exploits to burn the city and make a better one. The city fathers had everything all ready so in case anything happened they could rebuild it on a different

plan, so they are going to have a central headquarters and the streets leading out in all directions,--have wide boulevards, and that will be conducive to fresh air. Living on the seashore, with the ocean right at hand rolling in upon them continually, it ought to be one of the healthiest spots in all the world, and I believe if the people of San Francisco would all band together to make it so, they could make San Francisco the healthiest city in the world. But they would have to leave out the saloon, because the saloon can undo all the good results that can be attained by other means,--by all the sanitary regulations, by all personal attentions to health in every other particular, they can all be counteracted by the saloon.

Alcohol taken into the body destroys the blood. The blood is the source of life. Alcohol destroys the blood, contaminates it, so it permeates every tissue of the body and sets up universal disease. It has been shown by actual experiment that within fifteen minutes, within three minutes after alcohol has been taken into the body there is a change in the cells of the brain. The brain cells and the nerve cells are shrivled so they are under the influence of poison, and as time goes on and more and more alcohol is absorbed, this becomes more and more apparent. At the present time our insane asylums are being filled with men whose brains have been destroyed by alcohol, with men who are suffering from paresis because of the habitual use of alcohol in small quantity. The beer drinkers are the men who are periodical drinkers, the steady drinkers, and the wine drinkers, those are the people who suffer most from the effects of alcohol and alcohol degeneration.

Then there is the tobacco--the tobacco shop, the tobacco factory or store, headquarters where you see the old Indian standing out in front of the store. This is a place which can be suppressed with great advantage in San Francisco. I understand they are to shut out China Town--not to have any China Town in new San Francisco. Why not shut out tobacco too?

Just think of that great tidal wave of ocean air coming in upon them all the

time only to be contaminated with tobacco after it gets there. I was walking along the street the other day where the sweet fresh air from the country was sweeping down the street, and I had to go behind a man who was smoking so I had to breathe the air that was contaminated, and I could not help myself, for it had spread out over the whole street and I could not get away from it. The only way I could get away was to go on another street, and unfortunately I had to go on that road, so I had to smoke his stale cigar ^{after} with him. I had to take it second-hand, and it was anything but agreeable. Now we find this thing going on in every city. You can not go into a street where you do not have to smoke tobacco. You can not go into a street where you don't get the odors of sewers, odors of filth, odors of something which is contaminating the air. The air is God's free gift to man, and he has a right to pure air.

Now it might be an advantage to San Francisco to shut out the butcher shops too. When a man asked Socrates how to make a healthy city, and he gave him a formula for a healthy city, he left out the butcher shops. Glaucon said to Socrates, What will you do? What would the inhabitants of your health city do? Socrates said, they would eat fruit, and nuts, and grains, and cakes baked upon the embers and served upon the palm leaves. And that seemed a very delightful repast to serve, but Glaucon said, But would there be no roasts? Why roasts? Well, he said, one would think that they would tire of those simple foods and would like some roasts and a few other things for variety. Oh then, said Socrates, if you had that sort of meal, if you had that sort of food, then you would have besides disease, for flesh meats breed disease; and if you had disease then you would have doctors, and then you would have more disease. Then, besides, if you ate meat, you would produce an unhealthy city, for the people would be in unrest; they would be in a state of unrest. You would have to have more land to feed more cattle. Would have to have larger lands in order to increase pasturage for

more cattle. Then in order to keep your neighbor's horses and cattle off your territory you would have to go to war. And so meat eating leads to war as well as to disease, and you would have an unhealthy city rather than an healthy city.

Now if San Francisco could be converted to the idea that Socrates had of a healthy city, and would establish a healthy city in accordance with the notions of that ancient philosopher, whose writings are still respected perhaps more than those of almost any other Grecian philosopher, if they would make a city according to his formula, disease would almost be wiped out of San Francisco, and we would find the modern pioneers on the Pacific Coast developing into a race that would be superior perhaps to the ancient pioneers of that region. It is a very healthy region, and within the last few years there were found living upon the Pacific Coast old Indians who could remember their age to be somewhere about 140 years. Think of it. There was an old Indian, 140 years old, who went out every single fall to collect pine nuts in the Sierrita foot hills there for his winter food. This man was 140 years of age. Another Indian, 126 years old, went down to the seashore every day and carried a lot of fagots home on his shoulders for fire wood. So it is possible for human life to be very much extended in that salubrious region, and the people of San Francisco might begin to equal their predecessors in longevity. At the present time the average citizen of San Francisco dies at forty years of age. They might increase the age to three times that much if they would only live healthfully. What a beautiful thing it would be if San Francisco, in its reestablishment, would plant its feet upon the foundations of health and become the great health city of the world. It won't do it, because the majority of people in San Francisco are more interested in having a temporary good time, in having a good time just for the present, than they are in living long upon the earth and living well; so I fear the new San Francisco will be very much like the old one,

and the death rate won't be any lower than it was in the old san city.

Some time I hope we may have what was once suggested in ancient Greece, when Pythagoras went out in the country and established a little colony which he called Crebona. He undertook to establish there a city of health. He didn't have any meat shops there, didn't allow slaughtering of animals, or any meat. The people who lived there all believed in the simple life, lived on a natural diet,--abjured meat and all unwholesome things, and might have lived a long time and have spread out the six principles of natural living through the colony so they would have extended out through the earth, had it not been for the fact that the people of Athens became so enraged with the idea that there was a health town standing out there, and had risen after them, they became so enraged at it they swarmed out one day and massacred the entire city; destroyed every person there,--a curious historical fact, that shows us how the world hates truth. Truth always has a hard time. It is always on the gallows, as one of our poets says--^{Truth} "Whenever on the gallows." Why is it? There never was a time yet in the world when truth was popular, and there never will be, I don't suppose; at any rate, so long as our world goes on at the present rate truth will never be popular. For a time some principles are popular,--those that conduce to circumstances are popular, but on the whole truth is unpopular. So we can not hope the new San Francisco will be materially better than the old one. Nevertheless, we are going to keep right on. The Battle Creek Sanitarium is going to keep right on telling its story, holding up its protest against the way the world is going.

The great tidal wave that rolled in upon Japan and destroyed twenty-seven thousand people, that tidal wave was forty or fifty feet high, and on the coast of Java this same great tidal wave was sixty feet high. It was something awful to think about!--A tidal wave nearly as tall as this

building rolling in upon that coast, and that tidal wave killed thousands and thousands of people. But there is an immensely greater tidal wave than that that is rolling in upon the world,--a general wave of disease and degeneration. And this tidal wave is multiplying at a fearfully rapid rate.

Insanity has increased 300 per cent in fifty years. ^{The} Last United States census shows that in the last ten years there has been a tremendous increase in the mortality from almost every chronic disease. The mortality from acute diseases, some of them, has been lessened. The mortality from pneumonia, one of the gravest of all diseases, has increased until now pneumonia now kills more people than any other disease; even more than consumption does, and it is increasing every year. But with the exception of this, most acute diseases show less prominence in the mortality decrease than they did, but chronic diseases have all increased. Bright's disease, diabetes, cancer, apoplexy, and various forms of nerve disease, paresis, these symptoms have all increased to a most alarming extent. If they should increase at the same rate for forty years more, in forty years from now the rate of death from diabetes will be seventeen times as great as it was ten years ago, and from Bright's disease, five times, from apoplexy seven times. So you see, my friends, we are going down at a terribly rapid rate. Now if there was such an increase as that in a thousand years, it would be terrible to contemplate. We would think that would ^{be a} ~~be a~~ great increase, but we would not see this tremendous increase. Think of it--seven hundred per cent increase in one malady in fifty years; seven hundred per cent increase in Bright's disease in fifty years. Five hundred per cent increase in cancer, and so on. So you see, my friends, it is something terrible to contemplate. But we don't think anything about it. We go to sleep at night just as comfortably as though we didn't know it. But there are a few who feel like making a stir about it. That is why this institution is here, for the purpose of trying to arouse an interest in the world, to stir up a great interest in trying

to turn about some of this tide, and encouraging correct habits of life so we can get away from this terrible degenerating tendency which has gotten hold of the world.

One thing I think the world is coming to appreciate a little more than it has done before, is the importance of the outdoor life-- of getting out doors. This is a season of the year when it is a good time to cultivate the outdoor life, and I am glad to improve this opportunity to tell you that the Outdoor Gymnasium is now open. The Swimming pool is being filled today, and tomorrow morning will be ready for business. And the running path will be ready in a day or two. And Mr. Hopkins, who has been for several years connected with our Gymnasium work here, has returned, and will take general charge of our gymnasium work. Mr. Corsan, the champion swimmer of Canada, is here, and is organizing classes, and will have an exhibition in a few days. Mr. Brigham is here with his country walks. I took a walk with him myself the other day, and enjoyed it very much. I hope you will all improve your opportunity while you are here to go out with Mr. Brigham and get the benefit of the country walk and get the knowledge which he will be able to give you of the birds, the flowers, the trees, the fishes, and the other interesting things that grow about here. Mr. Brigham says there are one hundred different species of warblers that fly through here at this season of the year. They are passing through now. You can not go into the woods without running across some flower or bird or thing that you would be glad to meet and to know about. So I hope you will be on hand. Then we have the outdoor rides, the carry-alls and the tally-ho, and I hope you will register your names for those. So we can keep you busy. The horses, and carriages, and drivers are all at your service. They are not as busy as they ought to be. I hope you will make more demands upon them. While you are here, improve every possible opportunity that is offered you for cultivating health. When you go ~~back~~ home you will go back into the old disease-producing atmosphere

again more or less, and while you are here try to make this a little sort of sanitary heaven, so you can get as far away from Old Father Time as you can.

I found a lady today who didn't seem to be very much interested in what I was telling her. I found she had arteriosclerosis. I found the arteries were hard and her blood-pressure was away up to 220. But she didn't appreciate it very much, and I wanted to say something to her to wake her up to the seriousness of her condition, so finally I told her that old Father Time was right after her with ^{his} sickle, and that she would have to do a lot of sprinting or else he would get her quick. I think she is going to make a smart run and see if she can not get a little ways ahead of old Father Time. My blood-pressure is 105. Her's is 220. I said,--

"Really I didn't think you were seventy-five years old from your appearance."

"Seventy-five years old!" she said, "why, I am only fifty."

She was alarmed when I suggested she was seventy-five years old. She is older than that. That woman is eighty or ninety years old. A man or woman is as old as his or her arteries. If you have hard arteries, you are old, it does not make any difference what the age, or what the old family Bible says about your birth date. You are old if your arteries are hard. May be you think you are forty years old when you are seventy-five or one hundred, if your arteries are hard. If they are getting hard, you better get right at it as quick as possible and get them softened up by right diet, right treatment, and the outdoor life, the simple life. These things will turn back the tide, set back the hand of the dial, turn the shadow back quite a distance, if you go at it in earnest and live close to Nature. I admonish you all to do your utmost while here to get just as near to Nature

as you can, because when you get home you will have a lot of temptations to draw you back into the old channel again.

v-a 8-2'06

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QUESTION BOX LECTURE

Sanitarium Parlor, Battle Creek, Michigan.

May 22, 1906

8 P.M.

By J.H. Kellogg, M.D.

Q. Should one eat one or two meals a day?

A. That is a very hard question. People have been asking that question for the last thirty years. We used to say Eat twice a day, but as our experience went on we found out by and by that it was necessary for some people to eat three times. Some people who could eat but very little at a time, and food that was very easily digestible, we found they did better with three meals a day than they did with two, because if they ate two meals a day only, they didn't get enough food. Then after awhile we got hold of people who could take so very little food that we had to feed them four times a day. And as I studied the matter more, and watched the developments and discoveries on the question of digestion, I finally came to a new conclusion in relation to the matter of meals, and that is, one should eat when he is hungry. If one drinks when he is thirsty, and only sleeps when he is weary, why should he not eat when he is hungry? I am satisfied it is possible for us to be too rigid in our rules and in our regulations of physiologic processes. There are instincts within us that are intended to help us and guide us, which will wisely, more wisely direct us, which are an expression of an intelligence greater than ourselves, wiser than ourselves, which knows better than we know ourselves. So we get so busy about our business that we don't stop to think what we ought to eat, and when we ought to eat, or how we ought

to eat. We go rushing on with our business, our professional business, and our medical work, whatever it may be,—with our recreations or our pleasures, and go rushing right on without stopping or taking any time to study and to learn so that we might know the principles in relation to our bodies; consequently we can not help.

I remember some time ago a very educated, talented gentleman, a Rev. Dr. Willis, of Chicago, now of Brooklyn, N.Y., in Mr. Beecher's church. He came to see me one morning early. He said,

"Doctor, I heard your lecture last night, and I stayed over on purpose to come here and see you. I want you to tell me what you eat. Now, I confess I am ignorant on this question, but I would like to know what to eat. A man told me that you ate very simply and that you worked like a horse. Now" he said, "I would like to know just what you are eating. I want to work hard. I have a good chance in the next ten years to do a great deal of good work, and I want to be at my best, and do all I can in the next ten years; and I have made up my mind it makes some difference what a man eats. I used to make sport of you, and to ridicule your ideas, but I have really come to think differently about it, and since that man told me how you worked it occurred to me may be your eating has something to do with it, so I thought I would like to know how you eat."

"That man told you I worked like a horse?"

"Yes, he said you worked like a horse,—worked right along until your work is done, if it takes all night."

I said "I don't think I am quite so bad as that, but I do work hard. And if I am able to work like a horse it is because I eat like a horse."

"Oh!" he said, "then you think a man ought to eat a great deal, do you, in order to be able to work hard?"

"Now," I said "I didn't say I ate as much as a horse, but I ate like a horse; that is I use horse-sense in eating."

"Oh!" he said.

"Yes," I said, "I follow my horse sense when I eat. But some people seem to have lost their horse-sense, and don't use horse-sense when they are eating, and the consequence is they get into trouble."

"Now," I said, "look here" --- he told me he had been ridiculing me, so I thought I would hold him up to ridicule a little while to pay him back. I said "You come to me to tell you what to eat. I am surprised! Here you are an educated man, a college graduate. You have a classical degree. Then you went three years more to a college and got a theological degree, and you are a man of books. You have been studying all your life, yet you don't know what to eat. No horse, or dog, or cat ever came to me and asked what to eat. The horse knows what to eat. The cow knows what to eat. But you don't know what to eat,--an educated man like you!" I said "It really seems to me a great many people have lost their horse sense."

"Well, Doctor, I own up. I confess I am ignorant. I neglected this subject. I am ashamed of myself."

"Well," I said, "I am glad of it. Now you want to know what to eat, and I will tell you." So I told him what I ate for breakfast. I ate some bread, an apple, and a handful of nuts, and drank a little glass of apple juice, or fruit juice of some sort.

"Oh, is that all you ate?"

"Why yes," I said, "that is enough, isn't it?"

"Well, you didn't have any beefsteak?"

"Why no. Why should I want to eat an ox, or a piece of an ox?"

"Well," he said, "I always had an idea that one must eat meat to make him strong; that if a man wants to work hard he must eat meat. That is the idea I was brought up with."

"Well, now," I said, "I can not see any reason why you should think that, or why anybody should think that, unless it is because the ox is strong,

and because the ox is strong, if you eat a strong thing then you will be strong. That is the cannibal idea." A cannibal when asked why he ate his enemy said, "Because my enemy is strong, and" he said, "I eat him to get his courage. He was a very courageous man, and when I had killed him after I had defeated him, then I ate him, so that I would have his courage and his strength." Well, there was another idea, too, that the cannibal had when he ate his enemy. Some time ago there was a suit on one of the South Sea Islands, and the question raised was with reference to a certain piece of land--who owned it. The man who claimed it brought forward his evidence. He gave various items of evidence. Finally he said "This is my final proof that I own this land--I ate the former owner." Now that was final proof: that was conclusive. When he ate the owner he swallowed everything he possessed, you see, and became the possessor of everything the former owner had possessed. Well, now, that is the idea if one eats beef,--that he is going to get the strength which the ox has.

I related some of these facts to Mr. Hillis. Then he said,

"Really, do you never have a hankering for beefsteak?"

"Why should I?"

"Well," he said, "When I don't feel very well I think if I could just get hold of a good big juicy beefsteak that would make me feel better right off, ^{and} but when I eat it it does. I feel better in fifteen minutes after I have eaten a big juicy beefsteak, and I should think you would feel that way, working so hard as you do."

"No," I said, "I never do."

"I can not understand it," he said. "I can not understand it,--how one can be satisfied with such a plain diet."

"Now," I says, "look here. Suppose you were going along the road and you saw a dog gnawing a sheep's bone. Would you have any hankering to

get down along side that dog and help him gnaw those bones."

"Oh of course not! Of course not!"

"Well," I said, "what is the difference? You see a dog gnawing a bone by the roadside, and you go home, sit down at the table, and gnaw another bone of the same sheep. What is the difference between your gnawing the bone at the table, and the dog's gnawing one on the road? It is the same thing. The simple matter of location is a matter of no consequence."

"Well," he says, "I think I see now."

"Yes," I said, "I have no desire whatever to go down on all fours and gnaw bones with the dogs."

"Oh," he said, "that is the way you look at it. I never thought of it just that way. And, really, you never have a hankering for beefsteak then, never?"

I said, "My friend, I never have the slightest desire to make a cemetery of my stomach."

His jaw dropped, then he sprang to his feet, and said

"Doctor! doctor! I am a fool. I have been a fool all my life."

He said something worse than that. He said a certain kind of a fool. I won't say what kind of a fool he said he had been, but he used what I thought was rather a bad word for a preacher. He had been a fool all his life, he said, and he said "I never will eat any more meat as long as I live."

I have heard from him occasionally since that time, but I don't know whether he has baskalidden or not. If he has, it will be bad for him, because he knows the truth now, and he ought to follow it.

Now the thought that I wanted to impress upon you by this little story is the fact that there is an instinct within us to lead us aright. He had been wrong because he had trampled upon his instinct and his instinct had led him wrong. A dog's instinct leads him to gnaw bones, but my instinct does not lead me that way. But most human being's instincts lead them to

gave bones until they have been educated differently.

Now let me read you something from the Bible. We were discussing something the other day,--day before yesterday. I was out in the woods with the bath boys. We went out in the woods to have the Sabbath under the trees, to study the trees in the woods, read what the Bible says about the trees, and we got a brand new idea. Here is the first mention of trees in the Bible,--in the first chapter of Genesis, the eleventh verse: "And God said, Let the earth bring forth grass, and herb yielding seed after his kind, and the ^{fruit} tree yielding fruit after his kind, whose seed is in itself, upon the earth: and it was so." So you see that in the beginning, when trees were made, they were all fruit trees. Read that again: "Let the earth bring forth grass, and the herb yielding seed after his kind, and the fruit tree yielding fruit." That is, all kinds of trees that were made were fruit trees. There was no other sort of trees except fruit trees. All the trees that were made were fruit trees.

Well, you say, the botanist explains that. Botanists tell you the seed of the tree is fruit. That all trees are fruit trees in that sense. But there is something more than that,--the 29th verse of the same chapter: "And God said, behold I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." A very strange thing about that is the very definite instruction man received from the Almighty as to what he should eat. God made man out of the earth, and the first thing he talked to him about was his diet,--what he should eat; and that is a very significant thing, isn't it? Because the things we eat today are walking around and talking tomorrow, and consequently if we do not eat right, we will not live and walk right, will not talk right. So God told Adam what he should eat, and he said, "Behold, I have given you every herb bearing seed which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat."

So you see that all the trees that were made at the beginning were fruit trees, and every fruit tree was a food tree. That man had plenty to eat, didn't he. There wasn't any scarcity of food, because all the trees that grew were fruit trees, and they were the food trees. All the fruit was good for food, and is given to man to eat.

Now that does not mean that the fruits were all apples, or peaches, or all plums or cherries. Some of them were, but some of them were nuts. You know in the tropical countries; man is a tropical animal, you know, and the Garden of Eden was a sub-tropical country where tropical fruits could grow. There were not only the delicious oranges, pine apples, bananas, etc., that we have nowadays, but in addition to them there must have been great numbers of fruits of which we now have only very puny representations. For instance, there is the hickory nut. This is a very nice sort of nut, but one gets tired picking out the meats because they are so small. But just think of the time when they grew as big as your fist, or as big as your head, before they got degenerated. But, you say, I can not believe such a thing as that. Why not? Now you go out to the Pacific Coast, and Mr. Burbank will show you some flowers that used to be an inch across, and now they are many inches in diameter. When he found them, they were poor little degenerate specimens of flowers on the Western prairies. He took care of them, restored them to their original standard; and that is what I imagine with reference to the fruits. The acorn may once have been magnificent fruit, very wholesome and palatable. And as I said about nuts--walnuts, butternuts; what splendid fruits they must have been when they were as big as coconuts. And why not be as big as coconuts? How could one imagine any objection to any such idea --the idea that hickory nuts were once as big as apples? Go out in the woods and find apples growing wild--little bits of things, not any bigger than the end of your thumb. But the apple cultivated and restored to something like its original vigor, given a good chance, is a magnificent great palm

pippin, perhaps, splendid fruit that has been developed from this little degenerate apple. So it may be with reference to nuts and the other products that we find in the woods. The same thing may be true of them. They are all degenerated products. There was a time when all fruits were food. All the trees bore fruits, and all the fruits were food.

Now instinct was put into man to lead him to eat those things that were made for him. Every creature was given an instinct to eat things that were made for him. I stopped to see some chickens the other day that were born in an incubator, brought up by an artificial mother, never saw a hen in their lives, and they were drinking out of a can of water. They didn't have to be taught to drink. Instinct told them to drink, and told them water was good for them. You certainly remember the story of the hen that raised some ducks--hatched out some ducks eggs; and when the little ducklings started off for the water the mother hen was very much disturbed about it, and was afraid the poor little things would drown, and ran up and down the shore cackling and making a great disturbance because she could not follow them into the water. They had no duck mother to teach them to swim, but they had an infallible guide within them that taught them to swim.

Now, my friends, there is exactly the same instinct within us to teach us about eating if we only would follow it. Here is a pigeon, perhaps a carrier pigeon, who is carried away off out at sea and let loose five hundred miles out at sea. It goes up in the air, circles around, then takes a bee line for home, and getshome. If you were out five hundred miles at sea you would not have the slightest idea which way home was. If you were set afloat on the ocean in a boat you would not know which way to row. But the homing pigeon has an instinct that guides it home. Its poor little brain hasn't any intelligence in it, it has no mind, nothing to tell it the way home, but there is an instinct in it which leads it home.

So there is an intelligence that is taking care of every one of us to tell us what is natural for us, only we have extinguished it by our perversions. Here is a man that smokes tobacco. That man's instincts are under the influence of tobacco. Here is a man who takes opium, or who takes alcohol. His instincts are under the influence of these drugs, consequently they are not acute enough to give him any valuable instruction. Here is a man who is accustomed to the use of mustard, peppersauce, ginger, and all these artificial things that are not found in natural and wholesome foods. These things are found only in poisonous things. Mustard is found in a poisonous seed. Horseradish is a poisonous root. Cayenne comes from a poisonous plant. The oil of Cayenne is almost as deadly as prussic acid, and the oil of capsicum is just as deadly. These are not natural food flavors, so when we put them in foods they are really entirely lost, just like a man blindfolded who can not use his eyes. But when we take foods in a natural state, as God made them, and take natural foods, carefully masticating these foods, chewing all these foods and eating them we find within our bodies a response in our instincts within our bodies that tells us just how much to eat, tells us when we ought to stop, tells us just what kind of food we ought to eat, and all about it.

I know this is true, because I have tested it out on myself and on other people. I know it is true. It is true of the horse, it is true of the cow. It is true of the little calf, it is true of the chicken, and why isn't it true of man? The only reason is that man sets his will up in opposition to those natural guides that are put within us, divine leaders, divine guides that are within us to tell us how we ought to eat, how to relate ourselves to one of the most important sources of life, our eating. So in this matter of whether one eats once a day, or twice a day, or three times a day, or four times a day, depends on the kind of food you eat, and the quantity of food you eat, and the needs of the body. Each should depend upon his instincts to tell him, and that instinct which tells him when to eat is

hunger.

But, now suppose you say I am hungry all the time. When I go to dinner and sit down and eat, the more I eat the more I want to eat. Well, if that is the case, you are a little insane. You are no longer a sane person. Your stomach is crazy, so to speak. At any rate your hunger nerve is dead; it has lost its bearings, it has become abnormal in other words, so you will have to bring your will to bear to control it and guide it rightly. It is just the same situation as your hand gets in sometimes. I saw a woman the other day, or a girl rather, and a man some time ago--a similar case, who could not control her hand. She would tell her hand to go down the back, and it would go up to the top of her head instead. She would try to bring a spoonful of food up to her lips and it would go over her shoulder. She had no control over her hand at all., The only way she could control it was to take hold of it with the other hand. So as she walked about she generally had one hand held of the other hand, to control it. She used the sane hand to control the other hand which was insane. That is, it was out of health. It was abnormal, and the right hand was sane; and that sane right hand simply had to seize the insane left hand and hold it and take care of it. That is exactly what your will must do. Find out what is right for you, best for you, get your doctor's advice, then set your will to work to control it. I am talking now about the average man, the sane man, a healthy man. He can depend upon the sense of hunger to guide him as to when he ought to eat and how much he ought to eat, provided it is proper food. That is not true unless he does eat properly. These instincts are not safe guides unless we eat proper food. If one eats mustard, pepper, peppersauce, ginger, and those things that create an artificial craving in the stomach, burning and smarting in the stomach, which is mistaken for a desire for food, which is mistaken for hunger, just as one who drinks liquor, who takes alcohol, finds that every glass he takes creates a desire for more. When you take a cupful of water

you are satisfied, but if you take alcohol, each glass that you take creates a thirst, a craving for more; so the drunkard finds one glass does not satisfy him, he wants a second glass, and when that is finished he wants more than the second glass, and he goes right on taking more and more and more. Mustard, pepper, peppercorn, and all abnormal things which are put in our food for the purpose of creating appetite, create an abnormal appetite, create an appetite which can scarcely be satisfied, because it is an abnormal appetite; it is like the whiskey appetite, tea and coffee appetite, beer appetite, tobacco appetite,--they are all the same thing exactly.

So we must eat natural food, then we can eat in a natural way; because if you take food into the mouth, swallow it very quickly, before you have had time to chew it, your instincts have not had an opportunity to examine it, your faculties of taste, the fluids of the mouth, the nerves of the mouth have not had time to examine food and see what is in it. It is exactly the same thing as though you went to the store to buy goods, and the clerk brings out the goods and passes them by so quickly that you do not have an opportunity to see what the quality is--whether it is woolen, linen, or cotton, or what it is. He simply brings them along, passes them on, puts them into your package, filling your order; and you may get swindled in such a case as that. You may buy your goods and pay a dollar a yard for goods that is not worth fifteen cents a yard. That is exactly what may happen to you in your eating. If you eat your food slowly, then the taste buds inspect it, and when you have eaten enough of a certain kind of food, your appetite for that particular kind of food will cease. If you have eaten all the fats you need, the taste buds will refuse to accept any more fat, and you will have an aversion to fat without knowing why. You say "Well, now, I don't want any more butter, or any more of your rich gravy. I don't want any more of your cream." You will turn away from it. When you look at it you will have an aversion to it. But you will have an appetite for fruits; you

will have a craving for fruits. And if you need more proteid you will find yourself taking bread, or protease, or nuts, or something of that kind. You will find a craving for it. And when the instinct has been cultivated, educated in this way, or rather has been allowed to come back again to its proper place, so that more gratification of the appetite has been satisfied and you have put yourself on a rational basis, you can sit down at a meal and eat, and after you have eaten you can figure up what you have eaten, compare it with one of the tables in the Sanitarium Diet List, and find you have just hit it to the dot, without any figuring at all, without any computation whatever. Some of you may try that experiment.

I asked Prof. Chittenden how much nitrogen he ate in a day. He said I find that I eat about five grams. He said that for two or three months he weighed it carefully, made a careful estimate, and he found out it ran right along five grams all the time, and so he didn't have to weigh it.

Now I have several times had my own food tested, weighed carefully, and the amount of nitrogen I have figured out, and I do not remember that it has ever varied over 140 or 141 calories a day,--140 or 141 calories. I figured it up time after time, figured up all the food I ate for two weeks, and it figured up just 141 calories. It seems incredible that the thing should be done so exact; but it is a fact that our bodies will regulate that matter with a nicety that is beyond belief.

Now, for instance, here is the matter of temperature. If I should take the temperature of the people in this room I would not find a variation of more than half a degree. The temperature would be about 98.6. Some of you may wear thick clothes, and some thin clothes. I see the ladies most all of them are thinly clad, as they ought to be for a summer day, and most of the men, like myself, have got on winter clothes--a very foolish thing. I am going to put on white clothes one of these days, and if circumstances would allow me, I should stick to it,--wear white clothes summer and winter.

That is the proper thing to do. They let the light in upon the body. The Bible says, you know, we should walk in the light. With black clothes on we can not walk in the light; we are always in the dark; but with white clothes on we are always out in the light, because the light comes through more or less to our bodies. Some of you are wearing thin clothes, some thick clothing, but yet your temperatures would be just the same. Why? Because the heat producing process and the heat eliminating process are regulated to a nicety and adjusted to the clothing. If you go outdoors where there is cold fresh air, then come into a warm room right away, the heat elimination increases. Heat production is regulated accordingly, so it is adjusted. The variation of half a degree of temperature in the air sets something at work in your body readjusting the apparatus by which the temperature is automatically and exactly regulated; so the temperature is always kept at 98.6 degrees.

We have an apparatus upstairs in which eggs are cooked--jellied eggs. Hard jellied eggs, and soft jellied eggs are prepared there. When jellied eggs are cooked so as to have the yolks hard and dry, they have to be cooked for seven hours. They are cooked at a temperature of 160 degrees. And there is a little apparatus there with a gas jet in it, and the water in that boiler with little trays in it on which the eggs are put for cooking, a large number at a time, the temperature never varies half a degree from 160°, but always remains just the same. When the temperature rises half a degree, the fraction of a degree above 160, immediately the gas jet is turned low. The apparatus automatically turns off the gas. Just as soon as it falls a little below that degree the gas jet is turned on again. You are familiar with that, most of you. They are similar to the apparatus used in connection with incubators. Incubators are run you know at just the right temperature, because a uniform temperature is necessary for the proper development of the chicken in the egg.

There is something in the body, a mechanism in the body that is vastly more delicate, vastly more sensitive and intricate than any of these things, and it is being operated all the while, and controlled by an intelligent Power. That is the thing, my friends, that impresses me all the while. Whenever I go through the Ward and see the people I have been operating on, done terrible things to--cut away terrible tumors, cut off pieces of the stomach, spliced the intestines, as I have to do sometimes, I go in there and you don't know how thankful I am that there is a Power that can bind up those wounds I have made; that there is an Intelligence that can do that thing, do it so marvelously that everything will be all right, so that the work of digestion will go on all right.

I met a man the other day, and I said to him

"How are you feeling, my friend?"

"Why," he said, "I wouldn't know I had a stomach!"

As a matter of fact I have got his stomach in a bottle over across the road. He was so well he had forgotten he hadn't any stomach. We had to remove his stomach a while ago, a part of it at any rate, and we have got a good big piece of that stomach over across the road, and he said he was so well now he wouldn't know he had a stomach. He has only half a stomach at any rate,--he has less than half a stomach. He is perfectly comfortable without the rest of it. In fact he is better off than he was with it. If we should examine that man's stomach, although I left it with ugly corners on it, we would find that they have all been rounded off neatly, and that the stomach has been shaped as nearly like the original stomach as it could; and at the new opening where I patched the intestine on, we would find a pylorus there just exactly like the original one was. The old pylorus got worn off so it would not work; but now he has got a new pylorus that I made. I connected the intestines and the stomach, patched them together and made a hole between, so there is a new pylorus there that is working just as

well as the original one. The muscles have grown thick around it, and the opening is shut when it ought to be shut, and open when it ought to be open, so there is a new mechanism there, a new construction that has been created.

This thing has been proved by operations on various animals and human beings, so that is known to be a fact. That is a fact known to surgeons at the present time, that this thing actually happens under the control of this intelligent Power that is directing our bodies. If you want to know when you ought to eat and what you ought to eat, it is not to find a book somewhere and sit down and read, it is not to ask a doctor about it, but it is to look into yourselves. "Know thyself," somebody has said. There is no more important ~~body~~ knowledge for anybody to have than a knowledge of his own body, a knowledge of himself. Study yourself. If you find when you get up in the morning and eat a heavy breakfast you don't feel so well afterwards, you feel sort of thick headed, you can not do your business intelligently as you want to, you feel restless, nervous, stupid, then set to work to study how to fix that breakfast up so you won't feel that way. There is something wrong with the breakfast. So you should begin to practice on yourself and see what is the matter. In the first place, take pains to chew more. If you will chew more you will eat less. If you do more chewing it won't take so much to support you. A man down in Chicago who has begun to chew gets along with half of what he used to eat. He has figured it up, and he finds he has ~~not~~ eaten forty wagon-loads of extra food in the course of his life; and his stomach has had to carry that enormous load. Think of that poor stomach that has had to handle over forty wagon-loads of food more than it should have handled. No wonder his poor stomach is worn out. He dropped off half his food, so he will save his stomach. Fifteen minutes more of mouth work will save the stomach four or five hours of work. Fifteen minutes more of mouth work will save four or five hours of stomach work. Well now it is

easy to do that. Mouth work--only just a little more exercise of your jaw, and the jaw is used to working, so it does not take so very much. It takes very little energy to move your jaw fifteen minutes more. But the stomach is another thing. In the stomach it is muscular work. It is gland work. It is nerve work. And not only work but worry. When the food has to stay there too long, the stomach gets worried about it, gets congested, irritated, and there is a struggle and a wrestling with that food in order to get rid of it. So it is very important to save stomach work by thorough mastication of the food.

Now the thing of highest importance is to see that your food is the right quality and the right quantity. Somehow or other fruit seems to be the very choicest thing for the morning meal. When I want to have my head particularly clear, and I have got particularly hard jobs on hand for a day, and I know I have got to tax myself to the very utmost, I take my breakfast of fruit,--absolutely nothing but fruit; a couple of bananas, an orange, perhaps, an apple, take a little variety, a glass of apple juice, possibly may go so far as to have a little handful of nuts--pecans, or something of that sort. That is my breakfast. And I know if I eat that kind of a breakfast my brain will do its best; I can get out of my head--poor small head that it is-- all there is in it, and it never fails me. With that sort of a breakfast I can do my very level best that I can do at all.. Then about one or two o' clock, ~~xxxxxxxxxxxx~~ I eat my dinner. A meal and a half is all I want,--a fruit breakfast, and a dinner. This is all I need. But I can eat a fair meal. I am not quite sure yet. I am going to experiment and find out. If I had the time I would but I really do not have the time to find out. But if I had time I am not quite certain but I would change times. Instead of eating a little fruit when I get up in the morning, along about 10 o'clock I will take some breakfast, then about 4 o'clock in the afternoon

I would eat my dinner. I am inclined to think that is the way I would do if I had time, and I am not sure but that would be the better way. But I am certain of one thing--one don't need to eat square meals at 6 o'clock in the evening. That is a terrible damage, an injurious thing to do, and thousands of people are getting broken down physically and nervously because of the 6 o'clock dinner. I think that is one of the most pernicious things that we can find in our modern civilization in reference to diet--the heavy 6 o'clock dinner. You take a heavy 6 o'clock dinner, and you say O I can digest it all right! but you can not sleep with it all right.

A man asked me the other day if I thought it was a good thing to sleep on an empty stomach, and I said No, I don't think it is a very good place to sleep; but I think one can sleep a great deal better with an empty stomach than he would with a full stomach. I noticed somebody getting sleepy, and I told you that story to wake you up.

The 6 o'clock dinner makes one feel sleepy, but it does not allow him to sleep soundly; he just feels dull and stupid, and sleepy and drowsy, and he does not get that real splendid refreshing sleep out of it that he requires in order to rebuild his body. He wakes up in the morning feeling miserable. Hasn't any appetite for breakfast at all. The man who takes a 6 o'clock dinner never ought to take a morsel in the morning; at any rate, if he took anything at all, it should be nothing more ^{than} a cake of soap, or something of that kind to scour his stomach out, or lemon juice or orange juice would be better, perhaps, to scour out his stomach. He needs to scour his mouth. And what a nasty taste he has got in his mouth, what a coat on his tongue; how his teeth are covered with slime when he eats a 6 o'clock dinner.

I met a man some time ago who had been out to a six o'clock dinner, and especially big one. He said it was a fine dinner, but it is just that kind of a dinner that gives you a brown taste in your mouth the next morning. Some of you know what it is. That rich brown taste means a great crop of

germs in your stomach. These are there because the dinner is left behind in the stomach, or some of it at any rate, decaying there. The cause of it is that the dinner has lowered your vital resistance,--just filled the body up, filled the blood up with decayed waste matters that could not be utilized and that have lowered the vital resistance to such a degree that the body is not able to fight off the germs, so the germs get in with your breath and find a good place to develop in your mouth, and you find yourself in this miserable state.

Now another thing to do, if you make your breakfast largely of bread, if you go a little further and let it be some bread, a little rye bread, if you will masticate it very thoroughly, eat just a little crust of bread in the morning, and chew it very thoroughly,--but you better eat baked potato than to eat much bread; a very little bread in the morning and a good baked potato and some fruit, plenty of fruit, and a few nuts, that will make a splendid breakfast. I say that makes a splendid breakfast. You could take the potato in a number of ways if you want to--have mashed potato, or baked potato. Have the potatoes served in just as many different dainty ways as you like. Boiled rice, or rice flakes, or cornflakes, or anything of that sort would also be very good, ^{taken} Begin with a little fruit juice. Oatmeal is not a very good thing for breakfast. It is better for dinner. There is considerable cream in milk, which has a tendency to cloy the appetite, and it stays longer in the stomach than any other food. Starchy foods, farinaceous foods pass out of the stomach if taken in the form of gruels or flakes, in the form of rice, but not in the form of bread, pass out of the stomach in an hour or two, also fruits and fruit juices, whereas proteids, beefsteaks I should say particularly, hard boiled eggs--the whites of hard boiled eggs, and fats require three or four hours of stomach work. They stay there in the stomach a long time. So if you want to make your breakfast stay a long time in your stomach, or any meal, take a considerable quantity of fats. If you eat a good deal of butter, that will delay the progress of the

food from the stomach into the intestines.

Study yourself, and if you find you get hungry before dinner time, and pass one or two uncomfortable hours in a weak, faint, hungry condition, take something. If you find at night you are faint and hungry and are weak, eat something, but be careful what you eat. If you are going to take meals close together, or eat something within an hour of dinner time, that something must be simple--a little fruit or fruit juice; Apples, or apple juice. Apple juice has a little nourishment in it, and grape juice has more nourishment in it. Grape juice has twenty-four calories to the ounce. How many calories do you suppose there are to be found in an ounce of oysters? People think oysters are very nourishing. There are eleven calories to the ounce of oysters, and twenty-four to an ounce of grape juice. That is very remarkable--a ^{pint of} ~~five~~ oysters have only half as much food value, less than half as much food value as a pint of grape juice. An ounce of apple juice has 17 calories--fifty percent more than oysters have. That is, two-thirds or three-fourths of a pint of apple juice has as much nourishment in it as a whole half pint of oysters. That is new to you, but you can find that in the tables published by the United States Government, in Atwater's report of the actual food value of these various things. They show what I am telling you to be true. you will find some tables in the little booklet entitled **The Sanitarium Diet List** which tell you the same thing.

So this question must be settled by study of one's individual needs. Two meals I think, for the average person, two meals will answer very well. But for some people, invalids, especially people who have hyperacidity, and must not overload their stomachs, people who have dilated stomachs, these people should take small amounts of food, so as to avoid over-stimulation and over-taxing the stomach, and consequently they may eat three times a day, or four times a day.

Q. Will fasting absorb morbid growths, such as tumors?

A. Yes, it is strongly probable that fasting by living on a low proteid diet, taking a small amount of proteids, reducing the proteid down less than what one actually needs, does have a decided influence to lessen the growth of neoplasms, the development of new growths, but I do not think it ought to be relied upon for cure. I doubt whether a cure would ever be possible. The growth may be restricted for a time, but when you come to eat again-- you must eat after a while, you can not starve forever, then they will take on new growth. So the best way is to eat no more proteid than you actually need, and have the tumor removed. You won't be so apt to have another one.

Q. What is the danger about fasting?

A. Now starving is simply living upon yourself. When one ceases to eat he goes right on consuming. Here is a stove. The stove contains fuel. When the fuel is burned the fire goes out and the stove gets cold. The body is a furnace, but the body is a furnace which is made out of combustible material, so if you stop putting fuel into your body, the furnace that keeps up this heat goes right on burning and consumes itself. The body consumes itself at the rate of one-eightieth of its weight every twenty-four hours. If a man weighs 160 pounds, he will lose about two pounds weight every day after he has stopped eating, and he can go on that way until he has lost somewhere about half his weight. Then he can not go any further. If he is there then he will stop. He can not lose so much as that. I have met a number of people whose weight was a little less than half the normal weight, and they were very near the grave; but I have seen those people come back again to their normal weight; seen them double their weight a number of times. Have seen people ~~double~~ increase their weight two pounds a day for a very short time. A pound a day is quite an ordinary rate of gain.

Now the danger in fasting is that after one has fasted for some little time, kept it up for two or three weeks, the real structure of the house is attacked. We have two kinds of structures in the body, rather three kinds of structures. There are the purely mechanical supports of the body, like the bones, then there are the soft parts which cover the bones--the active moving parts, the muscles; then there is another part which is simply stored up food, the fat. That is stored up food, and is used as food. When one starves, the first thing he loses is fat. But there is no harm comes to him so long as the fat is the only thing attacked. But after awhile the fat is practically used up, then the muscles begin to break, and that is tearing down the house, and when one goes too far with that his house may be so far torn down that his heart is partly consumed, his liver partly consumed, and his kidneys may be in part consumed, so these important vital structures are attacked. The timbers which support the house are weak, so one may get irreparable damage by too long fasting.

It is not necessary to fast except in certain cases in which the body is in a state where it can not assimilate food, as in very high fever. But I believe all the real advantages of fasting in ordinary cases in nearly every case can be obtained by simply reducing the proteid element of the food down to the very lowest point, or even removing it entirely.

There are three elements of food: First, proteid. The proteid is the element of food out of which poisons are made, and those persons who are benefited by fasting are those persons who are suffering from auto-intoxication, from the accumulation and development of poisons in the body largely from the use of proteid, and these patients are generally people who have dilated colons. And when persons whose colons are dilated eat meat, chicken, oysters, and things of that kind, undigested fragments of that meat proteid lie in the colon undergoing putrefaction, and poisons are absorbed into the system, and in that way a state of chronic auto-intoxication is produced.

You know them as soon as you see them by the brown patches on the skin, have a dingy complexion, a dingy sclerotic, the white of the eye is a dingy color, and there are brown bands around the eyes; these dark bands around the eyes, discoloration of the hands, all of these are symptoms of auto-intoxication. And a foul breath, very foul coated tongue, dilated colon, emaciation, loss of strength, wasting of the muscles, these are other indications of neurasthenic conditions. Great depression of spirits, inability to sleep, loss of appetite, these are other symptoms of chronic auto-intoxication. Bright's disease is simply one of the results of chronic auto-intoxication. It is the end of long years of auto-intoxication that has finally come to Bright's disease or to cirrhosis of the liver. Abdominal atrophy is another result of auto-intoxication. Auto-intoxication is a slow fire that burns in the walls of the house, burns slowly, until by and by it breaks out through the roof; and when it breaks out through the roof it is Bright's disease, and Bright's disease is the end, it is not the beginning. So when you say a man has got Bright's disease; we must do something for Bright's disease; why, my friend, the house is consumed, the whole inside is gone; the flames are simply bursting out through the third story windows or through the roof; in fact the roof has fallen in already. That is why you have got the symptoms called Bright's disease. And the very same thing is true of apoplexy. Apoplexy is not a disease which has recently attacked a man, but it is the end of a long process of degeneration that has led down and down. The arteries of the brain have been diseased. Arteriosclerosis is a malady that that man is suffering from, until by and by the arteries become so brittle the pressure inside ruptures the artery, the nerves are cut off, and the man is paralyzed. This thing is true of all chronic maladies, the results of chronic auto-intoxication. These cases can be benefited by fasting, or, if the proteid is cut off, without the fasting; so it is only necessary to reduce the diet down to foods which contain little or no proteid. A fruit

diet is a pleasant way of starving,--live on fruits exclusively, or on fruits and just a little bread. A person on such a diet as that can fast for a week or two with very great advantage and no harm, because fruits furnish fuel to keep the fire burning, so the house is not attacked, the house is not consumed, while at the same time it does not furnish material out of which these poisons have been made which have maintained the auto-intoxication.

Q. What are the simple and most effective home measures to reduce blood-pressure?

A. A warm bath at night. A lady asked me that very question this evening, and I gave her the these directions: Take a warm bath at night. After the warm bath go quickly to bed, and the next morning take a tepid bath or cool bath,--not a cold bath, but a tepid bath at about 80°, with vigorous rubbing of the skin. Live outdoors. Take a great deal of ~~usual~~ moderate exercise. Just keep going so as to keep the heart active, keep the heart strong. Don't sit down and let the heart get weak. It is very important to keep the heart up, because your vessels have been more or less damaged, and will never be perfectly normal, so the heart must do extra work; must be kept up able to do the work.

Q. What is the cause of a floating kidney?

A. I will explain that. This represents the colon. Here is the kidney right here above the colon. The kidney is attached to the colon in that way. It is enclosed by a capsule here, attached to the colon by a sort of ligament. Here is the appendix down here. Now the colon is overrun. Here is the cecum. The bowels are allowed to become very inactive, and the colon gets overloaded, becomes heavy, it becomes tired. And the consequence is it begins to sag down, and it sags down more and more until by and by the colon sags down like that. It is heavy, and so it pulls the kidney down out of place. Tight lacing, constriction of the waist, helps do this. Probably the majority of cases of floating kidney are cases in which the

solen has been overloaded and the waists have been constricted also. These cases are very common indeed.

Q. What causes vertigo on rising or reclining or turning over, and can it be cured?

A. That is a practical question. When one has been sitting down, on rising or changing position it requires the heart to do an extra amount of work in order to distribute the blood through the lungs and throughout the body; and if the heart is weak, on sudden rising there will not be quite enough blood sent to the brain to keep the brain and the rest of the body going, and so one feels giddy. If something is not done right away, the next thing will be unconsciousness. The wheels of the mind will cease to move. A man who had considerable trouble with that symptom came into my office. He had a peculiar kind of heart, a permanently crippled heart. One of the valves was partly closed, so the heart was not able to respond to the sudden demand upon it, and when he was sitting down and suddenly arose in this way he pitched right over upon the floor. He was in a very precarious condition; didn't know what to do; didn't dare get up unless he had something to hang onto. He had to hang on to his chair until he got steady. I was able to make a suggestion to this gentleman that relieved him at once of all his trouble. That was, simply to make a big bow before he got up. Whenever he got up to bend forward as far as possible, then to get up; and he had not the slightest trouble. What is the philosophy of that? By bending over this way he compressed the abdomen, and that forced an extra supply of blood into his head, you see. That is all there was to that. He filled his head up with blood before he started to get up, so he had enough blood in his head to last him until the heart got to going. He was very greatly pleased to find that by making a ^{big} bow before getting up he could march off without the least difficulty. I tell you that story simply to fix it in your mind,

that whenever you feel faint or giddy, all you have to do is to bend over as you sit in a chair. When you begin to feel faint don't sprawl out on the floor. That makes such a great disturbance, and it shocks a great many people's nerves. Simply bend over, get your head low. If it is very bad, get your head down between your knees as far as you can. And that is a great deal better than to lie down, because you want to have your head low. You want at the same time to compress the abdomen. The abdomen will hold all the blood in the body, and it generally holds about half the blood in the body, and so if you compress the abdomen in this way you drive the blood up into your head, and you get immediate relief. If you clasp the hands over the abdomen, and bend over in this way, that is better still. You can drive so much blood into the head you will almost burst a blood vessel if you don't look out. That is a great deal better than to throw a person on the floor and then while they are lying there almost dead run out and find somebody. If a person does not know enough to do that himself, stand up and put your hand on the back of his neck and push him right down. That will rally such a person right away.

We often have occasion to use that simple remedy in the operating room. Often new nurses come in to assist at operations, and the operations are sometimes pretty appalling to a new beginner who has not been accustomed to such things, and in looking on they turn white and begin to faint. Immediately somebody siezes them, makes them bend over, pushes the head down as low as possible, and they are all right right away. It is dangerous to faint, so we don't want to faint if we can help it. If you get to feeling faint, get your head low as quick as you can, and, as I said, you will recover a great deal quicker if you bend over and put your head upon the floor.

Q. How would you distinguish between ^{neurasthenia,} ~~neurasthenia,~~ hysteria, and irresponsible mental conditions?

A. It sometimes takes a jury to do that, and if a jury can not do it, if you get half a dozen doctors together they will disagree. I don't suppose any two of them would agree. These are just the sort of cases that doctors disagree on. When a person is neurasthenic he is very likely to have mental confusions--confusion of thought more or less. And the neurasthenia is responsible for his being ugly, irritable, and disagreeable. I have known how much he is responsible when I had gotten a little neurasthenic after not having enough sleep. I feel a good deal that way myself sometimes along about 3 or 4 o'clock in the morning after several nights of it. But the question of that responsibility is one of the most difficult problems that philosophers have ever had to deal with. I do not believe it ever has been settled, or can be settled. I do not believe anybody knows how much anybody is responsible in any particular amount for what he does. I do not believe he can tell. Nobody but the Being who made us can determine that question. I am inclined to think that every neurasthenic is a little bit off his mental base. I am more and more persuaded that the neurasthenic is not perfectly sane; that he can not see things exactly in a well balanced light. How many people are well balanced, I am sure I don't know. I think we are all more or less a little off.

A. What causes so many diseases of the nervous system? Is insanity increasing, and how may these things be avoided?

A. Well, that is a very peculiar subject. Lunacy is increasing ^{the} at a tremendous rate of 300 per cent in fifty years. We are going so fast down toward insanity and imbecility and idiocy -- I figured it out the other day, applied the principle of graphic algebra to the problem, figured it out, and found that in 265 years from now, if we keep on the way we are going, we will all be lunatics and idiots; so we better stop. What shall we do?

I think I will tell you that next Thursday night. Next Thursday night I will give you a little talk about the American Cradle and What Is In It.

That is going to be my subject next Thursday night. It occurred to me while I was speaking that that would be a good subject to answer a little further some of these questions.

Q. What is the cause of eczema, catarrh of the skin? How is it cured?

A. Cure the stomach. The body has lost its resistance through bad digestion and absorption of poisons through the colon, so it can no longer resist the germs which are thrust upon it. Eczema germs are always found upon the skin. Germs that can produce eczema are always present on the skin. Remember that. Everybody has got eczema germs. The only thing necessary for you to get eczema is for you to simply get your vital resistance lowered to such a degree that germs can get down underneath the skin and set up an irritation; then you have eczema. Down in Mexico you always have thieves next to your house. They are going by the window every minute, every minute or so, every few minutes at any rate, and if you leave your doors and windows open they will get in. So you must keep your doors shut, and windows shut, or keep bars over them and keep the bars closed. Nobody thinks of such a thing as having an open window on the street. The windows of the lower story are always barred. This is equally true in Spain, in Southern Italy, and it is true in South America. In most countries outside of England and the United States you will see bars at the lower windows, and in some of the large cities of England the same thing is true. That is because thieves are about, and are sure to break in if there is an opening.

Now that is the situation with the skin. It is always covered with germs that are ready to steal a march on you if you let your resistance get low, if the blood becomes impure. It is the blood that does the fighting

off of these germs which get in and set up mischief of the skin, of the mucous membrane, and various other parts of the body. Eczema is a symptom of low resistance. Pimples on the face are an indication of low resistance. Nasal catarrh is an evidence of low resistance. Catarrh of the body anywhere in any part, catarrh of the bowels, catarrh of the stomach, or catarrh anywhere else is evidence of low resistance. It simply means that germs have gotten in, and that they are permitted to live there. The body has lost the power to turn them out, and consequently the body forces are at a low ebb, and there is a state of low vital resistance, and the body must be recuperated and those forces reinvigorated.

Now, how can we do it? Right diet, the outdoor life, return to Nature in every way, cold baths, exercise enough to develop the muscles in a healthful way. One ought to work hard enough every day to make him sweat. The Lord told Adam he should earn his bread by the sweat of his brow. And if he dodges the sweating, he is to be chastised with disease in consequence. The man who dodges work and does not sweat gets the worst of it. He does not have an easy time, but has an hard time. The man who works and sweats is really the man who has the best time in the world after all.

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THE AMERICAN CRADLE

Lecture at the Sanitarium Parlor, Battle Creek, Michigan,

Thursday, May 31, 1906

8:00 P.M.

By J.H. Kellogg, M.D.

I have had a good many patients to see this afternoon and evening, and I almost forgot about this lecture. I didn't have anybody to prompt me, so I have been behind. I get so absorbed in my work I don't know anything about what time it is--whether it is night, or day, or anything about it.

Last Monday night I told you I was going to talk to you this evening about The American Cradle. The American home is said to be the cradle of American liberties. And so it is. But it is likewise the cradle of other things besides liberties. If the American home were the cradle of American liberties, and nothing else, America would soon become a heaven, it would become a veritable paradise. But, unfortunately, the American Home is the cradle of everything that makes for the woe, as well as the weal, of the American people. For instance, the American home is the cradle of intemperance, it is the cradle of drunkenness, it is the cradle of inebriaty, just as much as it is the cradle of liberty; perhaps even more. It is the cradle of slavery, of slavery to evil habits, more than it is the cradle of liberty.

When we get into the American home and look into the secrets of it, find just everything that is in the home, we find it is the cradle of everything bad in America, as well as of everything good. It is the cradle of

disease. Just look at that one phase of it, that one thing, for a moment. How many diseases can be directly traced to the influences that surround the men and women, the boys and girls, the people in their homes? One thing comes up at once, that great terrible plague, so-called the "great white plague" that carries off four hundred and thirteen thousand people in this one country every year;--nearly half a million people dying of this one disease, the great white plague, tuberculosis. People have tuberculosis in the lungs, have tuberculosis in the bones, have it in their liver, have it in their stomach, have it in the kidneys, have it in the skin. So-called lupus is only tuberculosis of the skin. It is getting now so the human constitution, in this country at any rate, human beings are getting so innoculated with this disease that it is breaking out in every possible form. It is getting to be almost universal, and nearly half a million people die of it every year. That is a terrible thing, isn't it? There is only one ^{other} disease that kills so many people as tuberculosis. Up to within a few years, in this country, tuberculosis has killed more people than any other one malady. It has destroyed the lives of one-seventh of all the people who have died in America, this one disease; and there is only one disease which has come to be more fatal, and that has increased so rapidly within the last few years that it has gotten to be more fatal even than tuberculosis; that is pneumonia. Pneumonia killed last year four hundred and sixteen thousand people in the United States alone. That one disease--think of it! killed four hundred and sixteen thousand people.

Now the American home is the cradle of these awful maladies--is the cradle of tuberculosis. Now let us just look at the things in the home that go to promote tuberculosis. In the first place, the sunshine is shut out of the American home. The ~~carpets~~ ^{carpets} are so beautiful, so lovely, it won't do to let the sunshine get in through the windows, because it will fade the carpets. Some of the colors of carpets are not absolutely fast. Very few

colors are. The sunshine is a wonderful bleaching agent. There is a chemical element in the sun, the actinic ray, that will bleach out all kinds of vegetable colors. If there is any sort of vegetable color in your carpets, the sun's ray will certainly bleach out that color. It will have more or less influence on the lace curtains. If the sun shines on your lace curtains, by and by they will change a little bit. If the sun shines on the wall it will darken the wood. If it shines on mahogany it will make it dark, change its color. Perhaps you would like to have it dark. It would do no harm on that. But the sun getting into the house is supposed generally to do some kind of mischief, so the curtains must be pulled down, the blinds shut, and only those rooms must be opened which are necessarily in use for the time being and a little light must be let in, just as little as possible. Now that is a dreadful thing--the sunshine is shut out. Our houses are constructed not with reference to letting in the greatest possible amount of sunshine, but with reference to shutting the sunshine out. The consequence is the whole house becomes infected, for sunshine is a great disinfectant. Here are germs growing so fast that ~~they~~ if it was not for something which kills them off in a great wholesale way they would very soon swarm all over us. Think of it-- some germs double in number every fifteen minutes. Figure that up and see what it will amount to. Take one and double that every fifteen minutes for twenty-four hours, and see what that will be. Just see what it will be. Take one for every fifteen minutes, that would be ninety-six doublings, and see what you would have: 1, 2, 4, 8, 16, 32, 64, 128, 256, 512. That is only ten doublings. The last time was 512. Suppose we let this twelve go. Now then these ten doublings, how long is that? It is two hours and a half isn't it? In two hours and a half more we would get up to a thousand germs. Now let us start in with the thousand, and you see where we will be. One thousand, two thousand, and so on,--1000, 2000, 4000, 8000, 16,000, 64,000, 128,000, 256,000, 512,000. What? Five hundred and twelve thousand--half a million. In five hours we have got up to half a million

1,000,000,000

germs. Now you see in two hours and a half more it would be a ~~trillion~~ germs: so every two hours and a half is multiplied by a thousand, don't you see? So we start out with one; in two hours and a half it is a thousand, in five hours it is a thousand thousand--a million approximately. In seven hours and a half it is a thousand times that--a thousand million; and in ten hours it is a thousand times a thousand million, or a thousand billion. That is a trillion. In ten hours it is a trillion. Then, what would it be in twenty hours? It would be a trillion trillion. In twenty-four hours you would have multiplied that by a thousand more,-- a thousand, another thousand, and another thousand. How much would that be? A thousand, a million, a billion, a trillion, and so it would be a trillion, trillion, trillion. That is the number of germs you will have in twenty-four hours from that one germ alone. Now think of that--a trillion trillion trillion! A trillion times a trillion times a trillion germs in twenty-four hours. Suppose you go to measuring them, estimating them,-- ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ think how much that would be. Here is one single germ, a twenty thousandth of an inch in diameter. How many of those could you have in a cubic inch? You can figure it out and see how many cubic inches you could have in a trillion trillion trillion germs, and you would see you have got several cubic miles of germs in twenty-four hours. Notwithstanding they are so small, there would be several cubic miles of them. That is a lie. It is impossible. You don't believe any such thing. No such thing ever happened, of course. Here is one germ, and that germ could multiply in twenty-four hours until there are several cubic miles of them. Why don't they do it? Well, there is just one reason. Here you have got a bushel of corn. Suppose you should sow that bushel of corn on a piece of land a rod square. You probably would not get any corn at all. Very likely you won't get any at all. I don't know but you might get a very small crop, but I doubt whether any of it would grow; but you would not get certainly a very great crop from one bushel of corn in one square rod of ground.

Germs, like corn, ~~must~~ must have soil in which to grow, must have room to grow; and when germs begin to multiply they use all the food. They must have food you see. All vegetables must have food, and when they use the food up they can not grow any more, and that limits their growth. But germs multiply with such enormous rapidity that if it were not for the sunlight destroying germs every time it shines--destroying germs by the million : Here are tubercular germs, millions of them, lying out in the sunshine. The sunshine comes up and the sharp keen rays of the sun penetrate that filmy mass of tubercle germs, and in fifteen minutes they are all dead. Aren't you glad of that? I am glad of it. If it was not for that, these consumptives who go about spitting on the streets and on the sidewalks would spread the disease so universally that everybody would have it. But fortunately the sun destroys the germs, disinfects the germs; the sun disinfects the earth. That is the only reason why it is possible to live in a tropical region, where the germs grow in the warmth and the moisture so very rapidly, so fast, that if it were not for the sun with its disinfecting rays it would be impossible very soon for any one to live there. The germs will invade everything, cover everything up, bury everything deep. We are surrounded with these germs of various sorts. Tubercle germs invade our homes, and they are brought in -- neighbors will bring in tubercle germs on the soles of their feet out of the dust of the street, bring ~~ix~~ ^{them} in on their garments. Tubercle germs are sent out in various ways. They come in letters. Some clerk in the post office might have tuberculosis and in looking over that pile of letters puts his thumb in his mouth and puts the germs right on those letters. When you come to tear your letter open you get your hands infected, put your hands in your mouth to turn over the leaf of a book or something, and you have got tuberculosis. People borrow books from the city library. The last person who had that perhaps had tuberculosis. That person had plenty of time to read, and keeps borrowing books from the city library, and every time a leaf is

turned the finger goes into the mouth, gets tubercle germs, puts these down on the leaf, and when you come to read the same book you put your finger on that same spot, put it back in the mouth and deposit germs there, ~~and~~ in turning the next leaf; and you infect yourself in that way. These germs are all ~~and~~ about. Every little gust that blows in the streets brings in a lot of dust, and it is deposited everywhere on the tapestry, on the shelves, on the book case, on the tops of the doors and windows, tops of the picture frames hanging on the wall, on the coils. It is deposited on the tables, on the stands everywhere; on the carpets on your floor. It works in your carpet, and as you walk across the carpet you stir them up more or less, and you rub them into the carpet, and they work way down through the carpet. The carpet sweeper comes along, rubs them in until they get down into the carpet, and the carpet is tacked down so it can't be pulled up, and so they accumulate under the carpet until there is a whole managerie of germs,-- not only tubercular germs, but typhoid fever germs, pneumonia germs, diphtheria germs, and all kinds of germs that float about in the air are transmitted in that way. A couple of times a year, perhaps, the whole carpet is taken up, and just think what an accumulation there is under it. You remember every time the housekeeper comes around to sweep and dust that carpet, or beat it, the dust swarms up in the air. The room is all filled with germs. By and by they settle down on the floor again, and so they don't do so much harm; but the housekeeper stirs them all up. The old cat behind the stove asleep has sense enough to know that when the stirring up time comes it is time to get out, to leave. So you notice the cat always goes out when the sweeping begins. The old cat has good sense enough to know that those germs are unhealthy and she better find more sanitary quarters, so she just gets up and leaves. That is the thing everybody else ought to do as well as the cat. Follow the cat when the sweeping begins. By and by the dust settles around, and the housekeeper comes around at regular intervals

with the dusting brush, and she stirs up all the dust that lies about the window-sills ~~sills~~, stirs it up, gets it afloat again, so as to keep the dust moving and keep the germs floating about, so that everybody who breathes will inhale that. Then everybody that comes to the book case and takes down a book shakes off some germs, and they float off into the air, and you get your lungs full of them. There are some thousands of germs in every breath you draw in. And in a place where manufacturing is going on, where machinery is moving and belts are whizzing through the air all the time, the dust is continually stirred up, and the people who are there are continually inhaling these disease germs.

There is a place down under the house, a splendid breeding place for germs. The old pork barrel, sending off its ancient odors, a ham perhaps hanging up all covered over ~~the~~ with molds, several ancient cod-fishes giving off their odors. I have made an inventory of several cellars, and I am just telling you something of the things I have been through. Then there is the old soap barrel perhaps, the soap grease barrel, redolent with odors of the most obnoxious character. Then there is the old potato bin with a few forgotten potatoes down in the corner that have become very ancient and infirm; and a whole lot of other things. Take a light down there so you can see, and you can see the festoons of mold hanging down from the walls and ceiling perhaps. But really one does not need a light to get around in that kind of a cellar, for your nose is sufficient to tell you where you are, for every particular corner has its particular fragrance. Now sometimes when you go along the street you will come to a house, and you can tell the house by the odors in the house; you can tell what part of the city you are in by the peculiar odors that come out from the premises. I found that out when I was a school-boy. Another boy sat beside me who had a very offensive odor about him. I could not endure it, and I asked the teacher to give me another seat. I thought he was careless. But I visited his home one day, and I found the same thing true in the boy's house. It was a house odor he had with him--carried with him to school. His clothes were saturated with that odor--

a peculiar family smell that he had that belonged to the premises and the house.

Now it is germs that are responsible for all these odors. They are simply vile essences that are throwing off volatile odors, substances that are thrown off by these growing microbes. Now they are not dangerous in themselves. A bad smell is nothing bad in itself; at least so it has been supposed. But an eminent doctor has recently found out that these bad odors are poisonous, and extremely poisonous to persons who live in the presence of bad odors and inhale them. Although they don't take disease directly from the bad odors, these bad odors prepare the body for other diseases, and render the body susceptible to the influence of germs when otherwise they would not be. Animals kept in the presence of bad odors are bound to be susceptible to germs, when animals kept in clean, pure air are not at all damaged by the same germs when injected beneath their skins. This is very important, because some years ago Dr. Jacobi said that typhoid fever didn't come from sewer gas. There was a time when it was supposed that typhoid fever, and many other maladies of various sorts, came from sewer gas. The Doctor said there wasn't any danger in it, because he had examined this sewer gas and found there wasn't any germs in it, so sewer gas was recommended to be a pretty good sort of air after all. The fact was cited that in Paris the people take regular trips down the sewers. Every Saturday afternoon there is an excursion down the main sewer. It is a great big sewer ten or twelve feet in diameter, and a big stream of water is going down through it all the time. There is a place where they go into it, and they actually have boats in the sewer which take regular trips with lanterns and apparatus, and they make a very interesting time of it. This fact was mentioned, and another fact was mentioned. In Paris there are certain men who live in the sewers,--sort of sewer rats, and they live there all the time. They clean

the sewers. That is their business, their profession. And these men are found to be about as healthy as any of the other people in Paris. So the ~~these~~ sewers were recommended as a healthy place in which to live. Dr. Jacobi mentioned these various facts, interesting things, to convince us that sewer gas was harmless. I am sure that is a great load off my mind, although I hardly believe it. No one could recommend sewer gas as good air to breathe. But now the fact has been made clear by actual experiment that ^{while} sewer gas contains no injurious disease, is not able to give you diphtheria or typhoid fever, or grippe, or scarlet fever, or measles, or ~~whooping~~ whooping cough, or any other infectious disease, nevertheless sewer gas prepares the way for these very deadly volatile poisons which it contains; it prepares the way by lowering vital resistance, so that other germs can easily make one their victim, so he will become an easy prey to germs which he may inhale.

In a modern home see what a condition we have. There is a home with a bath room, with a kitchen, perhaps with several sleeping rooms that may be directly connected with the sewer, and if anything goes wrong with the sewer, with the traps or with the sewer pipes, if there is anything wrong water may be backing up and the sewer gas gets into your house, and the whole house is filled with sewer gas. And if it is a city like Chicago, every house in town perhaps directly connected with the sewer is filled with deadly sewer gas. It may be that the plumber has been to your house. Perhaps something got out of order; a trap got worn out and the plumber has been there to fix it. He has been careless about his work. When he was wiping a joint, putting solder around it, he may have left a little hole, and that deadly sewer gas has been leaking through all the time day and night; so there is a death trap in there. Many homes undoubtedly are in just that situation of a death trap by such a deadly connection with the sewer.

In multitudes of homes neglects of various sorts have led to conditions which breed disease. If you read the books of Moses (I presume you have all read these wonderful books) you find there a description of

what has been called, and what is now known even in sanitary rules, as The sanitary code of Moses. You find there a description of certain sanitary rules that the Israelites were required to live up to. I don't suppose all these originated with Moses. Moses wrote them out, codified them, but many of these rules were in use in Egypt. It has been proven by recent discoveries in old Egyptian literary papyri that have been exhumed that many of these rules were used in Egypt. Moses was learned in all the knowledge and wisdom of the Egyptians. He had been in school in Egypt; was brought up as an adopted son of the king, of the king's daughter, so he had all the ancient opportunities for education that Egypt afforded, and at that time Egypt was the great university country of the whole world. People went from Greece to Egypt to study. Pythagoras finished his education, his course of study in Egypt. Egypt was the seat of learning. Well now Moses made this code of laws, and among other things mentioned in this code of laws was this description of leprosy of a house, leprous garments, leprosy of the clothing, leprosy of the house. If you study carefully this description of leprosy of the house it is nothing more nor less than mold or fungi growing on the walls.

Some time ago I was called to see a lady who was sick, and as I was looking about the house after I had seen the patient that was sick, the mother, the lady of the house, said to me,

"Doctor, here is something I wish you would tell me about. I don't know what to do with it."

She took me into the parlor and she pointed out a brown spot on the ceiling. She said, "Doctor, there is that spot on the wall. I have scrubbed it off and put on new paper half a dozen times, yet that spot comes out there. It is all sorts of colors. Sometimes it is blue, sometimes it is green, and sometimes it is yellow; sometimes it is a reddish color. It is all sorts of colors, and I wish you would tell me how I can stop it."

Now I knew what the matter was. It was a damp house, right down on the ground; a very old house, as much as thirty years old; and the whole house was infected. It was a wooden house, and the boards were decaying, the studding was decaying. I knew the moment I got inside the door that decay was there. And the odor of decay means germs at work, that some sort of vegetable maladies or parasites are growing. So I knew what the matter was. It was a damp house. The daughter lay sick with typhoid fever. I don't believe it came directly from these germs, but it was a good place for it to come, and a place where one would be pretty sure to have it.

Now this woman said, "Doctor, what do you think I can do for that? What do you think is the matter?" I looked at her very severely, solemnly, and I said, "Madam, your house has the leprosy."

"Why, what do you mean? Has my house got the leprosy?"

I said "Certainly. Get down your Bible quick, " and I read out of it the description of a leprous house, and there was exactly just the thing she had in that house. It was described in the Bible. She had a house that had the leprosy.

"What shall I do?" she said.

I said, "I expect you ought to do exactly what they did in ancient times." They didn't simply put new paper over the wall; they didn't simply scrape off the leprosy; but they had to scrape all the plaster off. And when they scraped the plaster off they didn't simply take it out and dump it in the back yard, or over in the neighbor's yard, but they had to carry it clear off outside of the city and dump it away out in a place that was provided for everything of that sort. Then they were to shut the house up, put new plaster on it and shut it up, and wait to see what would happen; and if at the end of a certain time, a certain number of days, it broke out again, then what were they to do? Then they were to tear the whole house down,

all the stones from the foundation, and carry it all off outside the city. You can get a picture in your mind of the old ancient Hebrews scraping off the plaster, tearing down the building, tearing up the foundation, digging up the foundation stones, loading them onto donkeys and mules and carrying them away off outside the city.

Of course this lady was not going to do anything of that sort, and it is not necessary to do it in these days. A moldy pantry in the house, or a moldy cellar, or a moldy space underneath the house is a good preparation for disease. There are poisons being thrown off, and these poisons prepare the persons who breathe them to become victims of various diseases. Of course you can not catch leprosy from a house. It is a different kind of leprosy from what people have, but it is due to parasites, the same as the leprosy of people is due to parasites. You can not catch house leprosy, but if you live in a house that has leprosy, the conditions which are present there, and which make it possible for a house to have leprosy, will make it possible also for you to have some infectious disease -- will prepare the way for it by weakening your constitution.

In these days if a house has leprosy we don't have to tear it down. We can burn formalin candles, or brimstone, or disinfect it in some other way. These are the two best ways. Perhaps chlorin gas will do; but formalin is best, and is the most convenient thing, as it will penetrate every crack everywhere,--go into the plaster and destroy all the germs you have in the house, so it is a capital thing for disinfecting the house. But the trouble is you disinfect the house that way, and if the conditions remain the same,--if there is water standing in the cellar or under the house, if the house is built down in the wet ground, so the ground water is level with the surface a great part of the time, the house will be damp, and the dampness will

work all through the house, so the whole house will be damp, and it will be a good place for molds to grow, but a bad place for children to grow up, where they will be likely to have the rickets, to have tonsillitis, enlarged glands, and general tubercular infection. Old people in such a house are likely to have bronchitis, pneumonia, or tubercular disease of the lungs. Now there is a whole lot more to be said about that, but we will let that pass.

There is another place in the home that is perhaps the most common of all means of breeding disease, and that is the dining room. No, I must go behind the dining room, go to the kitchen. The kitchen is the place out of which comes more disease perhaps than any other one part of the house. We are made of what we eat. "As a man eateth, so is he," is an old German proverb. I suppose this is a sort of parody on the old proverb "As a man thinketh, so is he." I have taken the liberty to make another proverb out of these two--the old proverb "As a man thinketh, so is he," and the German proverb "As a man eateth, so is he," and I have made this proverb: "As a man eateth, so he thinketh." Two things equal to the same thing are equal to each other, don't you see; so I think it is fair to make a new proverb out of that-- "As a man eateth, so he thinketh." What we eat today, is walking around and talking tomorrow. There is no disputing it. The things that we eat today are the things with which we work tomorrow,--the things with which we make the material of our bodies, the brain with which we think is constructed of what we eat; and if our food is poor material, a house built of that will be equally poor. Build a house out of mud, and straw, and rubbish, and you have a house that the rain will wash away, and it will fall down.

Some years ago I was down at El Paso. I passed through there on my way to Mexico, and I noticed in going over a bridge on the other side a settlement of houses-- numbers of them, scores and scores of houses, little one-story houses, adobe houses such as abound in that region where the Mexicans and very poor people live. And I was down again a couple of

years afterward, was passing through the very same place, and looking for the houses I noticed they were all gone, not a single house there. I inquired what had become of those houses-- scores of them were all gone, and the brakeman of the train informed me they had a flood down there, and the river overflowed its banks, and the water stood all over that place two or three feet deep, and those houses all melted down in the mud. They got saturated with water, and they just melted down in the mud and were washed off down the stream. That is what becomes of mud houses when they are exposed to a long flood.

If those houses down there had been made of stone, if they had been made of brick, put together with good mortar, that thing would not have happened. The flood would have passed away and the houses would have stood. Now we are every one of us here, every one of you are exposed to a flood of disease that is continually coming in upon us, and in these modern times particularly a great tidal wave of disease seems to be flooding in upon the world.

It seems to be rolling in upon us, a great tidal wave of disease--insanity, psoriasis, tuberculosis, pneumonia, la grippe, comparatively new diseases, and many other maladies;--cancer, which is increasing at a frightful rate, Bright's disease, and many other chronic maladies -- degenerations, all of which are increasing at a tremendously rapid rate. The Scientific American some years ago collated some facts from a report of the National Bureau of Statistics and showed that during the last ten years of the last century, from 1890 to 1900, there had been an increase over the preceeding ten years in cancer at such a rate that in fifty years cancer would kill five times as many people as it does now, and Bright's disease would kill seven times as many people as it does now, and apoplexy would kill four times as many as it does now, and diabetes would kill seventeen times as many people as it does now. Now, my friends, think of those figures,--the death rate increasing so rapidly that in fifty years there would be from five to seventeen times as many people dying from some of these chronic maladies as die from them at the present time. So there is a great flood of disease coming in upon us,

and if we want to stem this tide, to be able to hold our heads up amidst these infectious maladies that are swarming all about us, find the ~~fixed~~ plague has broken loose from its stronghold away over there in Bagdad or somewhere, has broken loose from its little pent-up corner where it has been held in check for many centuries, and now has spread out all over the world; and I want to tell you the ~~fixed~~ ^{plague} has come to stay. We are not going to get rid of it very easily, because the rats have got it, and the flees have got it. You can quarantine men, but you can not quarantine the rats. You can catch the rats, possibly, but you can not catch the flees. In Japan, when the plague broke out some years ago, some people got rich catching rats. Great numbers of people brought bags full, brought sacks full of rats every morning, and they stayed the progress of the disease to some extent in that way. But it will break out again. This is a situation in which there will be found really ^{and} truly a "Survival of the fittest." The unfit will go to the wall. And that great biologic law, which unquestionably Darwin and his pupils have established, there is no question about it, that great law is operating in the world. The sanitary law has stopped it to a certain degree, sanitary regulations hold plague in check, and hold yellow fever in check, hold cholera in check, so at the present time this law is not operating as it once did, but it will get into operation more or less. It is only held in check, but it will quietly work its way to some degree with chronic diseases, infectious disorders, and diseases of a chronic character.

People might live one hundred years, or two hundred years, or five hundred years if they would obey biologic law. It has been proven again and again and again that any race, the human race, or the race of lower animals, that departs from its natural course of life is doomed to extinction and destruction; it absolutely must go to the wall sooner or later. There is no help for it, because we can not live apart from the conditions to which our constitutions, our systems, our bodies are physiologically adapted.

Take a man moving up to the North Pole. Suppose we were all to move to the arctic region. It would not be many centuries before we would be reduced to the same conditions as those wretched Esquimaux, that are rapidly dying out,--only just a few colonies left, one here, and another there, because they are trying to live in unnatural conditions. Man is a tropical animal, belongs to the tropics, and the tropics are the healthiest place for him to live if he lives near to nature.

The principles of this institution, my friends, are to try to hold up the natural way; to show men and women the natural life; to show up the evils that are existing in their homes everywhere. As I was saying a little while ago, the dinner table is one of the most prolific of all sources of disease in the home. It is certainly productive of many more maladies than any other one thing in the home. Now just think of it. For instance, in the matter of eating a large amount of proteids. Proteids are the things that are pressed upon us. As Ella Wheeler Wilcox said in the newspaper the other day, at the present time when you sit down at the table in the American hotel you find there a veritable menagerie of things,-- all the different kinds of fish that swim pretty nearly in the course of a week; there are all kinds of four legged things; all sorts of two legged things: a veritable menagerie of meats of various sorts. When you come to vegetables, there are just a very few--just three or four different kinds of things. But what a great variety of meats you find. you sit down at the first class restaurant, and almost all the dishes are made up of meats. And at the present time the fashionable cook thinks she must supply her table, if she is going to have friends and visitors, with a great variety of meats, a quantity of meats. Now these meats are all superfluous. Prof. Chittenden's experiments have shown that ordinary wheat flour, or ordinary corn flour, even the ordinary potatoes just as they grow in the ground, have all the proteid that we actually need.

We only need one-tenth of the total number of food units that is necessary in the form of proteid. If you take any more than that, that excess that you take is a burden to the body, is a source of poison, or fermentation, which contaminates the blood, contaminates the body, which lowers its power to resist disease; it furnishes fuel for disease, for parasitic elements to grow upon, particularly vegetable parasites, furnish fuel to feed them, the food to feed them so they can develop in our bodies, establish themselves, and become a source of disease. There is no question about that. There is a great long list of diseases that are attributed to uric acid. How many of them there are! Neurasthenia of various sorts, degenerations of various kinds, Bright's disease, arteriosclerosis, hardening of the arteries,--these all grow out of it; rheumatism of various sorts. All toxins developed in the body are largely through the influence of this excess of proteids, not only through the introduction of uric acid into the body, but through the decomposition of these proteids in the colon. When a larger amount of proteid is taken than is needed it is left in the colon, undigested, unabsorbed, and it undergoes putrefaction. And these poisons absorbed into the system produce hardening of the arteries, degeneration, brown patches on the skin, and premature old age.

Forty-five minutes ago I met a lady in the office, and as I felt her pulse I said to her "I see your blood-pressure is rather high." The doctor whispered to me, "Yes, it is 230. She seems to be scared. Perhaps you can quiet her a little, for she has found out she has a very high blood-pressure." I said, "There is reason to be scared, nevertheless we don't want her to be scared to death." So I said to the patient, "You have got quite high blood-pressure. Your heart is doing splendid work, isn't it? Your heart is able to pump against a blood-pressure of 230, so it must be a good strong heart." And, I said, "You know what somebody said about that,--he would not give much for a man who could not get up enough steam to make his head hot once in a while; didn't think he would ever amount to much." Now this lady is in a

sad condition. Has a blood-pressure of 230. My blood-pressure is 105, and she is a little older than I am. We have got to make a hard fight to get that woman into a condition where her life will be safe. I noticed her head propped up on a pillow, and I remarked about it. "Yes," she said, "I am giddy if I let my head down a little. I have to keep my head propped up on a pillow. I have to be very careful not to turn my head too quick, for I am giddy." That shows that the process of degeneration has already begun, that the blood-vessels of the brain are degenerating, are getting hard and brittle, like the arteries of the arm. That woman has got to live within narrow careful limits. She can live twenty years if she takes proper care of herself. But it is easy for such a person to go beyond the limit and to just snuff out the little spark of life. It is a very very easy thing to do. Here is a steam boiler, for instance, that is good for one hundred pounds pressure. But it has been badly used, been over-strained. The metal plate where the fire strikes it has been burned away, and a whole lot of sediment has accumulated in the boiler, some of the rivets have been started, some of the seams are loose. The boiler was good for one hundred pounds pressure when it was new, but the boiler inspector comes around, and he says You must not run that boiler under high pressure any more. It is damaged. You must run it as a low pressure boiler. You must not run it over ten pounds pressure. Now that boiler is all right for ten pounds pressure. It may last for twenty years at a pressure of ten pounds, but it would go to pieces right away at a hundred pounds pressure, don't you see. One hundred pound pressure is likely to blow it up and smash the house it is in, but on ten pounds pressure it will be run safely.

Now that is the case with a man with high blood-pressure, so it is a very important thing to get the blood-pressure down as quick as you can, because the heart is doing a tremendous amount of work all the while that is not required of it. It is exactly the same thing as though you were carrying

on your housekeeping away up on the third floor, and had to carry all your water and fuel upstairs. It would be a whole lot of unnecessary work. You better go down to the first story, get down to the level of the first floor, instead of trying to keep house on the third story. Now it is exactly the same with the heart. You don't get any good out of high blood-pressure, but you get harm from it. The heart is damaged by its work. The work is thrown away. The thing to do is to get down on the first floor. Fortunately, it is possible to do that. I prescribed for that lady a warm bath every single day. That will dilate the vessels of the skin, open up the narrow vessels and let the blood through easily, and so lower the blood-pressure by lessening the work of the heart, so her heart will last longer, won't wear out so quick.

Now the American home is making high blood-pressure by high feeding. Making arteriosclerosis by feeding large quantities of meat, too much proteid, a large amount of eggs, milk, and beefsteak. It is better to drop the beefsteak out altogether, because it is practically impossible to eat any beefsteak without taking too much proteid. If you undertake to reduce your proteid without dropping out beefsteak, how are you going to do it? Here is a potato. That potato has in it all the proteid that you need. So has bread. Bread has a little more proteid than you need. If you are going to eat starchy foods, or carbohydrates, in order to match it off against the beefsteak, which is almost pure proteid, what are you going to do? You would have to eat a whole lot of sugar; but that would not be good for you. It would make you bilious. So, as a matter of fact, you have got to drop beefsteak out. Prof. Chittenden is not a vegetarian in practice at all. He laughs at the idea of vegetarianism. He would not allow you to call him a vegetarian. Yet when I said to him, Prof. Chittenden, how much meat do you eat? he replied, "Oh, I don't eat meat. I really don't care for it, and" he says, "as a matter of fact, I don't see how to work it in." I looked over one of his bills of fare, and I found he had figured out there two grams of meat,

two grams of beef or of chicken. A gram is one-fourth a dram, and a dram is one-eighth of an ounce; and two grams would be one-sixteenth of an ounce. That was a very big slice of chicken, wasn't it? His breakfast for one day, his ration of beef, was one-sixteenth of an ounce of bacon. That was such a small amount it didn't amount to anything. I thought he put it in just so he would not be called a vegetarian. I could not see any reason for putting that in, except so that people would not classify him as a vegetarian. Of course that is rather small. I hardly think it is fair for Prof. Chittenden to say that. As a matter of fact he could not get in any more meat than that. If he put in any meat it would raise his proteid. So when you cut your proteid down to the normal there is not any room for beefsteak at all, and there is very little room for eggs. The fact is we have in natural foods that have been created for us, -fruits, grains, nuts, and cereals, in these natural foods we have everything the body needs. So in departing from the natural diet you see how far we have gone astray, and how much we suffer from it. You can trace a large part of the chronic degeneration from which multitudes of men and women suffer to this excessive proteid; and that, as I said, is one of the things that is due to the mistaken ideas that exist in the American home.

The average house-keeper thinks meat is the thing that gives strength, whereas it is not the thing that gives strength, but it gives weakness instead. We have been taught the false doctrine that meat is necessary for mental strength, that meat is necessary for courage, that it is necessary for vigor, necessary for manhood and for womanhood, that it is a necessary thing; that if one is going to lead a strenuous life he must eat a great deal of meat. Nothing could be more absurd! What animal leads a more strenuous life than the laboring ox. It works hard and steadily. Keeps toiling, toiling, toiling all the time. Or what animal leads a more strenuous life than the car horse. Neither one of these eats beefsteak.

Neither one of these animals are flesh eating animals. But we must have beefsteak so that we may have the proper vigor and spontaneity, so that we may have sufficient vigor and courage, so that we may have pluck and stamina to hold our own in the world. I would like to say to you that if you ever saw more pluck or more grit than one of my parrots, that is a strict vegetarian, I would like to know where it is. He is so full of pluck and pugnacity that everything is afraid of him. When we let him loose in the back yard every dog in the neighborhood flees when he hears him speak. A very interesting little circumstance occurred the other day. I was sitting in the dining room, just behind the parrot's cage. A strange cat came in. I had never seen the cat before, and I don't think it had been around the house before. The cat came in, got his eye upon the parrot. The parrot looked down at it--"Kittie! kittie! kittie!", and the cat sprang up in a chair, and sprang right on top of the cage and looked down at the parrot, was just putting down his paws, when the parrot looked up and said, "Kittie, kittie, kittie: pretty Polly!" all quiet and low. It seemed incredible that the bird should speak so intelligently. The cat was very much surprised, looked around, and shortly afterwards began putting its paws down in the cage to reach the bird again, and the parrot ruffled up and showed a little fight; and the cat thought it was about time to leave, so prepared to spring, and just as the cat sprang off onto the floor the parrot shouted out "Good-bye!" Now I would hardly dare tell that story if I hadn't had a witness there to see it, to see the whole thing, and if I hadn't seen it myself. Now that animal is intelligent.

A gentleman said to me the other day, who was visiting at my house,

"Doctor, you don't eat meat?"

"No."

"You don't eat meat-- you eat birds and squirrels and such things,

I suppose?"

"Why," I said, "why should I eat a bird if I would not eat beefsteak? No I don't eat birds. Look at this bird (I introduced him to my parrot). Would you like to eat him?"

"Well, not if he was mine I wouldn't want to eat him."

If he was mine this man would be willing to eat him if he was real hungry, but if he was his, he would not want to eat him. There is something in this matter of flesh eating a good deal more than the disease it produces. It does produce disease. I rejected flesh because it induced a high proteid, and this is scientific reason enough. We suffer in consequence of high proteid. But there is something more. It is unnatural, it is absolutely unnatural; it is against our better instincts; and that is a reason why it is not good for us. If it were good for us, we should not find this danger in its use. Apples are good for us. They are not dangerous. Potatoes are good for us, and they are not dangerous. Corn, wheat, rye, all the cereals are good for us, and they are not dangerous. Meat is dangerous. That is in itself evidence that it is not good for us.

There are ~~any~~ many other things I might speak about with reference to the American home, things of which the American home is the cradle. There is no question about it. There are diseases growing out of the conditions in which we live,--the conditions around us, the habits we largely practice, the things we eat, the things we do, the things we neglect to do; these things are the ground work, the foundation, the soil out of which our chronic maladies grow; then by and by we get disease, we get hard arteries, get Bright's disease, which is due to hardened arteries,-- generally get that, at any rate we get a weak heart, a cirrhotic liver, a dilated stomach, or some other awful malady, cancer, maybe, or something of that sort, and we say, "Doctor, what ~~xxxxxxx~~ do you think is the cause of this? Have I been eating too much fish? If I have, then I will stop."

King Edward a little while ago found himself in a pretty bad way. He consulted a doctor, and the doctor said, "Why, you have got tobacco heart. You will have to stop smoking," and King Edward stopped smoking. I suppose he thinks if he stops smoking the mischief will be all undone. But that is a great mistake, my friends. It is too late. The fire is bursting out through the roof, coming out of the third story windows. The mischief has been done, and it can not be undone. The house is in ruins. The only thing you can do is to just make the best of what is left. Why not, then, stop before you have to stop? Why didn't King Edward stop smoking ten years ago? Why didn't he stop before he began? Why wait until the whole house is in ruins, until the heart is weak, and the liver is cirrhotic, and all these awful consequences which are the end of the disease processes, and not the beginning, are present?

When you go to the doctor, and the doctor says you have got Bright's disease, you have got albumen in the urine, you have casts, you say, Well, doctor, it has just begun. You can stop it, can't you? My friend, it is impossible to stop that Bright's disease in the kidneys. That is the end product of the malady. The whole body has been progressing in that way for years and years and years, and that Bright's disease is simply the end of the malady. It is ~~ha~~ the beginning of bankruptcy proceeding^o. If a man's business has been going wrong for years and years and years and years, and his credit has been suffering for a long time, he by and by gets to the point where the creditors begin to close in upon him. He says, Now I must begin to look after my business, and correct the faults of my business. I must begin to stimulate trade; to correct this thing, or that thing, or the other thing. I must begin to economize. He ought to have thought of that a long time before. He has got to the last act of the tragedy. That is the situation in chronic disease. Everybody should know that.

The man who is smoking says, I am going to stop as soon as I find that tobacco hurts me. My friends, when you get to the point where you know tobacco hurts you, you are spoiled, ruined, entirely ruined by it, and it will keep on right up to the last minute. You take food away from a man, and he begins to famish and waste away. His tissues ^{will} ~~are~~ beginning to fade away. The man will lose weight -- one-eightieth of his weight every day, and the temperature will drop just a little after a while; then that man's temperature will hold right there almost to normal; it will stay right there until a day or two before the man dies, then it will go away down to 92 or 93. When that man's temperature gets down there, he may say, Now then I guess I better begin to eat. I guess it is time for me to begin to look after matters. But it is too late. He is as good as dead already. He is bound to die, and it is too late to think of anything else. The temperature of the body is kept up by what we eat, and when we don't eat food the body consumes itself. It is burning up, consuming itself. It lays hold of the muscles, and then it attacks the brain, and the tissues are absorbed and burned up, the eyes sink away back in the head because they have lost the cushions of fat behind them. So every bit of the tissue of the body is finally consumed to keep up the temperature. That is necessary. It is exactly so ~~that~~ with the man that has Bright's disease. ~~His~~ His body has fought as long as it could against the poisons. It has given up the fight. Pretty soon the kidneys are gone, and when they are gone everything else of the body is gone in the same way. It is the beginning of bankruptcy proceedings. All you can do is to stay proceedings for a while. That is the best thing that can be done for a man who has Bright's disease, or any other chronic degenerative disorder. But the man whose troubles are ^{merely} functional, he says, I have sour stomach, inactive bowels; or, he ~~says~~ says, I am nervous and don't sleep well; I get tired working; I feel irritable and cross; have confusion in my brain; have bilious attacks; have a bad taste in my mouth; have pain in my back.

People that have those purely functional troubles can be cured, can be made well if we can only get hold of them quick enough. I wrote to a doctor today and told him, I am sorry you didn't send your patient sooner. Why didn't you send that patient here months ago? If you had sent the patient then, a cure would have been possible. Now it is too late.

Stir up your friends and neighbors at home to turn over a new leaf. When you go home establish a new regimen altogether. Clear off from the table everything that makes more disease, and train yourself gradually into health, rather than to disease.

JHK v--m 7/6'06

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QUESTION BOX LECTURE

At the Sanitarium Parlor, Battle Creek, Michigan.

Monday, June 11, 1906

8.00 P.M.

By J.H.Kellogg, M.D.

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Q. After operation for appendicitis what length of time should elapse before it would be perfectly safe for a person to resume active work?

A. That differs according to the operator and according to the case,--according to what sort of sutures the surgeon uses in closing up the wound, how large a wound he makes, and how he makes it; whether he cuts across the muscles, or splits the muscle fibers. So each surgeon must give his own directions in relation to that. I say to my patients, You may get on your feet in a week; you must not do hard work for a month, if it is a man who is accustomed to doing hard manual labor. If it is a man who does not have anything harder to do than counting dollar bills, or something of that sort, I say to him, You can go to work as soon as you please after ten days. I remember one patient, one on whom I operated, and I found him out in the yard at the end of just one week from the time I did the operation. So I think ten days is quite sufficient when the operation is done in the way in which I think it ought to be done. But if the muscle fibers are cut, and the tendons are largely cut, and a large wound is made, a longer time must be allowed for the part to become thoroughly strong.

Q. Why have the Bibles been taken from some of the rooms?

A. I think they must accidentally have gotten packed into some of the trunks. I am sure there is no desire on the part of the management to keep Bibles from rooms. It is a part of the housekeeper's duty in this house to see that every room is supplied with a Bible,--not because we do not suppose that our patients have seen Bibles before; probably most of our patients are familiar with Bibles at home, and a great many people carry Bibles with them. I was very much interested some years ago, at a meeting of the American Medical Association in Philadelphia. The meeting had just closed. I have just returned from Boston, where I have been attending the meeting of the Association this year. The meeting in Philadelphia had just closed, and I was just crossing the road to pick up my bag at the hotel, and I heard my name shouted out. I turned about, and I saw one of the leading doctors of the country, and he was calling me, and I turned back. He said, "Come here, Doctor, I want to see you a moment." So we sat down on the water table beneath the hotel on one of the busy streets of Philadelphia. I hadn't had a chance to meet the doctor before that time, but he said to me, "Here, Doctor, I want to see you a minute." So he opened his bag, put his hand down into it and pulled out a Bible. He had a text he wanted to show me. "Well," I said, "Doctor, it is not every doctor who carries his Bible in his bag." "I always have my Bible in my bag," said the doctor. He was Dr. Howard Kelly, of Baltimore. You have heard of him before. And I am glad to mention this little circumstance just now. This question suggested it. And I am glad to tell you that Dr. Kelly is to be here one week from tonight, and will give an address in this city. He gives the address for the Graduating Class of the American Medical Missionary College. There is a class of about twenty-five to graduate this year,--I think it is twenty-five, and Dr. Kelly has

kindly accepted our invitation to give the graduating address. So you will all have the pleasure of hearing Dr. Howard Kelly speak one week from tonight, at the Tabernacle. He will be our guest for a couple of days. We shall have a reception in the evening a week from tomorrow night, and I hope you may have the pleasure of hearing a few words from Dr. Kelly here in this room. I shall get him to talk to you, and I am sure he will be glad to do it. The Sanitarium believes in the Bible, and the Sanitarium is not the only medical institution that does. In Dr. Kelly's private institution at Baltimore you will find a Bible in every room there, as you do here. I think surgeons and doctors of all people in the world can least afford to get along without Bibles. A medical institution certainly ought to be well supplied with Bibles and Bible ideas. There are some splendid things to help sick people in the Psalms. If you have not been reading the Psalms lately, take it up again. Read a Psalm every morning, and see how much good it will do you.

I ran across in my mail this morning--- I was going through my mail early this morning. I worked at it until 2 o'clock last night to catch up, and along about 7 o'clock I was working at it again. It is an awful thing to get behind with me. And when you have so many letters as I have you don't know where the end of it is. This is only about one-hundredth part of it. Here it is, I put it away down in the inside pocket, so it would not get lost. I put this in my pocket to read to myself, and to read to somebody else tomorrow, and I happen to have it here, and it just occurred to me it would be a splendid thing to read to you, seeing some of you have not got your Bibles. Here it is--a beautiful poem, entitled "A Solitary Way." It did me good, and I thought it might do some of you good. --

"They wandered in the wilderness in a solitary way; they found no city to dwell in. And he led them forth by the right way, that they might go to a city of habitation. For he satisfieth the longing soul, and filleth the hungry soul with goodness."

That is the one hundred and seventh Psalm. That one hundred and seventh Psalm is a wonderful Psalm. Read it tomorrow, or tonight, and see what splendid things there are in it. There is one verse there I shall never forget as long as I live. I remember a poor drunkard down in Chicago that I found there once. I read this verse to him, and it did him a world of good. "Fools, because of their transgression, and because of their iniquities, are afflicted. . . . Then they cry unto the Lord in their trouble, and he saveth them out of their distresses. He sent his word, and healed them, and delivered them from their destructions."

"And in the morning, rising up a great while before day, he went out, and departed into a solitary place, and there prayed." (Mark 1.35.)

Here is the poem:--

"There is a mystery in human hearts,
And though we be encircled by a host
Of those who love us well, and are beloved,
To every one of us, from time to time,
There comes a sense of utter loneliness.
Our dearest friend is "stranger" to our joy,
And can not realize our bitterness.

"There is not one who really understands
Not one to enter into all I feel;" -----

How often we feel that way! I remember a young lady who came into my office one day,-- she was feeling just that way. She burst into tears, and she said,

"Doctor, nobody understands me!"

"Well," I said, "I know just how to sympathize with you, for I feel the same way. I don't think anybody understands me, and I used to feel awful bad about it; used to feel very bitter about it, too, sometimes, because people didn't understand me, until I made a discovery, and that was that I didn't understand myself; and since I found that out I don't blame other people for not understanding me."

Well, we have all felt that way, I daresay.

Such is the cry of each of us in turn.

We wander in "a solitary way,"

No matter what or where our lot may be;

Each heart, mysterious even to itself,

Must live its inner life in solitude.

And would you know the reason why this is?

It is because the Lord desires our love.

In every heart he wishes to be first,

He therefore keeps the secret key Himself,

To open all its chambers, and to bless

With perfect sympathy, and holy peace

Each solitary soul which comes to Him.

So when we feel this loneliness, it is

The voice of Jesus saying, "Come to Me."

And every time we are "not understood,"

It is a call to us to come again:

For Christ alone can satisfy the soul.

And those who walk with Him from day to day

Can never have "a solitary way."

And when beneath some heavy cross you faint,

And say "I can not bear this load alone,"

You say the truth. Christ made it purposely
So heavy that you must return to Him.
The bitter grief, which "no one understands,"
Conveys a secret message from the King,
Entreating you to come to Him again.
The "Man of sorrows" understands it well,
"In all points tempted," He can feel with you,
You can not come too often, or too near.
The Son of God is infinite in grace,
His Presence satisfies the longing soul;
And those who walk with Him from day to day
Can never have "a solitary way."

The Bible is a wonderful comfort. These are beautiful thoughts.
Here is another sweet little thing. I found this in my mail this morning,
too. Somebody was good enough to send it to me. It was sent by the Secretary
of the World's Morning Watch. He sent this to me. He was my medical student
one time, so I know him very well. He is now carrying on a beautiful work,
and he sent me this. His address is 541 Lexington Ave., New York City.
They issue what they call a Daily Bible--a very beautiful little thing.
This is a very splendid little story. The title is "A Picture of God."
~~ixixxfakrkyxpathstikx~~

"It is fairly pathetic what a stranger God is in His own world.
He comes to His own, and they who are His own kinsfolk keep Him standing
outside the door while they peer suspiciously at Him through the crack at
the hinges.

"To know God really, truly, is the beginning of a normal life.
One of the best pictures of God that I ever saw came to me in a simple story.

It was of a man, a minister, who lived in a New England town. He had a son, about fourteen years of age, going to school. One afternoon the boy's teacher called at the home, and asked for the father, and said:

'Is your boy sick?'

'No. Why?'

'He was not at school today.'

'Is that so?'

'Nor yesterday.'

'You don't mean it!'

'Nor the day before.'

'Well!'

'And I supposed he was sick.'

'No, he's not sick.'

'Well, I thought I should tell you.'

And the father said, 'Thank you,' and the teacher left.

And the father sat thinking. By and by he heard a click at the gate, and he knew the boy was coming, so he went to open the door. And the boy knew as he looked up that his father knew about those three days. And the father said:

'Come into the library, Phil.' And Phil went, and the door was shut. And the father said: 'Phil, your teacher was here this afternoon. He tells me you were not at school today, nor yesterday, nor the day before. And we supposed you were there. You let us think you were. And you do not know how badly I feel. I have always trusted you. I have always said "I can trust my boy Phil." And here you've been a living lie for three whole days. And I can't tell you how badly I feel about it.'

Well, that was hard on Phil to be talked to quietly like that. If his father had spoken to him roughly, or had asked him out to the woodshed for a confidential interview, it would not have been nearly so hard.

Then, after a moment's pause, the father said, 'Phil, we'll get down and pray.' And the thing was getting harder for Phil all the time. He didn't want to pray just then. And they got down. And the father poured out his heart in prayer. And the boy knew as he listened how badly his father felt over his conduct. Somehow he saw himself in the mirror of his knees as he had not before. It's queer about that mirror of the knee-joints. It does show so many things. Many folks don't like it. And they got up. And the father's eyes were wet. And Phil's eyes were not dry. Then the father said:

'My boy, there's a law of life that where there is sin, there is suffering. You can't detach those two things. Where there is suffering there has been sin somewhere. And where there is sin there will be suffering. You can't get those two things apart. Now,' he went on, 'you have done wrong. And I am in this home like God is in the world. So we will do this. You go up to the attic. I'll make a pallet for you there. We'll take your meals up to you at the regular times, and you stay up there as long as you have been a living lie--three days and three nights.'

And Phil didn't say a word. They went upstairs, the pallet was made, and the father kissed his boy and left him alone with his thoughts. Supper time came, and the father and mother sat down to eat. But they couldn't eat for thinking about the boy. The longer they chewed upon the food, the bigger and drier it got in their mouths, and swallowing it was clear out of the question. Then they went into the sitting-room for the evening. He picked up the evening paper to read, and she sat down to sew. Well, his eyes weren't very good. He wore glasses. And this evening he couldn't seem to see distinctly--the glasses seemed blurred. It must have been the glasses, of course. So he took them off and cleaned them very deliberately, and then found he had been holding the paper upside down. And she tried to sew.

But the thread broke, and she couldn't seem to get the needle threaded again. You could see they were both bothered. How we do reveal ourselves in the details!

By and by the clock struck nine, and then ten, their usual hour for retiring. But they made no move toward retiring. She said, 'Aren't you going to bed?' And he said, 'I think I'll not go yet a bit; you go.' 'No, I guess I'll wait a while, too.' And the clock struck eleven, and the hands worked around toward twelve. Then they arose and locked up, and went to bed, but--not to sleep. Each one made pretend to be asleep, and each one knew the other was not asleep. By and by she said (women are always the keener), 'Why don't you sleep?' And he said gently, 'How did you know I wasn't sleeping? Why don't you sleep?'

'Well, I just can't for thinking of the boy up in the attic.'

'That's the bother with me,' he replied. And the clock in the hall struck twelve, and one, and two. Still no sleep came.

At last he said, 'Mother, I can't stand this any longer; I'm going upstairs with Phil.' And he took his pillow and went softly out of the room, and up the attic stairs, and pressed the latch-key softly, so as not to wake the boy if he were asleep, and tiptoed across the attic floor to the corner by the window, and looked. There Phil lay, wide awake, with something glistening in his eyes, and what looked like stains on his cheeks. And the father got down in between the sheets with his boy, and they got their arms around each other's necks, for they had always been the best of friends, father and boy, and their tears got mixed up on each other's cheeks. Then they slept. And the next night when sleep time came the father said, 'Good-night, mother. I'm going upstairs with Phil.' And the second night he slept in the attic with his boy. And the third night, again he said, 'Mother, good-night. I'm going up with the boy again.' And the third night he slept in the place of punishment with his son.

You are not surprised to know that today that boy, a man grown, is telling the story of Jesus with tongue and life of flame in the heart of China.

Do you know, I think that father is the best picture of God I ever saw? God could not take away sin. It's here. He could not take away suffering out of kindness to man. For suffering is sin's index-finger, saying, 'There's something wrong here.' So He came down in the person of His Son, and lay down alongside of man for three days and three nights. That's God--our God. And beyond that He comes, and puts His life alongside of yours and mine, and makes us hate the bad, and long to be pure. To be on intimate terms with Him, to live in the atmosphere of His presence, to spend the day with Him--that is the true normal life."

Now, that is a good story, my friends. It is true. I like it, because it enters right into our own experience. It makes me think of something that Beecher said years ago,--that Christ was God come down to take little steps beside us. Now if there is anybody in the world who needs that sort of thing to help him, it is the sick man. The same power that made us is with us. And this thing comes home to a doctor, I think, more than anybody else, because when a doctor does a surgical operation, as I have to do every day or two,--spend some hours in the operating room cutting savage wounds into people, you don't know what a comfort it is to think that the same kind Being that made that flesh will bind up those wounds and make them well. That is the thing we count upon. When I go home from my operating days, go back to my home, and it becomes very quiet in the middle of the night, and I am thinking about it, thinking of those poor souls up there in their beds of suffering, and that I have made them suffer, that I have hurt them, and that they are just writhing in agony, I am thankful there is One who can bind up those wounds, and that they are going to be bound up, and to have

faith and hope that it is going to be done. (Now excuse me. I am sorry my feelings so overcome me.) I am confident when I do the operation that I am doing the best I know how, and I ask God to help me, and I am confident there is a Power that will bind the wounds up, or I would not dare to do it, would not dare to do it.

Now the thing I want to bring to your mind is this fact that this same Power that heals wounds that the surgeon makes is the Power at work healing the wounds that our wrong habits have made, that we have done to ourselves,--the wounds to our stomachs, injuries to our heart, wounds to our nerves; all of them are real wounds that come from our wrong habits,--from wrong eating, from smoking, perhaps, from using tea and coffee. Perhaps late suppers. May be ice cream, or ~~xxxx~~ mustard, pepper, peppersauce, and all the things that wound and hurt when taken into our bodies. Now all these wounds can be healed just as much as a surgical wound, just exactly; and it takes the same Power to heal those wounds, exactly the same Power as it does to heal the surgical wound. It takes exactly the same Power to heal the diseased liver, diseased heart, diseased stomach, and diseased nerve, exactly the same Power that it took to make the first man that ever was made. Now that statement is not a particle too strong, my friends. It takes the same Power to heal every one of you that is going to get well that it did to make you--the same Power it did to make Adam.

Now, you say, I don't know whether Adam was made or not. It may be he simply came up by a process of evolution. I want to tell you, my friends, that scientific men today have thoroughly abandoned that old notion that ^(?) Hæcker and Bastian, and some other philosophers of a generation ago, gave of spontaneous generation,--the notion that somehow life came into existence without any intelligent creating power in operation, just by a sort of a fortuitous concatenation of circumstances. That theory has entirely

disappeared, and no scientific man entertains it for a moment today. All scientific men admit that there must have been away back somewhere a beginning of life, and that it ~~started~~ required the existence of Creative power to start off the series of life-processes which we see in operation now in living things in men, in animals, in vegetables--all these living things. There was a beginning to life somewhere. There was a first man, and the first man didn't come from a little jelly drop. I don't think he came from a monkey either. I think God made him, as the Bible says he did--"made man in His own image," made him a splendid man, a more splendid man than lives today on the earth. I will tell you why I believe that. I was over in Colorado some years ago, and I happened to be at the State Fair, and there was an exhibition of apples there,--most splendid apples, the finest apples I think I ever saw anywhere. They were so perfect,--no insects, no scabs, no scales, no imperfections; they were beautiful apples. And one exhibition made up by one man contained some twenty-six varieties of apples,--green apples, yellow apples, red apples, purple apples, white apples, sour apples, sweet apples. Apples of all sorts and flavors were there. They all came from one barrel of green apples which were shipped out to Colorado forty years before. All those apples had come from that one barrel of greenings. And that barrel of greenings, if you trace it back far enough, came from one apple seed, and that original apple seed from which that original green apple came contained all these different kinds of apples,--they were all there; all those apples had come from that one original apple seed. They must have been there in that seed, or they could not come out of the apple seed. They came right out of that one apple seed, so you see they were simply the substance of that apple seed, of that first apple, that first apple tree that came from that seed. Now I think exactly the same thing is true with man. Whatever we see in humanity today has come out of the original man. It was all there.

Here is a man who is a genius, a wonderful genius. A friend of mine, a doctor, a president of a college, told me of a pupil of his, and said that if you would give him a problem like this--Give me the cube of 5,296,425, he would give you the correct answer faster than you could write it on the blackboard. Or, ask him to give you the cube-root of some number up in the billions, and he would give you that cube root just as quick. You ask him how he did it, and he would state he didn't know how he did it, didn't know anything about it. It was not an intellectual process. The thing was somehow done in his brain. He didn't know how it was done any better than you or I did. It was simply done. Now there was Blind Tom. Some of you heard him. You know what he could do. Somebody could play a piece of music, a difficult piece of music for him, and he would sit down at the piano and play it right after without ever having heard it before. He didn't have to practice upon it; didn't have to see the notes; didn't know anything about notes in fact, but he could play. He was a musical genius. And just so with an artist,--a genius in art, or any other kind of a genius, a genius in some other direction, all these men came from the original man, and the original man must have had all these different things in him. That original man was a splendid man, a more splendid man than lives today. Men have degenerated. That is the theory upon which this institution is based,--that the human race has degenerated and got down to a low level, and now we are struggling upward; and that is what this institution is for--to help men up.

Last Thursday I took a little trip I have been wanting to take for a great many years. I was in Boston, and I stole a little time. Found there wasn't anything on the program for the afternoon that interested me to such a great degree that I needed to remain for it, so a little party of friends of us went out to old Lexington--tramped over that old battle-field out there, where the ^{canon} ~~gun~~ was fired, the shot was fired that was heard around the world; saw the gun, at least the pistol, that the British general fired giving the

signal for the attack. Saw where the battle for liberty began, and the old rock that stood on the firing line. It was a very interesting experience. But the thing I was out there most of all to see was Brook Farm, for that is the spot where the great battle for liberty began, for civil freedom. And there is the spot almost right there. Two or three miles from Concord is the place where the battle for liberty and freedom from wrong habits of vicious civilization began. Geo. Ripley went out there sixty years ago and planted a great Brook Farm colony. I didn't find anybody there I knew, but I looked at those old trees there, and said to myself, Thoreau sat under that tree; Emerson sat under that tree--saw that tree, and that tree saw Emerson. He was out there and held communion with that little patch of woods over there. And I found it a very interesting time.

Now this institution is carrying on the work they began there at the Brook Farm. The Brook Farm was a protest against the perversions of modern civilization, and we have been going on getting more and more perverted. This institution was started forty years ago by a dozen people who were interested in these ideas. It is forty years ago this summer the work began, and it has been going on ever since. Thirty-three years ago I became associated with the work, and have been here ever since, and I can see that it has progressed.

One thing that delights me very much just now is the showing up these great slaughter shops are getting down in Chicago and at other places. I met a gentleman a day or two ago. He didn't know me altogether, and he said,

"Don't you think it's pretty hard on these packing houses the way the newspapers are talking about them?"

"Yes," I said, "it is hard on them, but it is not half as hard as it ought to be. It is good for them. It is exactly what they ought to have."

These men I suppose are not any more culpable than other people are. They are furnishing the people what they want, and it is the most natural

thing in the world for them; for the slaughtering business, the whole business of the packing houses is debasing. The showing up that is being given to that whole business at the present time is just exactly what you might expect, for it is all a miserable business. Men who take life and shed blood, the blood of animals, don't care so much for human life as other people do. If you are going to hire a man to do a job for you as an assassin, you would pick out a butcher, wouldn't you? That is just the kind of man you would need. Some of the most horrible crimes that have ever been committed have been committed by butchers. And the riots they had in Chicago with anarchists and socialists which occurred down there some years ago, when so many people were killed, started in the packing houses originally. I am very well acquainted with that part of the city. We have a dispensary right there in that part of the city, in the stockyards district, and we treat in our dispensary between five and six thousand ^{of these} people a year, and we know exactly what they are. I go down to Chicago, and I often meet them there, and our doctors and nurses are working right there in that region all the while, so I am quite familiar--for the last thirteen years I have been quite well acquainted with that region. We have had a settlement and dispensary there all the time for the last thirteen years, and we have been doing what we could for the people there.

I once visited the stock yards and the packing houses, and from what I saw with my own eyes, I am sure the description in the papers is not overdrawn. About two or three weeks ago I was down in Chicago, and I had to go out quite early one morning to meet an appointment. I had an appointment over at the Northwestern University medical department, where our students were taking some medical work, and I started out about 7 o'clock to meet the students there. I found the street cars had stopped. It was a couple of miles over there, and I was in a little hurry, so a man came along with a

market wagon, and I found he was going in that direction, and I took a ride. I got up on the front seat by him, and I am always glad to do that. I was glad to do it with this man. I always do it when I take a ride with a man, because I am always glad for the opportunity to get into their lives.

I said to him, "I judge you are a market man. Do you serve meat to the markets?"

"Yes," he said, "that is my business."

I said, "You are connected with some of these packing houses, are you?"

"Yes," he said, "I have been there for the last ten years."

I said "I have been reading in the newspapers some things lately about the way things are done over there, about the canning of diseased meat, and all those things. Is that true?"

"Certainly it is true, every word of it!"

I said "Do you know it to be true?"

He said "Certainly. I have seen it with my own eyes hundreds of times. There is no doubt about it at all. I have seen it and know it is going on all the time."

I said "Is it true, the stories told of how they put diseased meat into great big vats there, cook it up, and then put the meat into cans, etc.?"

"Why," he says, "of course they do. I have seen them do that. They skim off the grease on top, draw out the bottom through a tap at the bottom, and that goes through into the cans. I know that to be true."

"How about diseased cattle," I said. "A gentleman up at your place told me sometime ago, when I asked him what his business was, he said My business is in the stockyards. I asked him what part of the business he was in--whether he was indoors or outdoors.

"Well," he said, "I am outdoors mostly."

I said "What do you do, drive cattle?"

"No," he said, "I will tell you confidentially, but I don't care to have you mention my name; but I will tell you what I have been doing for the last thirteen years. You know there are a whole lot of cattle picked out that are diseased, are not fit to be used, are rejected by the inspectors. These cattle are driven out by themselves, and it is my duty to be on the lookout, and when these cattle get out behind a certain wall which is there, provided on purpose for them, I slip them around the corner, get them down into another pen, and that night they are all killed and delivered to the retail dealers in Chicago." He said "That is my business."

Well, I told him I was glad I didn't have his business.

It was bad enough to kill cattle, healthy cattle, but to kill diseased cattle, and deliver them around to be sold to the people of Chicago, was simply monstrous.

"Well," he said, "I don't think it is good business myself, but I have to get a living someway."

"But," he said, "that is not all. There is more diseased meat that passes the inspectors that is not rejected than there is that is rejected, for only a very small amount of it is rejected." And one of the health commissioners of Chicago, something like five or ten years ago, made this statement, that if all the diseased meat that is brought into Chicago, if all the diseased cattle brought into Chicago for slaughtering, if that meat was all rejected, if all the diseased meat was rejected, the price of meat in Chicago would be a dollar a pound. That is what one of the health commissioners of Chicago said as much as eight or ten years ago. So this thing has been known a long time. I have known about it. It is simply just now being shown up.

Some time ago one of our doctors here, Dr. Otis. He is not here now. He is located at Chicago. He was professor of bacteriology in our Medical College. Dr. Otis is a very expert microscopist. We were having a sanitary convention here in the town, a meeting of the State Medical Society, and we had an exhibition. I was chairman of a committee to secure laws in the State of Michigan requiring the careful inspection of cattle and of slaughtering houses, and I thought it would be a good way to awaken interest in the Medical Society, on the part of the doctors, by having an exhibition. So I asked Dr. Otis to go down to Chicago, and through the Agricultural Department at Washington, and by using special influence I got a chance for Dr. Otis to go into the stock yards, into the slaughtering houses there, and select out some portions of animals that were condemned, and to bring them home for exhibition. Dr. Otis spent a whole day there with the inspectors in their work, went right along with them, and he saw what was going on. Here came in a cow with a great lumpy jaw. What did they do? They simply cut the lump off, and sent the rest of the cow right along. Here was an animal almost dead with hog cholera. The intestines were filled with hog cholera germs. The animal was killed. What did they do with that? Removed the intestines, rejected them, and sent the rest of the animal right along. Here is an animal filled with trichina. What did they do with that? The animal was put out by itself. It could not be sent to Germany. But somehow or other it easily slipped out to one side and got in along with the other hogs that were to be used by American kings and queens. Well, among other things the Doctor brought home was a cancerous mass. Examination proved it to be cancer. It came from the jaw of a cow. It has been proven for some time that actinomycosis, or lumpy jaw, has been extending, and getting hold of human beings. In Chicago men and women are being afflicted with lumpy jaw, and it has been found that it began to spread from the

stockyards. The disease started right there where men come in contact with these animals, and this awful disease has extended. It seems to be a form of cancer. Dr. Otis and I were very much interested, and decided to make another investigation. But he brought these specimens home and exhibited them down town for a time. We had a table for them there, and it made everybody sick. It was perfectly terrible, those awful specimens. A large table full of them, and they made everybody sick. So the other people begged that we take the specimens out, and we took them down, and we got permission from the police department to spread them out on some tables right in front of the City Hall. The chief of police said we might put them there in front of the City Hall on a table if we would have a wall put up in front, because so many people were going by he was afraid they might be shocked by that awful sight of that diseased meat. Of course they ~~ix~~ might see the same thing in any butcher shop, but it would not have the labels on it. That is all the difference there was. These specimens had labels on in this case. These lumps of meat didn't look any worse than you would see in any butcher shop. Take a piece of any sausage and examine it with a microscope, and you would see the same thing. It is composed of trimmings, and it is ground up so nobody can tell where it came from. Tuberculous lungs make splendid sausage. Tubercular liver, abscesses, etc., make just the finest kind of sausage.

We spread those specimens out there on a table, and we put up a wall. We made the wall just about five feet high, and you know that wall was the finest thing we ever did. It was the most splendid thing, for every one wanted to see what was on the other side of the wall; so every minute of the time those specimens were there, there was a whole row of eyes looking over the top of the wall, and we simply kept a man there regularly, and we had the finest sort of a chance to expose this thing. The superintendent of the Public Schools was so much interested he marched the whole public school

down there, all the teachers and the children, to see those specimens of meat. Now that was just simply one opportunity to expose the thing that is going on. You don't know anything about what you are eating when you sit down to the table and eat a piece of meat. You don't know anything about what was right next to it.

I want to tell you the last piece of beefsteak I ever ate in my life, about forty years ago, made an impression upon me so that I never shall forget it. My father bought a chunk of tenderloin. Brought it home. Steaks were cut off. We didn't have ice as plentifully then as we have now, but it was cared for as well as it could be in the cooler. Pieces were cut off and eaten for breakfast next morning, and we all thought it was very nice and tender. But the next morning when the cook cut off the first slice of beefsteak from this meat he cut into a huge abscess, as big as a goose egg, all full of pus. Now I had eaten a piece of beefsteak that came from right next to that abscess--a quarter of an inch from that abscess. It was very nice, tender, and toothsome. But I said That is enough for me. I don't want any more beefsteak. And I never have eaten any beefsteak from that time to this. I made up my mind it was a dangerous thing to do.

A story was told some time ago of a man who went down to one of the cannibal islands. And there had been some sailors there some years ago, several of them, fourteen, I think,--sailors who were shipwrecked on that island. When the missionary went there a few years later there were none of them there. He talked with a savage about them, and the savage explained that thirteen of the men had been eaten. He made signs to show that they went down their throats. But what became of the fourteenth one? He indicated that they didn't eat him. He got an interpreter to come, for he couldn't make out what the native was saying as to why they hadn't eaten the fourteenth. He reported that he tasted too much like tobacco, and they could not eat him.

His flesh was so tainted with tobacco that the cannibal could not stomach him. Now you stop to consider a moment the significance of that. Here is an animal, a hog for instance. That hog eats all sorts of things--eats other hogs, eats dead things, eats any kind of things he can pick up. He is a scavenger. It is his nature. That is what he is for in the world. I was reading in The Sanitarian some time ago an article on pork, recommending it for consumption, but the writer of the article said you must be very careful to feed the hog on grass,--give him good pasture, give him nice clean corn. Don't allow him to eat anything dead. Because if he eats anything dead of any kind it will spoil the flesh, and the pork won't be fit to eat. It will have a strong flavor, and it won't be good, won't be wholesome, for flesh makes a sick hog. In other words, if a hog should get hog hungry and eat one of their own number, that ~~the~~ hog would be unfit to eat. But if a man should eat that hog, and ~~make~~ make stew of him, he would be unfit to eat also, don't you see. Well now, when an animal is in such a state that he is unfit to eat, what is the condition? That is repulsive to you. You think that animal must be in very bad condition--is not fit to eat; yet, according to this argument, the man who eats pork must necessarily be in the same condition, so that he would not be fit to eat. If any cannibal should eat me, I should like to have him like the flavor of me at any rate, and say I had a good taste. There is more than one way of tasting people. A man told me the other day he had a bad taste in his mouth. Now that bad taste in that man's mouth was really that man's flavor, don't you see. I think if a cannibal should get hold of him he would not like him, because he would have a bitter taste. And that bitter taste was not simply in the man's mouth, but it was in the man. It was simply the man himself coming out.

The perspiration that comes out upon the skin is extract of tissues--extract of the body, or excretions, simply extract from the blood and the tissues. And if a person's body is in such a state that his excretions

have a foul odor, that the perspiration is rank or strong, the tissues of his body are in that same state. He is not fit to be eaten. He is not fit to think well. He is not fit at all, is unfit. And the thing that man needs is that he should have his whole body purged.

Now to make that illustration a little bit more graphic, let me call attention to a simple fact that I think everybody knows. Here we have the good old family horse. It has been shut up in the stable all winter. You take him out in the spring and give him a little drive, so he sweats a little, and when that perspiration gets dry it is just like pitch. If you have ever curried a horse under such circumstances, after he had sweat and the perspiration dried up and leaves the pitch behind in his hair, you can hardly get it out with the curry comb. When I was a boy I did it, and I know. That pitchy substance on the horse's hair has a very strong odor, and it is extremely offensive. But now if you drive that horse regularly ten miles every day for six weeks, the perspiration that comes out on the skin at the end of six weeks is limp as water. It does not leave a white froth on his back. It does not leave any pitch behind. Why? Because the horse has been cleared out; the tissues have been washed out. The perspiration is extract of horse, don't you see? So when we mention perspiration as offensive perspiration, that is simply an indication of what the man is like inside. So we should aim in what we eat, in all our δ conduct and all our behavior toward ourselves to be in a fit condition--clean inside and outside. The man who has a dingy skin, and the whites of whose eyes are dingy, has a dingy sclerotic, his doctors say his skin is tawny. Ladies don't always like their complexions, and sometimes have to spread something outside to cover it up. But that color is more than skin deep. It is dirt in there that makes that skin tawny and dingy, it is simply dirt. It is dirt that makes the whites of the eyes dull--organic dirt, rubbish lying in the tissues. Now it is dirt,

as I said before, which is more than skin deep. It is in the muscles and glands, in the liver, in the stomach, in the brain, in the nerves, and it is no wonder you feel miserable and depressed, and pessimistic, find it hard to be hopeful and cheerful. It is no wonder you feel a little cross, irritable, and get out of sorts with your neighbors, and scold the children.

I remember a lady said to me one day, "Doctor, what is the matter with me? I scold my husband, I scold my children, I scold the neighbors! I just scold and scold all the time! Doctor, I wish you would tell me--Am I sick or am I wicked?"

I just took a look at her tongue, and it really looked as though the city scavenger ought to have it. I was glad to be able to say to her, "Madam, your case is not a case of total depravity, but a case of total indigestion." So it was. She got a good stomach, and after a while got good spirits, and a good temper back again, and got free from her depression of spirits. The whole thing, really, is to get the blood right, and when the blood is clean the breath will be sweet, the perspiration will be limp, the skin will be clear, and the countenance clear; and the eyes will be bright, and the mouth will have a pleasant taste, and the tongue will be clean; the teeth won't all be covered over with rubbish and filth in the morning so they will have to be scrubbed to get them clean. The whole body will be clean and wholesome. Just think of it, my friends, the way some people live. I know some people who have to spend about half the time fighting bad odors which are oozing out from every pore, simply because the blood itself is saturated with these malodorous poisons. So we must eat right if we want to have a clean breath, or want to have a clear skin, pure blood, and healthy tissues, so that the perspiration will not be poison. We can do it by eating things that are sweet, and pure, and good.

A butcher told me that whenever a man brought him a hog that had been fed on flesh, he knew it. He said, You can tell by the smell of it.

It has a strong odor. Here is a man who sits down and eats corpses every day for dinner. Plenty of people do that, sometimes three times a day,-- eat dead things. And why shouldn't it have the very same effect on a man that it does on a pig? It does have the same effect on a man. That is the reason why we have no meat on our tables upstairs. Some of you think it is a little hard to be deprived of beefsteak. We want to make things here just as near perfect as possible for you, so you can get the purest, sweetest blood in the tissues in the quickest possible time. We hope to win some of you to this pure sweet life so you won't depart from it when you go home. We don't expect to win you all, but we wish we might. I tell you it did me a lot of good to go over to the Brook Farm, under the same trees under which those philosophers stood, and appreciate the fact that sixty years ago there were men who believed just as I believe about this thing, and that set a pace for the world, as it were--this idea of returning to nature. It didn't really begin with them. Men have been living all along through the ages who have been doing this very thing. There was Pythagoras, that great Grecian philosopher, who went out a few miles from Athens and founded a little city called Croton. He and his followers, several hundred of them, went there and established the same sort of a colony as the Brook Farm; and that was two thousand years ago--more than that, almost twenty-three hundred years ago that Pythagoras did that. And the populace of Athens became so enraged because of what he had done, because he would have no meat and was raising the new standard there, that they swarmed out one day and massacred the whole of them. That is what the world wants to do to people who stand up for truth. That same thing happened to the Brook Farm. The men were not massacred, but the enterprise failed for want of financial support. They were really starved out, but the idea went marching on, and today there are thousands and thousands of people

who believe as these philosophers did, although there were only one hundred and forty at that time. There was Rev. Dr. Chas. Dana, who afterward became the famous editor of New York City. There was Emerson the poet--Ralph Waldo Emerson. We had a little excursion out there the other day, and the son of Ralph Waldo Emerson, the philosopher was there as guide to the party. And there was Bronson Alcott, and there was the very place where Louise M. Alcott wrote "Little Women." And these "little women" were all raised on that Brook Farm, all of them, and they were all vegetarians. Bronson Alcott called on us once, was a guest in this institution, and he told me that for fifty years he had abstained from flesh foods, and he intended to abstain from flesh food the rest of his life. Wendell Phillips was one of them, too, that silvery tongued orator,--one of the greatest orators this country has ever produced. He was also the guest of this house,--not this one, but the old one, and Wendell Phillips told me that for fifty years he has abstained from the use of flesh food. He adhered to this return-to-nature idea. This idea is not dead. It is going on, and this institution stands for this same idea, and we are endeavoring to promote it in every way we can. I hope while you are here you are going to get all the good you can from this idea. I hope that you will get so much good out of it that when you go home you will take it with you.

Q. Are pure sweets, such as milk chocolate, injurious to the stomach?

A. Now milk chocolate I could not say is an extremely injurious thing. Some people can not digest it. It tends to produce acid--that is the worst thing. Chocolate contains theobromin, and that is equivalent to uric acid; so on the whole it is not a thing that can be really recommended.

Q. Could an accident of any kind, such as a heavy strain, cause hypopepsia?

A. I don't believe one could get hypopepsia from a strain.

It is barely possible the stomach might become prolapsed, and after a long time that prolapse of the stomach might result in hypopepsia.

Now just a word, then I am done for tonight. You are here to get all you can out of this experience here at the Sanitarium. You are ~~not~~ only going to stay ~~but~~ a few weeks. While you are here I hope you will accomplish something. If you have not got a full program, get your doctor to make your program full. You ought to have a change of program about every twenty minutes all day long. Don't stay too long in any one place, but see that you have something to do. I see a great deal of loafing about this place. That is not profitable. If I were in your place I would put in every minute in doing something to get well. Now don't have too much faith. That is one trouble with many of our patients who come here. They have too much faith. You may have too much faith in your doctor. You may think you know the doctor is going to cure you. I want to tell you there is not a doctor in this house that can cure anybody. I know that from sad experience. I have never cured anybody. Well, perhaps I have cured a few corns, ingrowing toe-nails, bunions, and some things of that sort; but I didn't cure even them. I made a wound that had to be healed by a Power beyond me. The healing Power is in yourselves. If you all get well, it will be because the Power that is within you heals you. The Creator working within each one of you heals you, and that is the only healing power there is. There is no healing power in doctors, there is no healing power in medicines, there is no healing power in baths. The healing power is in the man himself; and if you do not have that healing power in you you never can get well. Some of you have got more than others, because some of you are nearer run out than others. Some of you have spent nearly all your energy. Your energy is nearly all spent. You have a very small amount of healing power left, and progress will be slow, and you will have to have all the help possible. Some of you

have too much faith in diet--think this diet is just going to cure you. I heard of a lady who said to another lady, who had just arrived and had just eaten her first breakfast, "I know this diet is going to cure me, for I have not been able to eat anything for three years but what would make me trouble, but I ate my breakfast this morning, and I would not know I had a stomach:" Food alone will not effect a cure. Suppose some of you were farmers, and suppose a strong wind should come along and break a hole in the roof of your barn, and the rain should fall through the roof down upon the hay and wet the hay, and you should say I will fix that ~~hay~~^{roof}--that is the cause of my hay getting wet, because the roof leaks. You may fix the roof all right, but the hay has been wet. You have got to do something to the hay, or it will mold and spoil. So it is with the body. Wrong habits have made your bodies diseased. But this condition can be corrected. It is not simply to stop these wrong habits--stop smoking, stop drinking tea and coffee, stop over-eating, hasty eating, stop using mustard, pepper, peppersauce, and all these things; stop the use of meats, rich sauces, and all things of that sort, or stop the excessive use of sweets. It is not simply that, but there must be something more done. The body must be reconstructed. The liver is crippled. You must get a new liver. The stomach is all worn out, almost completely exhausted--worn out, perhaps. Your stomach must be reconstructed, must be made new. And so with every vital organ of the body--it must be reproduced, reconstructed.

But, is that possible? you say. Yes, it is. That is the wonderful thing about these internal organs--stomach, liver, and other organs, they can be reproduced; and the process of reconstruction takes place with considerable rapidity. For instance, a German doctor some time ago took a rabbit, opened the abdomen, found the liver, cut off half of it, closed up the abdomen, and in three months he examined that rabbit, and that half of the liver that he had cut out had been reproduced, and the rabbit had a whole

liver, just as big and just as good as ever. So he cut off the other half. Closed up the abdomen, and in three months more examined it again, and the other half had been reproduced, so that rabbit had a brand new liver. I expect that is what a whole lot of you need--you need brand new livers; and fortunately you can have them. Livers can be reconstructed, not by surgical measures, but by the process of reconstruction which is going on in everybody's body all the time.

Did you ever hear anybody say, Well, I have got a vacation. I am going off to recreate a while. Notice how that word "recreate" is spelled out--re-create. That is the word. That is what it is for. We are going off to re-create for a while. That is a thing you can ^{not} do yourselves. It is done by the Power working in you, which made you in the first place. But you go off, put yourself under better conditions, and that Power which is within you will recreate you and make you well.

Now it is necessary to stimulate these re-creative processes in the body. It can be done. That is what cold baths are for--to stimulate reconstruction. We are continually rebuilding. That is what massage is for--to get at some particular spot and work that spot until fresh new blood comes rushing through reconstructing, repairing, and rebuilding. That is what swimming is for--to get your lungs to pumping, and to get your heart to working. That makes the diaphragm go up and down, and gives the liver a hearty squeeze every time the diaphragm comes down, and drives the blood out of it, drives the black bile out of it, wakes it up. And if there is gall-bladder disease it clears out the gall-bladder, relieves it of its congestion, and the whole process, the whole functions of this organ are put into more active operation. So you want to do something to get you to breathe, unless you have had heart disease and the doctor tells you you must not. A good many times a day set your breathing pump to going tremendously hard. It does you a world of good. I live about half a mile from here, and I usually come

down on my bicycle. When I go home at night, I get out in the middle of the street and ride my bicycle as fast as I can make it go. Why? Because I don't care anything about my bicycle. I can get another one, but I want to make my lungs work. I want to make my lungs go, make my heart work, get my chest to going, and make my muscles work. I want to make my heart work because, if I get my heart to working, the heart, you see, if I make it strong and keep it strong, it will send the blood around in all the different parts of the body where it is needed for its reconstructing work. It is the blood that cures, it is the blood that creates, and it is in the blood the work of Creative power is in operation. That is why we had that motto placed over the palm garden. As you come in from the front door, you look up to the center over the entrance to the palm garden, and you see that motto which says "He is thy life," and that life is manifested especially in the blood. So see that you do everything that is to be done here. Get the doctor to give you a full program to keep you going all day long. If you get tired, rest a little while, then start again. Don't say, if you feel a little lame, Now then I have lamed myself; I have got a sore back. Don't be afraid of it, because it is by work that the muscles get strong. Any one who goes to work in the gymnasium gets sore and lame. But you must go right out the next day and work again, and do more the next day. In three or four days that soreness will be gone, and gone forever. If you stop eating beefsteak and drinking tea and coffee, you will be amazed to see how little you will be troubled in that way.

I met a man today who does the most violent kind of exercise. He takes a twenty-five mile run in one day occasionally--Dr. Ossig. He ran the other day continuously for twenty-five miles without stopping. Four years ago I sent that man out to Colorado to die. I saw him while he was there, lying on the hills, a poor emaciated skeleton, his eyes sunken away back in his head, pale as a sheet, coughing and expectorating, half of one of

his lungs filled up with tubercle germs, and I never expected to see him alive again. He could walk but a few steps--just drag himself along. But he went into the outdoor life, the simple life, adopted the Sanitarium diet and treatment. He lay out there in the sunshine when he could not walk, and the sunshine revived him, helped him. And he just drank in the live free air--breathed as deeply as he could with his one lung. I was out there six months afterward, and you know that man ~~walked~~ up to me, looking as bright and chipper, and he said, "Come on, Doctor, come out for a run." He challenged me to run up the mountain. So we started out, and he beat me very quickly. Now that man after a year and a half out there came back. He lives here now. He slept in a tent out in my back yard all last winter. He never slept in the house ~~soo~~ one night all last winter. He slept out there in a tent all winter long. He abominates houses. You can see him here. If you have not seen him, call for him, and have an interview with him. It is Dr. Ossig. I see he is here. There he is, over there in the audience. The Doctor does not have any more aches and pains. Does not know anything more about them. I saw him the next morning after he took the twenty-five mile run. I said, Are you sore? He said, No, not a bit. That is because Dr. Ossig has returned to nature. He sticks right to it--lives there all the time, and he is well. He was as good as dead at the time I saw him as I have just told you about, and if he hadn't done the things he has been doing, there would have been a funeral inside of six weeks there from the time I saw him. There would have been a funeral as sure as the world. These things may not seem very harmonious when you talk them, but when you look at a man like Dr. Ossig, you can see they are worth considering. What I am telling you is plain simple facts.

We have here another friend, Mr. George H. Allen, of England.

Mr. Allen is going to talk to you one of these days. He is the man about whom I told you a little while ago, who walked all the way from Land's End to John O'Groat's, and did it in a whole week's less time than anybody else

ever did it. He didn't eat any beefsteak on the way either. He has not eaten any beefsteak at all, or any meat, in nine years, and he has become a strong man, a man of international reputation. He is going to do some feats over here one of these days. I won't tell you too much about it yet; but if he had been down in Greece the other day when that fellow won the Marathon race, and had been in the ring, he would have won. He has been doing some things. He has done better things than were done there. But Mr. Allen is a man of modest means. He didn't have anybody to back him up and send him down there. But if he had been there he would have won. You will see before he leaves Battle Creek that he will do something better than that Marathon race, and without any beefsteak. That is the reason why he won--because he has a good heart and good lungs, and he has no beefsteak to hamper him.

Mr. Allen is going to talk to you one of these days, so I won't anticipate. I only want to interest you in the return-to-nature idea,--to let you see it is God's idea, it is the Divine thought, and is in harmony with the great Power that made us and preserves our lives. And we should work to be in harmony with it. When we are sick it is because of wrong habits; because we violate the laws of life made for our good; and how can we hope to get health and strength and vigor, hope to be put in good repair again, when we ourselves are working against God, working against nature as we do?

I don't like to use that word, because it is misleading. There is no such force as nature. Nature is nothing but a picture--simply a panorama.

So while you are here I hope you will improve all the opportunities about you, and be inspired by what you see other men have accomplished. I am going to let Mr. Allen tell you his story some evening this week, and I hope he will set a pace for some of you which will lead you a long ways toward health.

HOW DOES A SICK MAN GET WELL?

A Lecture at the Sanitarium Parlor, Battle Creek, Michigan, Thursday, June 14, '06

At 8:00 P.M.

By J.H. Kellogg, M.D.

A question I used to ask myself a great many times is How can this sick man get well? As I was going into my office a poor forlorn-looking business man, depressed, with a hopeless look, perhaps all upset at home, perhaps completely broken up in business and with very little hope for the future, with a sour countenance, a disordered stomach, broken down nerves, coated tongue, miserable physically and mentally,--how can such a sick man ever get well? It seemed so impossible to me that anything we could do was ever going to transform that man and change him from an invalid to a well, happy, vigorous, cheerful man again, that my heart usually failed me. I used often to say to myself, How can it ever be? What can I say to this man? When he would say to me "Doctor, can you cure me?" I would say, "Well, now, my friend, while there's life there's hope. We will try, we will do our best." I would try to say something good, something cheerful, but really it seemed so utterly impossible that that man could ever be reconstructed, or ever made well and sound again that I didn't dare say very much about it.

That man got around in three or four weeks. I saw a wonderful change come over him,--the skin getting color, his eyes getting bright, his emaciated form getting rounded; and I tell you, my friends, it seemed to me the greatest miracle that could possibly exist on the face of the earth.

I have been here in this institution just thirty years -- a little more than thirty years. It is thirty years this year since I took charge of

this establishment. Thirty-three years ago I became connected with it, and I have seen that sort of miracles being done here all the time, day after day, month after month, year after year. I have seen thousands come here and go away well. Not everybody, but most all who came,--the great majority going away greatly helped. And that is why the institution has grown, because the people have gone away well, told other people about it, and they wanted to come and get the same help that others have gotten. And as the years have gone by I am glad to tell you I have finally solved the mystery. I know why sick people get well. You have gotten well, and we are glad of it, yet I can not cure anybody, and there is no doctor in this house that can cure anybody.

I will tell you a little story to get the thing before your mind to begin with, in an elementary way.

A missionary down in the South Sea Islands went out one morning,--and it is pretty nearly always summer down there; but one bright morning he went down to the sea shore and he saw a very curious circumstance. They have down in these islands a big kind of crab, a land crab, that goes down to the water and gets something to eat, and then goes back to its hole in the rocks. This land crab has one peculiar habit. If it gets its foot soiled, instead of hunting up some way of washing it somewhere, as you or I would do, he proceeds to pluck it off. It simply seizes that foot with its nippers and cuts it off. Well, the missionary saw this land crab on its way down to the shore to get its breakfast, and observed that a misfortune had befallen the poor little creature. While he was crawling over a little stone, the stone rolled over and he was thrown into the mud. After he got out it looked itself over for a minute, then deliberately went to work and cut off all its feet, and dragged itself home by its nippers. Cut off all its legs, dragged itself slowly home by its nippers, went home to his hole in the rock.

Six weeks afterwards this land crab reappeared with a brand new set of legs. Now the land crab had faith, you see. It knew therefore legs coming. ~~It knew~~ It knew the next time it molted, shed its skin, a whole brand new set of little leg buds were there ready to sprout out, and when its skin was shed these little legs would come out; so it didn't feel very much concerned though it lost its legs. Perhaps some of you know that crabs and lobsters are very prodigal of legs. If a lobster gets scared, he shakes off a leg. If he gets mad he sometimes bites off a leg. Lobsters and crabs fighting together with one another tear legs off at a great rate. Lobsters are as extravagant of their legs as men and women are of their stomachs. They throw away legs without any sort of provocation.

Now a lobster is not afraid to tear off a leg, because he knows at the next molting period he will have a brand new one. A lobster gets a new set of legs every time it molts. The same thing is true of crabs, and of many other creatures of the same sort. Every time they shed their skin there comes out a whole new set of legs. Now by what power is it that these lobsters get their new legs? Cut off a man's leg, and it does not grow on again. Cut off a horse's leg and it does not get a new one. Yet here is a boy eight years old, pull out a tooth, and he does get a new tooth. I met some time ago a man eighty years old who had just got a new set of teeth. He had been without teeth entirely for twenty-five or thirty years, but he had just got a new set. You have all heard of such cases, I am sure.

There are certain parts of the body, then, that are reproduced in this way.

A German physiologist, I think it was -- I was telling about it the other day -- took a rabbit, opened its abdomen, cut off half its liver, closed the abdomen up, and three months afterward opened it again, and found that that portion of the liver he had cut off had grown on again. Half of it was new. He cut off the other half, and in three months opened the abdomen again, and found that the second half had grown on; so the rabbit

had a brand new liver. That was a very unique experiment. The very same thing has been observed in the body in other parts. Certain structures can be reproduced. If you have a broken leg, there is a little gap between the bones. They are a little ways apart. That space is filled in with new boney substance. Nature makes a splice so that they are cemented together, spliced together, in a most admirable manner. There is an illustration of new development in the formation.

Well, this happens in the body in various other ways. Here is a man who had an injury to his nerve. The nerve perhaps runs down the arm and is distributed into the five fingers. That nerve may be cut across or injured. In order that that nerve should be reproduced, repaired, it is necessary that there should be some new nerves grown, because the ends of the nerve don't touch exactly. There has to be a little growth of the nerves. Suppose you bring them close together, for they are not absolutely in contact, but are only near by, and the nerve fibers have to grow out from one to the other. The thing that happens just then is a marvelously interesting thing. It is only recently that the facts have come to be fully understood.

Now you know the nerve is like a bundle of telephone wires. If you look out in front of the building here in the morning you will see strung along these poles, telephone poles, a large cable. This cable contains twenty-five or thirty telephone wires. There is one that goes up to my house, one to Dr. Riley's house, another one goes to Dr. Morse's house, another one to Dr. Stewart's house, all along Manchester Street. Now we will suppose this is the rubber coating that covers the cable, and here are some of these telephone wires. There is one wire, here is another, here is another, and here is another. We won't try to draw all of them. Now suppose that cable should break,--there is a gap. When you undertake to bind these together again it is quite a job to match them, isn't it? ~~It would be quite~~

It would be quite a job to make all these match together. That is exactly what the nerve fiber is. The nerve fiber is a bundle, it is a sheath. But instead of being composed of thirty of these fibers there are thousands, many thousands,--these little threads, each one of them not more than one-twentieth part of an inch in diameter. They are done up in these little bundles running down to be distributed, and as a nerve divides or sub-divides, these little bundles are divided. Some of them run off in this direction, others in other directions, so they go off in all various directions, each minutely sub-divided, so as to reach the most minute parts of the body. There are thousands of them in every little piece of skin. There are hundreds and hundreds of them in the space of skin that would be touched by the head of a pin. And these little nerves are distributed all over the body and within the body.

Suppose, then, this is a nerve instead of a telephone wire, and there are thousands of these little fibers, and the nerve has been cut in two, and the ends brought near together. Really, the distance will be much greater than it is here, for, as regards diameter, these minute fibers inside are very small, not more than one-twentieth of an inch in diameter. So if we should press the ends together even then the distance between the ends of these two fibers would be more times the diameter of the fiber than exists in this case here. Suppose it is twenty times the diameter of one of these red marks. Suppose these fibers are so near together they are only one-thousandth of an inch apart. Still it would be a gap there that would be twenty times the diameter of these little fibers themselves. Now how are they matched together again? I tell you, my friends, that is a problem. Physiologists puzzle themselves about that. Here is a bundle of these fibers brought up one against the other. There are perhaps a hundred thousand fibers. When they are once cut in two, how in the world are they ever going to be matched up again? Well the old theory about it was this. Suppose that this is the end of a nerve next the body, and that is the end of the nerve distributed down to the arm. The theory was that whenever a nerve was cut in this way,

the part of the nerve next the body started to grow out again and grow down the whole length of the nerve. Think what a task that was, for a nerve to start out, for instance, in the spinal cord here, and go down to the feet, and that nerve was cut up here in the body somewhere. Now then, according to the old theory, it was necessary that these nerves, in order to get well should sprout out and grow the whole length, until they filled in the ~~shank~~ nerve again. That was the old theory, but it was purely a theory. Why? Physiologists said, How otherwise could it be? because certainly these little fibers never could match.

Suppose we have a transverse section here. This is cylindrical, you know, and we are looking at the end of it now. We just see hundreds of these, great numbers of these little fibers that are distributed all over. They are all bound up together you see, and we are looking at the end of them, only, instead of being a few, as I have pictured ~~that~~ here, there are perhaps one hundred thousand of them done up in this bundle. Now the question is, How can these fibers get matched again? For instance, here is No. 100,000, and here is No. 999,999. How is No. 999,999 going to match itself to the other side? This thing is beyond all possibility of estimate. Think of it, for instance. Now here is No. 999,999 goes to my little finger,--no, it was the foot we were talking about,--goes down to the little toe. Here is 999,998 that goes to the big toe. Now suppose that fiber which goes to the little toe, #999,999, should get mixed up and get joined to the fiber which goes to the big toe, #999,998. The result would be when you told your little toe to contract, it would be the big toe. Suppose here is a muscle that moves the leg forward. Suppose the nerve that goes to that muscle would go instead to the muscle in the back side; then, when you wanted to put your leg forward, it would go back instead of forward, so you would go backwards instead of forwards if you wanted to go somewhere. So you see it is very important that these nerves should not get tangled up, but should reach the right spot.

So suppose this is the bundle of nerves that went to the skin, and the nerve intended for the feet should go to the thigh or to the knee. Well now, suppose that somebody should step on your toe. You wouldn't know it. You would think it was your knee by the touch. You would move your knee away instead of your toe. You see the whole control of things would be lost. Everything is completely mixed up unless these nerves are all joined in the right way.

Now how is the thing to be done? How can it be done? How can these nerves be matched up as they ought to be? The investigation of the subject upon lower animals has shown this wonderful thing, that after there has been a division of that sort in the nerve there is a ~~space~~^{clear} fluid poured out between the ends of the nerve. Then upon the upper side, next to the spinal cord, these nerve fibers begin to grow out, and they begin to sprangle out like a spray, and they keep moving around, and they come over here and push along these different ones until by and by they find the one to which they belong, and when one finds its mate, there it stops. Now it is the same thing as though this telephone cable here had been cut. You are looking at the ends of the cable, you see, up there in the air. Suppose pretty soon you should see these cable wires sprouting out from the end of the cable and swaying all around in the air, reaching all around toward the other cable; by and by finding the end of the cable, then go feeling all over the end of the cable to find the wires that match the others. That is what these nerve fibers do,--~~each one~~ each one intelligently guided, reaching out there in the length which surrounds the end of the fiber and feeling of these thousands of nerve fibers until each one finds its mate, when it attaches itself at once, and the break is restored.

Suppose, my friends, you should look out there tomorrow morning and see that cable had been broken, and see it proceed to repair itself in just that way. What would you say about it? You would say there was something uncanny

around, something wonderfully mysterious. But this is just what is happening in the body. There is a power at work in the body that is doing these wonderful marvelous things. Suppose you should look out there and see a tree springing up suddenly out from the ground, with leaves, branches, and everything. You would say something had happened. You would say that is a miracle. And, my friends, that is the same sort of miracle that is going on in our bodies all the while. Let me just mention one thing to you here for example. Here is a little circumstance^s which I suppose has happened to all of you along some time in your life.

Perhaps you have had a boil or a swelling, or an abscess, or something of the kind. Now what was that boil? Some germ got in under the skin. A man showed me today where he had had twelve boils on his wrists within a short time. Why did he have them on his wrists instead of his elbows? Because his cuffs rubbed his wrists and irritated the skin and rubbed the germs in. That is why men have bells on the back of the neck. Stiff collars rub the back of the neck, and that is the explanation of it. Now here is the skin. Here are germs growing on the skin all the while, and these germs are working their way down into the skin here. When they get down below the skin they begin to grow and multiply. That is, they do sometimes. They do not always. It sometimes happens that they do not. It generally happens that they do not, because the blood is able to destroy the germs. Now we will suppose that we have here a blood vessel. Let this represent a blood vessel. Look at it ^{marching} through the microscope and you see ~~marching~~ down through the middle of the vessel some round little masses called red cells. Wonderfully interesting little things they are. Now ^{stringing} along the side here you see now and then a white ~~stringing~~ ^{one} ~~stringing~~ along. Once in a while you see one that seems to be sort of hitching along. The red cells of the skin march right straight along like a regular procession of soldiers. But these white ones hinch and roll along in a very leisurely fashion. One would naturally think they were loafers,

but they are not, they are looking for something. For instance, you see this cell here, and you see it rolls along until by and by it gets to where that little germ is,--a little speck, or a germ has gotten into the blood. Just as soon as it gets up to it it swells out, takes it inside, ^{picks} ~~takes~~ it up exactly as a drop of water rolling down a pane of glass will pick up a speck of dust. It is just a drop of living jelly. It just absorbs that germ, takes it inside, you see, and after a while it gets dinner and dinner and dinner and dinner, and by and by it actually disappears. It has been digested. These cells actually digest germs. This process is going on continually in our bodies. Millions and millions of germs of this sort are digested every day. There are produced in the body, in the alimentary canal alone, a trillion trillion germs,--one trillion trillion germs every day. A trillion is a lot, isn't it? But there is a trillion trillion germs produced every day in the alimentary canal. That is a number with twenty-four ciphers. That number of germs is produced every day in the alimentary canal. They are swarming into the body, taken up into the blood, carried to the liver. In the liver great numbers of them are killed, but sometimes they do not get killed, and then they make gall stones. Gall stones always have some of these germs in the middle of them. These gall stones come from germs. Suppose you have got some germs in your body somewhere. Here are some tissues outside of the blood vessels, and some of these germs have gotten in the tissues. Now watch the blood cells and see the red ones go straight along with the white ones. They go along until they get opposite where that germ is, then they stop. Another one stops, and another one, and they keep stopping there until by and by a great number of them have collected, a whole crowd around there. If you watch closely pretty soon you will see one of these boring a hole right down there, and beginning to poke itself through, and pretty soon you find that this cell has gotten through on the other side.

There it is, and you watch it and see it moves right straight toward that germ. It hasn't any eyes, yet it goes right where that germ is. At any rate it goes right straight to it. It does not go hunting all around feeling here and there, but goes right straight until it gets to the germ, and pretty soon you find the germ inside of it. It is eating it up, digesting it. That is the thing that is happening in the body. This thing happens millions of millions of times every day, every hour, every instant. Hundreds of thousands of germs are being eaten up in just that way. That is what these white cells are for. This is the only way in which the body is defended. This is the thing I want to call your attention to. The power to defend one's self against disease depends to a very large degree upon the number of these white cells. His power of defense sometimes gets low. When a person gets pneumonia, for example, if you examine his blood when he first gets an attack of pneumonia, perhaps you find that he has not more than one white cell to six thousand red cells. That is about the usual number,-- one to four thousand, or five thousand. There will be four thousand of them to a single drop of blood, a drop so small that it will just hang on the point of a pin,--one-twenty-fifth of an inch in diameter. In such a cube there will be four to six thousand. Now if a person gets pneumonia, the next morning after he gets pneumonia, if you examine his blood, you will find he has got twenty-five thousand--four times as many as he had before. Now, just think how many must have been created,--he has four times as many as he had the day before in his entire blood everywhere. Now there are about twelve pints of blood, and every minute drop of that blood has got twenty-five thousand of those little white cells in it, and of that twenty-five ~~thousand~~ thousand nineteen thousand have been produced within twenty-four hours. Well, now the next day perhaps there will be seventy-five thousand, and possibly, if it is a bad case, the next day there will be as many as one hundred and twenty-five thousand. So they go on multiplying in that way. So here we

have now more than fifty times as many white cells as we had three days before, and they have all been created.

Here, you see, is a process of creation going on in the body. That same mysterious Power that made things in the very beginning of time, is working in every human body all the time. Why, my friends, that is the hope upon which your recovery is based; it is this hope, this marvelous fact, which is known to physiologists, but common people generally do not understand it. It has not been presented to them. You didn't learn that when you studied physiology at school, because the fact has not been recognized by physiologists until within the last few years. But within the last few years this thing has come to be recognized. So that it is now known as a scientific fact. And it is true that there is working in the body a mysterious Power. Prof. Bunge says-- a thing which exists in itself, a power which exists in itself, a self-existent power; that self-existent power is working in the body. The great unknowable Mr. Payne used to say-- the non-relative. The philosophers say--the great unapproachable, the unknown Being that created all things in the beginning. That same Power is working in every human being every second of his life, and that is why it is possible to live. That is the thing that makes it possible for a plant to live, or a fly, or an ant, or the smallest insect. Every creature, every living thing depends every moment of its existence upon these life processes that are being continually carried forward, and in such a marvelous way,-- a marvelous constant activity that we must recognize, the very same power that made these living things at the very beginning. In other words, it takes the same power to keep a thing alive that it did to make it.

To speak still further, when God made Adam he didn't start ^{him} out all alone by himself with ability to take care of himself, but he had to stay right with him. He had to stay right with him to take care of him and keep

him alive after he had made him.

Now that is a very wonderful thing. When I first got hold of that thought so I appreciated it and really understood it, it fairly overwhelmed me. It brought tears to my eyes a great many times, because I saw I didn't need to be afraid of anything any more, because that same Power that kept my heart beating while I was asleep, took care of my heart when I could not take care of it, that same Power knew everything that could possibly happen to me, and would take care of me so long as I had anything to do, so I didn't need to worry about anything. Now think of it!

A lady sat down in my office, and she said to me, -- she looked very unhappy --

"Doctor, I heard you talk in the parlor the other day about this great Power that makes things, that keeps things alive. Do you really believe that there is a God that is interested in me personally, that knows about me? I believe in God, but then God is so busy, he has got so much to do -- he has got this great universe to take care of; I can't imagine that great Being could be interested in me, or could think of me."

I said "Let me feel your pulse." I felt her pulse. I said "Your heart is beating."

"Yes," she said, "I know my heart is beating. I would be dead if it didn't."

"So you would. Well, now," I said, "as I feel your pulse I notice your pulse is beating ~~about~~ about seventy a minute. Would you have your ~~heart~~ pulse beat a little faster, -- have your heart set your pulse going faster?"

"Oh," she said, "I can't make my pulse beat faster."

"Well, then, make it beat slower."

"But I can not do that. I can't make my heart beat any faster or any slower. I can not control my heart."

Then I said "Something does control your heart. Somebody does control your heart, because your heart is a muscle."

The heart is simply a muscle. I tell you to move your arm or your hand, and you make your hand beat the table. You can do that. You tell your hand to beat the table, or you tell the muscles of your arm to contract, and your arm contracts the extent your muscle contracts. But the hand does not beat the table unless there is a command behind it. Every time your hand strikes the table it is because there is a command to strike, a command issued to it; so there is power behind the hand. There is a will behind the hand, you see, an Intelligence behind. Now the heart is simply a muscle, nothing more than a muscle of the arm, like the muscles of the arm. Every time the heart beats it is simply a muscle contracting; a muscle that has a cavity inside, and when it contracts it squeezes the blood out. And it goes on contracting all our lives seventy-five or one hundred times a minute, and each beat is in obedience to a command, and behind that command there is a will that issues the order. There is an intelligent mind that thinks.

When you go upstairs your heart beats faster than when you walk on a level. When you lie down your heart beats sixty times a minute. When you sit up the rate of your heart beat is 70. When you stand up it is 75. When you walk it is possibly 80 or 90 or 100. When you run it may be 140 or 150. What is it that varies the rate of your heart? You do not vary it. You do not say, "Now I am going upstairs, my heart must beat ten times faster, and so set your heart to going just as you regulate the clock. You do not say "Now I am going to run, my heart must work faster, so I will have it work 150 times a minute, because I am going to run very fast." You do not do anything of the sort. But all these regulations and variations, with the most extreme nicety, are controlled without any consciousness of yourself; I mean without our own intervention

in any way whatever. How is it? Why is it? Why it is because there is One that knows more than we. There is an Intelligence above us that knows exactly what we need, and that is all the time looking after our needs, looking after our wants, supplying them regularly -- this marvelous internal machinery exactly according to what is required of it.

There was a time when physiologists sought to explain all these wonderful things that are going on in the body, the operation of the various physical and chemical laws. The scientists have assigned great power to law. The scientist has told us a great deal of how the laws of nature do this and the laws of nature do that. Now, my friends, law is not a force. Law is simply a habit. It is simply an observed order. It is a law. You talk about the law of gravitation. Gravitation is simply that things fall. Bodies of lesser mass fall toward bodies of greater mass -- may fall up or down, it does not make any difference. The apple on the tree falls toward the ground because the earth is bigger than the apple. If the apple were bigger than the earth, the earth would fall up. As a matter of fact, the earth does fall a little bit up just as the apple falls down, but the movement is so very slight it could not possibly be measured; it can scarcely be calculated. But all bodies when set free move toward one thing in proportion to their respective mass. That is the law of gravitation. That is the thing which is always done. We observe it. It is always so. That is a law. The law has no power in it to do things. So you may say it is according to law that the heart beats. But there is no power, no intelligence in it. It is simply a law with no power to regulate anything. But the physiologists and scientists have given up all that philosophy. They do not attempt to explain it any more by physical, or natural, or chemical law, but they admit in the latest analyses that there is an intelligent power regulating all the functions of the body every second, every instant of their

lives, intelligently, beneficently, constantly, without any intermission whatever, looking after all the nice adjustments which are necessary to keep all the bodily functions in perfect order.

Now what a wonderful thing that is, my friends, isn't it? Now thankful we ought to be that this is true. Now thankful you and I ought to be that we do not have to sit up nights to keep our hearts going. We do not even have to sit up nights to keep our lungs going. But sometimes people get to the point where they do. The machinery breaks down. I knew a man some time ago who had to sit up to breathe, because as soon as he went to sleep, or lay down, ^{he} stopped breathing, and it required some little time to get things adjusted for him so he could sleep. That man had only one lung. The other lung was filled with water. When he went out to Colorado the air was so thin he wrote me he could not get breath enough when he was asleep, so he had to sit up to breathe. He had to keep pumping with all his might to get air enough into that one lung to keep him going. He had to have the doctor take the fluid out of his lung, so as to liberate the other lung and get it in operation.

Think of the stomach for a moment. The stomach makes gastric juice, and this juice digests things. Put a piece of animal into the stomach, a piece of beefsteak for example, and it is digested. Put a whole animal into the stomach, like an oyster, for instance, an oyster on the half-shell, swallow that oyster alive and kicking into your stomach, and the stomach will digest it. You remember the man who lived in a tub once-- the philosopher of the tub. He invited all the people of Athens to come down and see him swallow a snail. He advertised that he was going to swallow a snail at a certain hour the next day, and all the people of Athens came down to see him swallow that snail alive. But that was just an experiment to see how people would come out, how their curiosity would be excited by some ridiculous thing of that sort, and he pointed a moral, a lesson from

that circumstance. He didn't do it from frivolity, but it was to attract attention and get an audience, and then he gave them a little talking to. Now that snail was digested. Why? Because the gastric juice has power to digest any kind of proteid substance. The question is then, Why does not the stomach digest itself? When the gastric juice will digest the stomach of a pig, if it will digest a stomach, liver, and everything else in the stomach, why does it not digest itself? The wisest man in the world can not tell that, can not explain it to you except on this very ground on which I am explaining the whole phenomena of life to you,--that it is the same Power that made the man that is working in him continually, watching over him, regulating and performing all the body's functions for him. That is the Power, and that Power alone ~~think~~ can preserve the stomach from being digested by its own gastric juice. So when you eat your dinner, take your dinner inside of a fleshy pouch, the moment that dinner goes into the stomach there is corrosive gastric juice inside there that can dissolve that dinner, digest it and absorb it,--beefsteak or whatever it may be, ^{not} But it does ^{not} dissolve the tissue of the stomach itself. Why is it?

I met a man some time ago whose throat got closed up so I had to make an opening to connect his stomach with the outside of his skin, so he was without any esophagus. So we furnished him with a rubber esophagus, and he chewed up his breakfast, swallowed it into his stomach through a rubber tube. There was a little leak around the rubber tube through which some of the gastric juice came out upon the skin, and it just digested the skin, so that the next morning the skin was all raw. The gastric juice got outside and had eaten up the skin. Why does not the gastric juice eat the stomach then, as I said before? The skin is tougher than the stomach. It is simply because there is a power operating there in the stomach, to preserve it, to take care of it all the while.

Now, my friends, it is this power which was recognized in the earliest times by men who have studied this, and among the ancients it was called the Vig-medicatrix Naturae -- the natural healing power; "Vig-medicatrix Naturae" -- the curing power of Nature. This power was recognized by the ancients. They recognized that there was a natural curative power within the body. They did not recognize it in just the same sense that I am speaking to you of it, but they recognized that there is a curative power working in the body, and this curative power that is working in the body is the thing that does the curing. Go back still further in the ages -- to Moses and Adam. You find Moses saying or writing this, -- at any rate you find it in one of the books of Moses -- "If ye obey ^{all} these judgments and statutes which I give you I will bring upon you none of the diseases which I have brought upon the Egyptians, for I am God that healeth thee." Now God himself spoke that through Moses. We find it in the Bible. He said "I am God that healeth thee." Now that thing is just as true today my friends, as it was thirteen hundred years ago. If a man gets well, it is God that heals him. The Creator heals him. The same Power that made him preserves him, keeps him alive when he is well, that same Power cures him -- cares for him when he is sick and restores him to health, if he ever gets well.

If you are going to depend upon God to heal you, he expects you to cooperate with him in that thing. Suppose you employ somebody to mend a fence for you. Some boards or pickets have been knocked off your fence, and you employ a man to go there and put these pickets back in your fence. And then when he goes away you go back and knock some pickets off again. It would be a long time before that fence would be put in good repair, wouldn't it? Suppose you employ a tailor to mend your coat, and as soon as the tailor is gone you cut holes in your coat, or burn holes in it, --

light a match and set your coat afire; light it or tear it, or injure it in any other way,--it would be a long time before you would have it fixed up in any very good shape. My friends, that is the way some people undertake to get their bodies repaired.

Here is a man who says, "I have got a weak heart. I must take something for my heart." So he sets out to get his heart cured, and every morning after breakfast he smokes a cigar, and that poisons the heart. After dinner he smokes another cigar, and after supper he smokes another, and perhaps smokes some more cigars between; and when any friends drop in and offer him a cigar he must smoke a cigar with his friends, or with his customers, if he is doing business; so he is all the time poisoning the heart. How can he ever get well? Here is a man who says, "Oh I have got such a bad stomach. Doctor, can't you do something for my stomach?" My friends, there is no doctor that can do anything for your stomach. He can tell you some things to do for your stomach, how to treat it, how to be kind and good to it, but the doctor himself can not do anything to your stomach, unless it might be a surgical operation -- remove something from it, or something of that kind. Now while you are trying to get your stomach cured you sit down at the breakfast table and put down into your stomach things that excrete it, such as mustard, pepper, peppercorn, ginger, horse-radish, and other things that fairly sting and burn and smart and blister as they go down your throat. You do not feel them after you get down into your stomach, but they injure the stomach worse perhaps than they do your throat. A great many people take Jamaica ginger with the idea that it does good, because it warms things up in your stomach. Suppose you put it into your eye. Won't that be warm? It does in your stomach exactly what it would do to your eye. If it warms up the stomach it is because it irritates it. If it warms up the eye it is simply because it irritates it; or, if it irritates your eye, it is simply because it

warms it. It does not stop with the stomach, but all the way along until it gets into the blood and is circulated through the liver and nerves, goes all over the body, and it produces the same sort of irritating mischief everywhere it goes. Suppose you should do that. How long do you suppose it would be before your stomach would be well?

The thing for a man to do who wants to get well is to find out what God wants to do with him, to find out the rules of the life that have been established by him; to find out what is good for him to do, how much to eat and sleep, what kind of air he should breathe, how he ought to relate himself to all the agencies of life. That is exactly what you would do if you had gotten a pet bird, or a pet animal of some kind from South America or from Africa. The first thing you would ask would be, What does this animal eat? What shall I feed him? You would ask if it should be kept in a warm place or a cold place, a damp place or a dry place, in a dark place or a light place. You would ask all about it. You would inquire carefully into the natural conditions of life for that animal. Now how is it about ourselves? Do we do that? Do we often say to ourselves, Now then, what is natural to eat? I suppose some of you are interested in that, and that is the reason why you are here. Indeed, the whole thought in this institution is to find out what is natural, to find out the natural way, to find out how God wants us to live and what He intended for us, what are the foundation principles of our life; and when we have found that out to follow them. And we go further than that, because we find out the natural methods of cure; we endeavor to follow the natural methods of cure; to find out what means there are by which we can assist the curative processes of the body. After we have conformed to all the proper conditions of life, after we have ceased to do evil and learned to do well, as the prophet said, we then must look a little further and see what are the natural means that may be employed to facilitate these curative processes.

If a man has got a bad liver, the only way in the world he can ever be well is to get a new one. And how can he help to get hold of that new liver? If a man has got a bad stomach, it is only by getting a new stomach, by having the stomach reconstructed, that he can ever hope to be well. And the question here is how can we best aid this power that is working within us all for making that new stomach. Can anything be done? Indeed it can be done. The nerves are damaged, almost irretrievably damaged. How can these nerves be rebuilt? How can this reconstructive power be encouraged and helped? That is the whole inquiry.

Now after forty years of experience -- this institution has existed forty years this summer; forty years ago this summer this place was opened, and for the last thirty years it has been going on constantly on the principles and the system we are working on now. It has been gradually evolving during these thirty years a system which is the outgrowth of this constant seeking for means that are representing the divine powers that are working in us, means of working in harmony with these powers -- "The natural method" we call it. This natural method has power in it, vitality, a miracle-working power, simply because it is divine; not because it is natural simply, but because it is divine, because it is the original method that God intended for helping the sick to recovery. Now as a result of all this seeking, this work and this experience we have gradually evolved what is called sometimes "The Battle Creek Idea," "the Battle Creek System," and we have it here in operation.

Last year, a few weeks later than the present time, we had here a thousand people who were seeking health, and so many of them got well last summer that we expect we will have a thousand here this summer -- more than that possibly, and if we do, we shall cover the lawn around here with tents. We will take care of all who come. The outdoor life enables us to get

along very simply if we have to. So we find multitudes coming,--five, or six, or seven thousand a year of sick people coming here, and the great majority of them going away helped, cured, restored. It is simply because we seek to cooperate with our Maker in restoring the sick and diseased body to its normal condition again.

Now I am speaking these things to you tonight because I find a great many people come here with the idea --"Well, I will go up there to the Battle Creek Sanitarium, I will stop there a little while and get my stomach in good order, then I can come home and go right on just the same as I did before. I can eat what I want to, and I won't have this trouble that I have now." Perhaps you have been working so hard that you have gotten run down, and you say, "I will go to Battle Creek and get myself fixed up, so I can come back and work just as hard as ever,--put in twelve, fourteen, or sixteen hours in the office counting the dollar bills, and things just as I used to do." "My heart is so weak I can not smoke any more. I will go up there and get my heart straightened up, and then I can smoke these Long Nine cigars again." Now, my friends, I want to say to you that that thing can never be done by you, and you ought not to want to do it. When you have once found out the right way you ought to be willing to travel in it. I do not think it is worth while to coach people up in wickedness. I would not employ my time to help an old smoker to get his heart in shape so he can go back to his pipe again. I would say, "Go on with your pipe, smoke it, and get through with this thing as soon as you can, and the sooner you are out of the way the better: you are doing no good. You are setting a bad example. You are fighting against God. You are ruining your body; you are defacing God's image. And if you do not want to be reformed, what is the use of bothering with you?" I confess that is the way I feel about it. The man who does not care anything about reforming, who does not want to turn away from his evil ways to seek a new and better way, what is the use of

spending time with that man? He is a tare, don't you see? We can not make wheat out of tares. The Bible says the tares and the wheat shall grow together until the Judgment day. All you can do is to make better wheat out of wheat. You can not convert tares into wheat. There is no hope for that. And when you find a man who will not turn away from his evil ways, and is determined to go right on in these evil measures, you might just as well let him alone, as I said before, for he is a tare. I do not mean to say that every man who smokes tobacco is a hopeless tare, in that sense of the word. He is a tare as far as tobacco is concerned, and if he won't reform there is no hope for his heart, for he has tobacco heart. The man who has gotten Bright's disease of the kidneys by drinking whisky, beer, etc., you can do nothing for that man until he first of all removes the cause. Here is a man whose house is afire. How did it get afire? He threw a burning match down in the waste paper basket. That set the house afire. You can start a fire, but you can not put out a fire. So that man is going around lighting matches and tossing them among the papers in the waste paper basket, and fires ^{are} breaking out behind him everywhere he goes. You have to follow that man with the fire department, and keep right after him, and the probability is that even then he will burn his house up some day when the fire department can not be gotten in quick enough. He will get up such a great blaze the house will be carried off. That, my friends, is exactly a picture of the daily lives of some of you. Every time you sit down at the dinner table you are simply throwing a match into the tinder box. All it needs is simply a little spark to kindle a great conflagration. May be you are just upon the point of an acute attack of rheumatism -- rheumatoid arthritis or gout; may be you have just gotten to the point where that gout is ready to break out. May be all it needs is just the poison in a single cup of tea to finish the work. The last straw breaks the

camel's back, and that is absolutely true in physical matters as well as in relation to other things. As I said before, the thing is to get in the right road, find the right way, get into it, and stay in it. So I feel that the greatest benefit we can give people here at Battle Creek is to put them in the right way.

This morning I was called out of the operating room. A gentleman called to see me in great haste. He was a business man who dropped off the last train. He found me in the operating room, and he insisted on seeing me. Fortunately I had to wait a few moments for another case to get ready, and while it was being gotten ready, with my gown and operating accouterments on, I stepped out to see the gentleman. It startled him a little bit to see my appearance, but he got composed.

"Now," he says, "Doctor, I have got just ten minutes. I am suffering from diabetes." -- That is a disease in which there is a large amount of sugar carried off through the kidneys, because it is not burned in the body. He said, "I want to know if you can do something for it."

"Oh yes," I said, "there is no doubt we can do much to help you."

He said, "How?"

I began to tell him about the nature of his trouble, why he had sugar, that that sugar was simply a symptom, an indication that the whole body is diseased. His blood-pressure was 175, and it ought to be 105 only, so it was 73 too high. That is 50 % more than it ought to be. I said, "You have got to bring this blood-pressure down. This high blood-pressure is evidence that the disease is not only in the kidneys, but it is all over the body everywhere. The whole body is diseased, so you will have to be reconstructed."

"Well, what can you do for me?" he said.

"In the first place," I said, "you must have your diet corrected. Then we must teach your body to burn up this sugar, to destroy this sugar,

and you must eat just the right amount of food, have just the right number of calories -- just the right number of calories of carbohydrates, just the right number of protein, just the right number of calories of fat. Much must be carefully calculated out. Then you must have treatment that will help you to burn up this sugar. Have your exercise properly regulated."

"Now, Doctor," he said, "look here. Just tell me what to do. I want something to do. Can't you give me a formula? Can't you give me something to take home to cure this disease?"

I said, "No. You must come here and stay here awhile."

He said, "Oh I have got too much business! I can not get away."

"You must come and stay a few days," I said, "so we can teach you how to eat."

"Is it necessary for me to stay here several days?" he said.

I said "I think it is necessary to stay here a few days, at least long enough to learn how to regulate your habits, and to learn how to do some things which are essential for you to do."

"All right: Good day, Sir!" and away he went. He meant to say, "I haven't any use for you. If you can't give me a prescription for some medicine of some kind that will cure me, then I want another doctor," and he started off.

Now this man looked very intelligent. He was a very bright looking man. I dare say he is a talented business man, but he has not given enough thought to this thing so as to have any proper conception of how health is to be gotten. It is not to be found in pills. The curative power is not bottled up. You can not bottle up a thing that has power in it to take a man who is right down in the gutter and lift him out of it and put him up on the high road of health and make of him a man of health and vigor. That power can not be kept inside of a bottle. The cork would not hold it. It would burst the bottle. And you can not find that sort of thing in any

mineral spring. You can not find that thing in any climate or in any bottles. It is not to be found in any of these things. That power exists only in yourself. It is the same power that is found in a mighty tidal wave. It is the same power that is found in the hurricane, and in the cyclone and the earthquake. It is the same great power that is moving things in the universe, that keeps the earth revolving around the sun, and the sun around some distant point in the heavens. That is the power that heals, and there is no other power that has the power to heal. Now the thing for us to do is to cooperate with that power,--find out what it wants us to do and what it is trying to do, what it will do for us, then cooperate with it, and keep right on cooperating with it.