

From

The Battle Creek Sanitarium,
Battle Creek, Mich.

7-23-30

THE BATTLE CREEK SANITARIUM
SENDS A SKILLED DISTITION TO LABRADOR

Sir Wilfred Grenfell, the world famous hero of Labrador, whose whole life has been devoted to the betterment of the benighted people in that country, has found that beriberi, a disease which until recently destroyed more than 15,000 lives annually in the Philippines and hundreds of thousands in Japan and China and other oriental countries, has made its appearance in Labrador in the fisher-men villages along the coast.

At the request of Dr. Grenfell the Sanitarium last year sent Dr. Helen Mitchell, the Director of the Sanitarium Nutrition Laboratory, to Labrador to try to discover the causes of the beriberi outbreak and of other conditions affecting the nutrition and general health of the people. From Dr. Mitchell's highly interesting report it appeared that the average family in Labrador lives largely on tea and fine flour bread. The usual allowance is a barrel of white flour per year for each adult. Plenty of molasses, corn beef and salt pork, oleomargarine and a few peas and beans and some salt fish make up the balance of the diet. Fresh vegetables are almost wholly unknown. As a result the whole population is suffering from malnutrition, with the frequent occurrence of night blindness, beriberi, rickets and scurvy, all diseases that may be easily prevented

by proper regulation of the diet.

As a result of Dr. Mitchell's survey and her report of the conditions found, another Battle Creek College dietitian, Miss Vaughn, has this year gone to Labrador under the auspices of the International Grenfell Association, and will spend a year in that country and North New Foundland where similar conditions exist, instructing the people in the principles of right living. She carried with her a large stock of seeds and gardening implements, besides special foods for combating beriberi and other diseases due to a deficiency of vitamins. The result will doubtless be a marked improvement in the health of the people of Labrador.

Unfortunately there are millions of people in the United States who are suffering from malnutrition in ways not different from those in which the people of Labrador are afflicted except in degree. Perhaps the majority of all the chronic ailments from which men and women suffer are due to malnutrition from wrong habits of eating, such as lack of roughage, inducing slow and deficient elimination, too much cane sugar and candy, chronic nervousness and insomnia from the use of tea and coffee, and gout and kidney disease from the free use of flesh foods of various sorts.

Our bodies are made of what we eat. What we eat today is walking around and talking tomorrow. Food is fuel. It supplies the energy which keeps up steam in our body engines. Intelligent men and women everywhere are giving more attention to the question of eating.

The Health Extension Department of the Battle
Creek Sanitarium will send you for the asking a little
book in which you will find interesting and dependable
information. Ask for booklet ^{B,} Eating for Health and
Efficiency. ^

QUESTION BOX LECTURE IN THE OLD LOBBY JUNE 2, 1930

By

John Harvey Kellogg, M. D.

QUESTION: Why is fish indigestible, or is it indigestible?

ANSWER: This question seems to be a little in doubt, in the first place about fish and in the second place whether the question need be asked or not. As a matter of fact the fault to be found with fish is not that it is indigestible. That is not the greatest objection to foods. Foods may be indigestible and still be very wholesome. For example, bran is not very digestible and yet it is very useful. We need a certain amount of roughage. Fish might be good roughage if it were not for the fact that it is putrescible and that it is unwholesome. It was never intended for food to be eaten.

A fish is an animal. Animals are all food consumers. An animal is an eater, in other words. Food is an eatable. Did you ever stop to think about that? Food--an apple, potato or bit of bread, plant foods, these are eatables. Now, an animal is an eater. There is a difference between an eater and an eatable. It is an absurd thing for one eater to eat another eater. If you found apples eating the potatoes you would say something was going wrong. It is equally absurd for an eater to eat another eater. Animals eat plants. That is the true order of nature.

If you read Professor Elliot's splendid work-- Elliot of Oxford, England, one of the great scientists of the day-- you will find

Professor Elliot saying that in the Eocene period there was not one carnivorous animal. All animals were plant eaters. Animals only became eaters of other animals when plant foods became scarce. When the nut trees were mowed down by the great ice sheet that came down from the north the great nut forests were destroyed and then animals were really compelled to eat other animals in order to live.

"Well," you say, "then, isn't it all right?" It is perhaps better for one animal to eat another animal than to die, but it is not a question of what is possible, but the whole question is what is best. The biologic argument does not pretend that meat is not a food; that is, that it cannot be used to sustain life, but the argument is that it is not the best food, and if we have an opportunity of course we would want to select the very best that is offered to us. Meat is not a natural food; it is not the best food; it is not really a wholesome food. It will of course support life if there is nothing better. I would eat a pig rather than starve to death, but I would have to be very hungry before I would want to eat such an unwholesome thing as a pig.

I do not know of anything, my friends, that is so profitable as the time and the effort and the money that people invest in learning how to live and then in living up to the best ideals. I invited a friend of ours who has been coming here for a number of years to come in this evening, and I am going to ask him to stand up and bear testimony to the advantages of biologic living. Won't you come up and tell our friends the story you told our faculty a day or two ago? This is Mr. Loomis. I first had the pleasure of meeting him fifteen years ago.

MR. LOOMIS: I do not know whether I can say anything tonight that will seem to you to be really worth while. I came here

in order that I might find out whether my condition of life would be really worth while if I were here in touch with what was going on in this institution.

If I take you back home I might be able to tell you as to who the men were in our church or connected with our church. One of them was a man who did business in Boston, and he was trying to import meat from Chicago on a train that would keep the meat well preserved. I do not know whether any of you know the name of this firm or not, but that was what he was trying to do-- get what he could out of the meat.

Now, I would like to have you ask the question whether this man lived as long as he ought to have lived. He was about seventy years old, I think, when he died. He went to Boston and went into a hospital there. He was out for a little while and was taken back into the hospital again. He had been dealing in meat and had been eating meat.

Now, he was one of the men who tried to look after my welfare to the best of his ability. He used to take me down to Boston occasionally. I enjoyed riding with him because he was a very sociable sort of individual, but he found I was under the weather physically and he brought up a man by the name of Fred Shattuck. He and his friend brought up Fred Shattuck and they had Fred Shattuck look me over to see whether I was worth anything or not. Fred Shattuck said to me, "You are not fit for an operation." Another doctor in Fitchburg got together with Fred Shattuck and those two men said, "You are not worthy of an operation."

Well, what did I do? I got hold of a book. That book was called life. I read that book over and there were a great many suggestions in it that seemed to be very profitable to me, and one of these suggestions was just this: that a man who was in a bad condition ought to see what he can find to eat, what would constitute his menu.

Let me tell you what my menu was for a couple of years. My wife made what was tomato bisque and she gave me entire wheat bread and she gave me some prunes. My wife suggested that and that was my menu for two years.

Then I discovered a man who had been to this Sanitarium. I asked him one day whether it would be worth while for me to attempt to go out to the Sanitarium. He said, "Yes, you had better go out there and see what is there. It may not satisfy you altogether, but you had better go there at any rate." So I came here to this Sanitarium. This man had Dr. Stewart as his doctor, so I was under Dr. Stewart's care and Dr. Stewart looked me over. I had something over my stomach which seemed like a hard rock and Dr. Stewart said, "I see that is a sort of cyst. As soon as we have an opportunity we will go and see Dr. Kellogg." Dr. Kellogg I think had just returned from California. We slipped into a side room where Dr. Kellogg happened to be at that time. Dr. Kellogg had been looking over the statements of the physicians who had examined my blood and other things in regard to my physical condition, and he said, "I am going to be over at the surgical ward day after tomorrow. If there is anything you want done you had better come over to the surgical ward day after tomorrow. I think this thing can be fixed for you." So I went over to the surgical ward. I slept the night before all right and then they took me into the surgical ward. They gave me a good many fluids in preparation for the operation. The operation took place about three or four o'clock in the afternoon. They took me back to the room at five o'clock and I said to those who were there, "I am cold" and they took an electrical blanket and threw it over me, pressed the button on the wall and I was warm in just a minute. Now, it seemed to me that was a very profitable thing for them to do. In the first place

I knew that in this Sanitarium they were doing what they could for my blood. They did not try to do that back in Massachusetts. I am perfectly aware that in any hospital in Fitchburg or in any hospital in Boston they could not do what was done here in this Sanitarium.

I consulted with a doctor in Fitchburg. My wife went to see him and she said to this doctor, "Is Mr. Loomis ready for an operation?" and he said, "No."

I think spoke to Dr. Fred Shattuck in Boston in regard to the matter. He and the doctor in Fitchburg both agreed it would be impossible for me to have an operation and so I came here for the operation.

I was put into the very best room in the surgical ward. I made the statement that I was cold and they warmed me up.

Some Chicago surgeons came in with Dr. Kellogg and Dr. Kellogg spoke of a saline infusion made in my veins. I thought probably the Doctor did not intend that I should understand what he said, but I did understand it. Salt water had been pumped into my veins to revive me, and I think it did revive me.

Mr. Edward Boehm was my nurse. As soon as I was lying in bed I felt of my pulse. I found my pulse going altogether too fast, and I said to the nurse, "It is going too rapidly." He went and got some ice and pounded it up and put it into a rubber bag and put it over my heart and relieved the situation. "Now," I said, "if a nurse can do that there is hope for me."

I said to him, "I will be all right if I pass the third day."

"Well," he said, "you need not be troubled about that after

the operation has been performed as Dr. Kellogg performs the operation I think you will go ahead and become all right." Now, that was the situation.

When I was put to bed there was a thunder storm that day and it seemed to almost waken me up, but it did not disturb me any. I sent a telegram home to my wife and signed it and she was very glad to get it, that I had had the operation. There was a bouquet of red roses brought into the room and set upon the table there. I was very grateful for those red roses. I know that this is an operation that could not have happened in Boston. They did not have the resources there. That operation did happen here and my life has been saved. I regard it as a miracle, the operation that Dr. Kellogg performed. Now I do not know that there is anything more that I can say.

Some of you may be in the same situation as I was, and there may be something that you want taken care of and can have it taken care of here. This is a good place for you to come. It is a very cheerful and a very happy place for me to come. I was happy all that summer, although for a day there things looked a little dark, but the sun began to shine the next day and it has been shining ever since.

Dr. Kellogg said I think possibly you may live eight or ten or twelve years. Now, that was fifteen years ago. I was nearly sixty-two years of age when this operation was performed and I am seventy-seven years of age now.

DR. KELLOGG: Thank you very much, Mr. Loomis, for your interesting story.

Mr. Loomis came here fifteen years ago. He said, "I have been to Boston and have been examined by their most eminent surgeons there and they say I cannot be operated on and that my case is a hopeless case."

I found an enormous kidney. One of his kidneys, I think it was the right kidney, had become enormously enlarged so he was enormously distended and a great cyst formed in it and it was necessary to remove this kidney. Well, it is not a simple operation to remove a kidney so badly diseased, and the patient was greatly emaciated and very feeble and gasping for breath and the Boston doctors said it was impossible for him to be operated on. If we had not known that we could do a few things here that they did not do in Boston we would not dare to operate upon him. But I had operated on a good many similar cases before, so we felt it was possible we could save this good man's life. A few days after he arrived he went to the operating room and I removed his kidney.

We did not do this without preparation beforehand. We took care to see that his body was saturated with glycogen. After an operation the liver is the great life preserver. The whole body is flooded with poisons after an operation and the liver has an enormous amount of work to do to destroy those poisons. That is what makes shock. This discovery was made during the World War that that was the real cause of shock. We did not know that exactly technically, but practically we had made the discovery that by giving the liver a good supply of glycogen with which to fight poisons we could carry patients through very perilous conditions, and so we did the operation, and the gentleman mentioned one of the first things he saw when he got back to his room was a bouquet of roses. I have made it a practice for more than forty years whenever I operated upon a patient to have a bouquet brought to the patient's room during the operation so that when the patient came to the room the first thing he would see would be a nice bouquet. I said that was my apology for hurting their feelings.

This gentleman made a good recovery and has remained alive

because he has been adhering closely to this biologic way. After the operation he said, "Now I have only one kidney and I have to take good care of it. I would like to have you tell me how to live." So I told him how to live biologically. He has been following the biologic way for fifteen years and he is certainly better today, has a better chance for living twenty years more than he had when I first saw him fifteen years ago. He seems to be in good condition, that is, he has no serious physical ailment of any sort.

Some three years after Mr. Loomis had his operation he was passing through the lobby and Mr. Barron was standing here. Mr. Loomis had just returned from a trip around the world. He traveled alone, I believe. As I met him and shook hands I introduced him to Mr. Barron. He told Mr. Barron something of his story, being examined by Boston doctors and they all refused to operate. Mr. Barron said, "You should have seen my doctor. He would have operated upon you."

"Who is your doctor?"

"He is Dr. So and So."

"Why, I saw him and he refused to operate."

I am sure the surgeon that he spoke of, a very eminent surgeon, would have done the operation just exactly as well as I did it. It was the diet and care before the operation and the careful diet and care after the operation. This institution has a system of its own of caring for surgical patients .

One of the first things I had to do when I organized the work here in 1876 was to start a training school for nurses. There were only two or three training schools for nurses in this country at that time. They were just beginning, one at Bellevue Hospital, and one at Boston, and one other one, and when I graduated in Bellevue the training school

there had been in existence for just one year and had not yet graduated any nurses. So we had to originate a system of nursing. The old system was based upon drugs, of course. It was giving the patient his medicine regularly once an hour or twice an hour and keeping the pillow cases clean and everything in order about the room and the ward; but in the matter of diet and of physiotherapy, the application of heat in various ways and the use of water in various ways, nothing was known and nothing was done in the old system of nursing.

Our training school has been in existence now for fifty years and we have graduated hundreds of nurses; in fact, I believe between two and three thousand nurses have gone out from our training school, and the Battle Creek system of nursing has spread out all over the world. You will find our nurses in every civilized country at the present time applying the Sanitarium methods.

I mention this to you so you will know there is a difference. Any patient who has ever been through our surgical ward after having had a similar experience in some other hospital knows there is a vast difference in the way cases are dealt with.

For example suppose a patient is suffering from-- I will mention a case to you. We had a lady with us (a case similar to that of Mr. Loomis) who had a very large tumor. She had been in Boston and visited the various surgeons there and an operation had been refused. She was the wife of a prominent attorney in Tennessee. The leading surgeons of the South, Richmond, Virginia, Memphis and other large centers had refused to operate and she finally came here. Well, when she came here she had a high temperature and the case was really at that time inoperable, but I believed if we could get the patient free from fever it was possible to operate. Finally the fever was subdued and I wired her husband that

I thought we might operate for her and he came and brought his family doctor. Unfortunately the day they arrived the fever came back, but after two or three days the fever was gone again, so we took the patient to the hospital and removed the tumor, and it was a very large tumor. The Doctor said to me as we took the patient to the ward, "Now you will give her a dose of morphia, won't you?"

"No," I said, "I think she will not need it."

"Of course she will have to have morphia. Promise me you will give her morphia."

I said, "I will give her morphia if she requires it, not otherwise."

The next morning the doctor called on me. As we called upon the patient the doctor asked, "How did you sleep?"

She said, "I slept very well."

The record showed she had slept six hours the first night after the operation.

He turned to me, "You gave her morphia?"

"No, she did not have a grain of morphia."

"Is it possible?"

The Doctor did not suppose it was possible for a patient after such a severe operation to go through a night without great suffering without morphia, but she had not had any morphia at all and was feeling bright and happy and had an appetite for breakfast. If she had had morphia the bowels would have been in bad condition and she would have had no appetite and she would have had to have more morphia the next night. The bowels would have been in bad condition and the patient's condition would have been bad from the morphia alone. She got through the operation and made a good recovery without any medicine of any sort. That is an everyday

experience. Patients are made comfortable without the use of drugs of any sort, so we do not have the disturbing effect of drugs to combat as well as the operation.

MR. LOOMIS: Just one thing more I wanted to mention and that is the fact that I weighed 160 pounds when I went into that surgical ward and 118 pounds which I came out, so you can see that something had been removed.

DR. KELLOGG: And he had gained in flesh notwithstanding.

QUESTION: Is ordinary store cheese healthful? Is it constipating?

ANSWER: Well, "ordinary cheese" covers a great number of varieties of cheese. I remember ^{about 60} ~~some~~ years ago I made a study of cheese.

~~It was a long time ago. It was a long time ago, between 50 and 60 years ago; in fact, it was in the summer of 1876 just before I took charge of the work here and began building it up. I was in Wilmington, Delaware, and I thought it would be a good opportunity, as they have a market at Wilmington where they sell all sort of things, and I noticed a man was selling cheese. I had been studying cheese along with other foods. I said, "Here is a good opportunity to study cheese." I was particularly anxious to study the inhabitants of cheese. Cheese, you know, has a population. So I asked him to give me his oldest cheese. "Oh," he said, "you like skippers, do you? My wife is very fond of skippers. She takes the skipper cheese and roasts it at night and eats it just before she goes to bed."~~

I said, "That is the kind of cheese I want." So I got some and ^{of} took it home and in my room with a microscope I looked it over very carefully and I could not find a single skipper. The cheese was so bad

the skippers had all skipped. To be certain I thought I would look again and so left it on my table and when I came back in the evening I found it was gone. I was rather surprised and inquired of my landlady. Rather as I was taking my supper she came into the room. I noticed a twinkle in her eye and she made a sort of grimace and finally she said, "Why you have been lurching."

I said, "I do not understand what you mean."

She said, "Didn't I find the remains of your lunch in your room? I did not like the looks or smell of it and I carried it out of doors," so my specimen had been cast out.

Now, that sort of cheese is not fit to eat. There is plenty of it eaten, however.

Perhaps you will remember the story of Charles Lamb. His sister was very fond of cheese. One night he limped home from his office--(he was in the government employ)-- quite late at night and his sister insisted that she must have some cheese. There was no cheese in the house and so he had to hobble down the street half a mile or so to the cheese monger and get some cheese for her. The cheese monger cut off a slice of cheese and was doing it up and he said to Mr. Lamb who had been watching very sharply, "Shall I send it or will you take it with you?"

Lamb said, "From what I have observed if you will lend me a string I can lead it home."

The only cheese that is fit to eat is freshly made cheese. Cheese that is far advanced in decay is just as unwholesome as meat that is advanced in decay. The whole process of cheese making and the process still employed in making certain varieties of cheese employs the filth germs that are in the milk, ~~employs them~~ to act upon the curd and soften it and

to give it the peculiar flavors that some cultivated tastes enjoy.

There is a story told of a Spaniard and a German who were traveling in the West Indies. The Spaniard was sitting opposite the German in the dining room. The German brought a little box out of his pocket and opened it. It contained some Limburger cheese. He passed it over to the Spaniard, thinking it would be courteous to share it with him. The Spaniard turned his face. The German said, "Do you think it is unhealthful to eat Limburger?"

"Unhealthful?" he said, "I consider it an unnatural crime."

So it is an unnatural thing to swallow these unwholesome and decomposing germ-filled comestibles. Cottage cheese is wholesome and freshly made cream cheese that has been made from sterilized milk by modern up-to-date processes is also wholesome.

QUESTION: Can one make satisfactorily acid milk at one's home from the acidophilus tablets?

ANSWER: No, it cannot be done. These tablets do not contain a sufficiently large quantity of acidophilus germs to make a reliable product. The only way to make acidophilus milk at home is to get the fresh acidophilus milk from some drug store or from some place where it is sold and use this in liberal quantities in inoculating the fresh milk. If you get, for instance, Pet milk or evaporated milk and add to it a quantity of boiling water and allow this to cool to a temperature of that of the blood and add to each pint of this diluted evaporated milk, add to each pint of it a half tumblerful of acidophilus milk which you obtained from a laboratory and let it stand in a warm place for 24 or 48 hours, this will be a very good quality of acidophilus milk. But you must have a fresh supply of the fresh acidophilus milk with which to inoculate it each time.

QUESTION: What is the best way to increase the sugar in one's blood?

ANSWER: The best way is to eat carbohydrates, that is, sugar or starch, and the very best form of sugar to eat is lactose or or B-Lac as we call it.

QUESTION: Is there any real cure for dandruff?

ANSWER: No, there is no absolute cure for dandruff. Dandruff is a disease of civilization. It is not found at all among savages. Babies do not have it. Among civilized people only babies and very young children are entirely free from it. It has really become practically a universal disease among civilized people.

QUESTION: What is tachycardia?

ANSWER: Tachycardia is a rapid beating of the heart. I will explain one case to you at least. A young lady came to my office and I found her heart was beating 300 beats a minute. I had never seen a heart running quite so rapidly. I found it quite impossible to count the beats. The only way I could ascertain the number was to put my finger upon the pulse and with the other hand, with a pencil in my hand to make dots on white paper and count them afterwards. By this means I found the heart was beating 300 times a minute. In this case it was only necessary to wash the stomach out to secure relief. That is one cause of tachycardia.

QUESTION: Would nervousness cause chronic diarrhea and what is the best remedy?

ANSWER: Nervousness may cause diarrhea. It, however, is more likely caused by infection. The most common form of chronic diarrhea is that form which is due to achylia, or the lack of hydrochloric acid,

so that the stomach is unable to close the pylorus. The pylorus remains open and food leaves the stomach too rapidly and it escapes from the intestine at a too rapid rate. Sometimes within a half hour after the food is eaten some of it will make its appearance.

Another rather chronic form of chronic diarrhea is due to colitis, and this is due to the fact that the colon is never completely emptied. There is simply an overflow of accumulated material. Both of these forms of diarrhea are rapidly curable by the application of proper means, and the proper means in the case of achylia is to give the patient hydrochloric acid. Hydrochloric acid will enable the stomach to close the pylorus and to retain the food a sufficient length of time for proper digestion. In the case of colitis the thing to do is to cure the infection by change of the intestinal flora and by thorough evacuation of the colon by enemas, daily and regularly. This difficulty can be always overcome.

QUESTION: Are there any objections to drinking sweet cider?

ANSWER: Not if great care is taken to see that the cider is really unfermented, really sweet. I have found people to put sweet cider in their cellars and to continue drinking the cider which they found getting sweeter all winter long. Cider that has been getting sweet for a month or two becomes quite unfit to drink.

QUESTION: What is the best and quickest remedy for relief of gas pains?

ANSWER: Gas pains are most commonly due to the fermentation of retained residues, and the best remedy is a hot fomentation or a hot sitz bath, or sometimes a hot bath and a large hot enema. The enema will remove the remaining residues.

discloses of the colon in a state of infection. You will see the sort of conditions produced in the colon that can be removed in no way but by curing up the infection, and these conditions are always produced by laxatives used for any length of time. Mineral waters, castor oil, salines, laxatives of all sorts with any exception produce this state of colitis because they irritate the mucous membrane and also its resistance to attacks of germs.

QUESTION: How can one prevent hair from turning gray?

ANSWER: There is no means of preventing the graying of the hair. It is produced by certain cells in the blood. The white blood cells creep up in the hair and steal away the pigment.

QUESTION: Do you recommend drinking cocoa or chocolate.

ANSWER: The health cocoa or health chocolate that has had the theobromine removed can be recommended, but not ordinary cocoa or chocolate because it contains a considerable amount of theobromine, which is essentially the same thing.

QUESTION: How can one best build up the red cells of the blood?

ANSWER: By the use of food which is rich in iron and the other blood making elements. It is not sufficient to take mineral iron. It is necessary to have also the organic matter which is produced in plants and is found associated with chlorophyl. The iron connected with chlorophyl is the best blood building material, and this is found in spinach and green leaves of all sorts, and it is also found in carrots. In 20 or 30 of our vegetables, iron is found in as large proportion as it is found in meat. Red meats do not furnish the best kind of iron. The iron that is found in red meats is iron which has been used. It is second-hand iron. If you wanted to build a fine house you would not go to a junk store to get your materials. You would get fresh materials. You would have new lumber and you would have new hardware. Everything would be new. When you eat meat everything you get is second-hand. It has been

used; it is second-hand iron. It is inferior on that account. Actual experiments with animals show that blood cannot be built up so well with red meats as it can with iron from plant sources. We have a special preparation that is known as Food Ferrin which supplies these plant irons in abundant quantity.

QUESTION: Are green onions injurious as food?

ANSWER: Well, very young green onions that are not very strongly flavored are wholesome and the onion contains a very superior quality of blood building iron.

QUESTION: There is one question I did not completely answer the other night. A lady, I think it was, asked some questions about the Bible recommendation of meat eating and asked this question: What about Peter's vision?

ANSWER: You will remember Peter's vision, perhaps. Peter was up on the housetop about midday and he fell asleep and he had a vision, and in this vision there was let down from heaven a great sheet and in this great sheet there were all manner of four-footed beasts and all sorts of animals, reptiles and animals of all sorts. They were there in this great sheet and Peter heard a voice out of heaven say, "Arise, Peter, slay and eat."

Now, the question has often been put to me if Peter was commanded to eat all these animals of every sort, certainly there cannot be any wrong in killing animals and eating them. You know the answer is a very simple one to this question. Did Peter do it? Did Peter do it? Peter was commanded to kill these animals. All kinds of creeping things were there, four-footed animals and creeping things, and the command came, "Arise, Peter, slay and eat." Did Peter do it? If he did do it then there would

be some excuse for somebody else to do it. Peter did not do it. He said, "Not so, Lord." He answered back, "Not so, Lord." He had not any idea of killing those creeping things. Now, if Peter was wrong in doing that he should have been punished on the spot. What happened to Peter. Nothing at all, but the Good Book said that that sheet was lifted back into heaven and so Peter was excused from killing those four-footed beasts and creeping things and all the rest of us are excused.

QUESTION: Is angina pectoris curable?

ANSWER: Angina pectoris is a disease in which certain structures have been damaged and we cannot expect that those structures will be fully restored, but if the disease is taken in the beginning before it has advanced very far it may be arrested and then it may not make any progress perhaps for 20 years or more. The important thing is to cure angina before you get it.

Angina is produced by poisons circulating in the blood vessels and the thing ^{is} to avoid these poisons. ~~That is~~ the whole purpose of our biologic regime is to keep the blood pure, to keep the blood clean. Cleanness of blood is evidenced by cleanness of skin. A person with a clean, transparent skin usually has clean blood; but when the blood becomes impure and becomes saturated with these waste products absorbed from the colon, some of them are deposited in the skin, and that is what makes the skin opaque and makes the white of the eye dingy.

QUESTION: What is the nature and the character of Parkinson's disease?

ANSWER: It is still somewhat obscure. There is an old theory with reference to this disease that is universally accepted. It is

so that the stomach is unable to close the pylorus. The pylorus remains open and food leaves the stomach too rapidly and it escapes from the intestine at a too rapid rate. Sometimes within a half hour after the food is eaten some of it will make its appearance.

Another rather chronic form of chronic diarrhea is due to colitis, and this is due to the fact that the colon is never completely emptied. There is simply an overflow of accumulated material. Both of these forms of diarrhea are rapidly curable by the application of proper means, and the proper means in the case of achylia is to give the patient hydrochloric acid. Hydrochloric acid will enable the stomach to close the pylorus and to retain the food a sufficient length of time for proper digestion. In the case of colitis the thing to do is to cure the infection by change of the intestinal flora and by thorough evacuation of the colon by enemas, daily and regularly. This difficulty can be always overcome.

QUESTION: Are there any objections to drinking sweet cider?

ANSWER: Not if great care is taken to see that the cider is really unfermented, really sweet. I have found people to put sweet cider in their cellars and to continue drinking the cider which they found getting sweeter all winter long. Cider that has been getting sweet for a month or two becomes quite unfit to drink.

QUESTION: What is the best and quickest remedy for relief of gas pains?

ANSWER: Gas pains are most commonly due to the fermentation of retained residues, and the best remedy is a hot fomentation or a hot sitz bath, or sometimes a hot bath and a large hot enema. The enema will remove the remaining residues.

QUESTION: What is the best treatment for arthritis?

ANSWER: Heat and sunshine are the best measures for arthritis. It may be artificial sunshine or natural sunshine. It is very important that the patient should be protected from cold. A warm, even temperature and the application of heat for relief of the pain, and of sunshine for improving the vital resistance and building up the recuperative forces of the body,--these are the best means. But cold particularly must be avoided.

There is usually associated with chronic arthritis an infection somewhere, which may be infected teeth or infected tonsils, ^{but it} It is most likely to be an infected colon. Colitis is present in the great majority of cases and this must be cured by change of the intestinal flora and by a biologic diet.

QUESTION: When the Graham test shows a bad condition of the gall bladder but free from stones, what sort of food and treatment is necessary?

ANSWER: The first thing that is necessary is to change the flora of the duodenum by the use of lactose or Lacto-Dextrin or B-Lac in place of ordinary sugar. By its use and the avoidance of decomposing food of any kind, such as old cheese or meat or eggs-- it is necessary in these cases to avoid eggs as well as meat-- the flora of the duodenum and chronic duodenitis can usually be cured up in a short time. Other measures are necessary. Diathermy, fomentations to the abdomen and over the region of the liver and especially the moist abdominal bandage worn at night, are very important and effective measures of affording relief.

QUESTION: Why are laxative drugs harmful?

ANSWER: Because they cause a spastic condition of the colon. They cause an irritation of the colon. Next Monday night I am going to show you some slides which will give you pictures such as the X-ray

discloses of the colon in a state of infection. You will see the sort of conditions produced in the colon that can be removed in no way but by curing up the infection, and these conditions are always produced by laxatives used for any length of time. Mineral waters, castor oil, salines, laxatives of all sorts with any exception produce this state of colitis because they irritate the mucous membrane and also its resistance to attacks of germs.

QUESTION: How can one prevent hair from turning gray?

ANSWER: There is no means of preventing the graying of the hair. It is produced by certain cells in the blood. The white blood cells creep up in the hair and steal away the pigment.

QUESTION: Do you recommend drinking cocoa or chocolate.

ANSWER: The health cocoa or health chocolate that has had the theobromine removed can be recommended, but not ordinary cocoa or chocolate because it contains a considerable amount of theobromine, which is essentially the same thing.

QUESTION: How can one best build up the red cells of the blood?

ANSWER: By the use of food which is rich in iron and the other blood making elements. It is not sufficient to take mineral iron. It is necessary to have also the organic matter which is produced in plants and is found associated with chlorophyl. The iron connected with chlorophyl is the best blood building material, and this is found in spinach and green leaves of all sorts, and it is also found in carrots. In 20 or 30 of our vegetables, iron is found in as large proportion as it is found in meat. Red meats do not furnish the best kind of iron. The iron that is found in red meats is iron which has been used. It is second-hand iron. If you wanted to build a fine house you would not go to a junk store to get your materials. You would get fresh materials. You would have new lumber and you would have new hardware. Everything would be new. When you eat meat everything you get is second-hand. It has been

used; it is second-hand iron. It is inferior on that account. Actual experiments with animals show that blood cannot be built up so well with red meats as it can with iron from plant sources. We have a special preparation that is known as Food Ferrin which supplies these plant irons in abundant quantity.

QUESTION: Are green onions injurious as food?

ANSWER: Well, very young green onions that are not very strongly flavored are wholesome and the onion contains a very superior quality of blood building iron.

QUESTION: There is one question I did not completely answer the other night. A lady, I think it was, asked some questions about the Bible recommendation of meat eating and asked this question: What about Peter's vision?

ANSWER: You will remember Peter's vision, perhaps. Peter was up on the housetop about midday and he fell asleep and he had a vision, and in this vision there was let down from heaven a great sheet and in this great sheet there were all manner of four-footed beasts and all sorts of animals, reptiles and animals of all sorts. They were there in this great sheet and Peter heard a voice out of heaven say, "Arise, Peter, slay and eat."

Now, the question has often been put to me if Peter was commanded to eat all these animals of every sort, certainly there cannot be any wrong in killing animals and eating them. You know the answer is a very simple one to this question. Did Peter do it? Did Peter do it? Peter was commanded to kill these animals. All kinds of creeping things were there, four-footed animals and creeping things, and the command came, "Arise, Peter, slay and eat." Did Peter do it? If he did do it then there would

be some excuse for somebody else to do it. Peter did not do it. He said, "Not so, Lord." He answered back, "Not so, Lord." He had not any idea of killing those creeping things. Now, if Peter was wrong in doing that he should have been punished on the spot. What happened to Peter. Nothing at all, but the Good Book said that that sheet was lifted back into heaven and so Peter was excused from killing those four-footed beasts and creeping things and all the rest of us are excused.

QUESTION: Is angina pectoris curable?

ANSWER: Angina pectoris is a disease in which certain structures have been damaged and we cannot expect that those structures will be fully restored, but if the disease is taken in the beginning before it has advanced very far it may be arrested and then it may not make any progress perhaps for 20 years or more. The important thing is to cure angina before you get it.

Angina is produced by poisons circulating in the blood vessels and the thing ^{to do} is to avoid these poisons. ~~That is~~ the whole purpose of our biologic regime is to keep the blood pure, to keep the blood clean. Cleanness of blood is evidenced by cleanness of skin. A person with a clean, transparent skin usually has clean blood; but when the blood becomes impure and becomes saturated with these waste products absorbed from the colon, some of them are deposited in the skin, and that is what makes the skin opaque and makes the white of the eye dingy.

QUESTION: What is the nature and the character of Parkinson's disease?

ANSWER: It is still somewhat obscure. There is an old theory with reference to this disease that is universally accepted. It is

believed by the majority of pathologists to be due to the degeneration of one of the little glands here in the throat associated with the thyroid gland. These glands are supposed to degenerate and that results in the disturbance of the nervous system which is manifested in trembling and in various other ways. One other way in which it is manifested is in rigidity of the muscles. You see ^A person suffering from Parkinson's disease ~~and he walks in this way instead of swinging his arms when he walks.~~ He carries his arms stiffly by his side and his gait is stiff and rigid and by and by he gets so he totters when he walks and his chin is usually carried forward and his speech becomes disturbed, his tongue seems to be thick and there is very likely to be a drooling from the mouth because of inability of the muscles to control the saliva. So it is very important for a person who is threatened with this disease to arrest it by adopting a thoroughgoing biologic bill of fare, avoiding to the very last degree all sorts of poisons, tea, coffee and colon poisons. Everything that can be gotten rid of must be avoided in order that the blood may be kept as clean as possible. When this is done the disease may often be arrested for years and sometimes some little improvement may be secured.

QUESTION: What number of calories is correct for a reducing diet?

ANSWER: It is about one-half what you have been accustomed to eat and about two-thirds as much as is necessary for a person of your height and weight, that is, normal weight. That may be continued for a few weeks until your weight is gradually reduced. A person on a reducing diet should live almost entirely on such food as cabbages, turnips, carrots, tomatoes and juicy fruits and things of that sort and should avoid breakfast foods and butter and eat potatoes very sparingly. ^{should} If you adopt that plan, cutting out the breakfast foods and eating bread very sparingly,

only a little dry bread, perhaps half a slice of toasted bread a meal. You may eat bran for breakfast food. Fig Bran is very good breakfast food for persons who want to reduce. Avoid starchy ^{foods} things except potatoes, a small potato a day. Cut out sugar and candies entirely and all kinds of sweet things. Make the diet consist almost wholly of such things as spinach, carrots, tomatoes, turnips, cabbage and lettuce, the coarser kinds of vegetables. These coarse vegetables contain iron which is very necessary, and vitamins, and a person reducing must take care not to reduce the intake of these very necessary things. You want to reduce the intake of fats and of carbohydrates, but you need the same amount of protein and the same amount of minerals and of vitamins as though you were not reducing. Those things you cannot reduce without suffering.

QUESTION: Should it be necessary for young children to regularly take mineral oil to insure daily bowel movements.

ANSWER: Unfortunately there are a great many children that are quite young who have already received so much damage by neglect that the colon has become permanently crippled more or less. If a child has had colitis-- and babies often suffer from colitis (an acute summer complaint is an acute colitis). After an attack of that sort a child is likely to have a chronic colitis and a child who has suffered from colitis is likely to have a seriously damaged colon and such children need some help.

The majority of civilized people, old and young, require two or three times as much roughage to assist their colons, and they need several times as much lubrication as they would require if they had always lived in a perfectly normal way and had perfectly normal colons.

QUESTION: With all the progress being made in surgery today, will it not be possible to obtain spare parts for the body as we now do for automobiles?

ANSWER: That is a very optimistic outlook and it is more or less true that these spare parts can be obtained. I remember seeing an eminent surgeon in New York a good many years ago bring into the amphitheatre a little girl who had had tuberculosis of her leg and foot and the result had been a serious damage of the leg bone; the large bone between the knee and ankle had been destroyed altogether. Now, that was the situation. The large bone had been seriously damaged so it had to be removed, a large part of it, ^{had to be removed} and the heel was largely destroyed. There was practically nothing left of it. The doctor brought in this little girl and with the little girl he brought along a piece of ^{leg} bone from a boy who had been killed by accident in the street—a piece of his leg bone that he had put in cold storage and had been keeping for several weeks—and he brought in a heel bone from a Negro that had been killed in a similar way. He patched the Negro's heel into that little girl's foot and the boy's leg bone into the little girl's leg and the little girl made an excellent recovery. A few weeks later she walked out of the hospital with scarcely a limp in her gait. So this thing is being done.

Dr. Carrel made a striking experiment a number of years ago. He took a cat and removed one of its kidneys and grafted in place of that kidney a kidney from another cat. Two or three months later he did the same thing with the other kidney, so here was a cat that had kidneys that belonged to two other cats and had lost its own and ^{was} enjoying good health. That cat lived for six months with borrowed kidneys.

This thing has been done with other parts of the body, as you know, for a long time.

QUESTION: Does a preponderance of the heart on the left side mean serious trouble?

ANSWER: No; Every sprinter, every well trained athlete has a large left-sided heart. The heart is larger on the left side because it is the left side that does the work. The left side of the heart does an enormous amount of work. The whole heart pumps something like three hundred tons of blood a day; that is, it lifts three hundred foot tons a day. It pumps nearly two-thirds of a barrel of blood every minute of our lives. It is almost incredible the amount of work the heart does. When one is running, the amount of blood the heart pumps is very greatly increased, not quite in proportion to the amount of air breathed, but in general as much blood goes through the heart-- the amount of blood which goes through the heart which the heart pumps is equal to the amount of air which goes through the lungs. The two are about the same except when one is running.

QUESTION: How many hours' sleep are required for a child nineteen months old and also for a child six years old?

ANSWER: Well, a baby should sleep nearly all the time. A child two years old should sleep at least half the time. Older children should sleep anywhere from ten to twelve hours, and the same thing is true of people advanced in years. People past eighty years of age, for example, should sleep a good deal, ten or twelve hours a day.

Many people past fifty years of age engaged in very intensive work would be greatly helped by taking an hour or two of rest in the middle of the day. In many countries, South America and Mexico and nearly all tropical countries, it is the almost universal custom to take two or three hours' rest and sleep in the middle of the day. All business houses shut up. In most tropical countries business houses are all closed up for two or three hours in the middle of the day. You cannot find a lawyer

of a business man in his office between the hours of twelve and two.

QUESTION: What is the age limit for a tonsil operation?

ANSWER: Well, I don't know. There is almost no age limit at all. When a tonsil is inflamed so badly it ought to be removed, it may be removed no matter what the age may be. It is not a dangerous operation and can be very safely performed. The little gland is on the surface and can be just as safely picked out as a wart can be removed. It involves really no risk when done by a skilled surgeon.

QUESTION: Should water be taken with the meals?

ANSWER: Yes; it is very natural and entirely proper to take a little water with the meals, but you should take it in the proper manner. For myself I prefer ice water. The proper way to take water is not to drink a half glassful, but just take a very small sip. The reason for drinking during meals is to refresh the gustatory nerve. When we are continually applying things that have flavor, the gustatory nerve gets tired and ^{when} you apply a little cold water to it the ^{thus} cold water revives it. ~~liven~~ ^{it} up. Cold stimulates nerves, increases their ^{sensibility} ~~sensibility~~, whereas heat has the opposite effect. Heat relieves pain because it lowers nerve sensibility while cold, on the other hand, generally increases pain because it increases nervous sensibility. So the purpose of drinking at meals is not to supply liquid unless you are eating very dry food, but to freshen the mouth, to revive the sense of taste. The proper way to drink at meals is to take small sips of cold water, retain it in the mouth until it gets warm and then it will not do your stomach any harm and you get the full benefit of it in your mouth.

of nerves

QUESTION: After taking psyllium seed for an extended length of time, what are one's chances of being able to live with good results without it?

ANSWER: Well, the chances are not so good, and I will tell you why. By neglect, the colon becomes damaged, sometimes elongated. I have often seen colons that were several feet longer than they ought to be. They became elongated, enlarged, overstretched. Here is the cecum on the right side, just a little pouch. It will not hold more than the palm of your hand. I have opened the abdomen fifteen or sixteen hundred times and I have had an opportunity to examine these organs very minutely, and I often found the cecum that ought not to hold more than the hollow of your hand would hold two quarts. A quart and a pint is a very common thing. In this pouch will accumulate material, and the ordinary foodstuff, that would be sufficient to keep the colon in a perfectly wholesome and normal condition when the colon is healthy, when the colon is crippled in this way it is not sufficient but requires more stimulation.

Unfortunately our colons are damaged from a very early period in life. Many a person before he is two years old has got such damage to his colon that it is a handicap to him all his lifetime. The first thing our mothers do for us when we begin to get out of the cradle and toddle about, almost the first thing our mother does to us is to housebreak us. That is simply training the child to be constipated, training the child in habits of constipation.

I met a gentleman just yesterday who has been making an earnest study of this question. He got hold of some of the ideas that I have been promulgating for the last fifteen or sixteen years, rather nineteen years since I began to promulgate the doctrine that the bowels should move after every meal and that the normal rhythm should be at least three or four times a day, and I learned it from the big apes of the London Zoo. That is where I found it out and afterwards studied the matter among primitive

people all over the world through medical missionaries, and this man got the idea and so he had been making a study on his little boy. He has a little boy that is twenty-one months old and as soon as the boy began to get teeth he began to feed him spinach and watched the results. He found that the motility of his little boy is three to four hours; that is, it takes three or four hours for the food to pass from the mouth out of the body, and that is the normal period. You can readily see that a child ought to have a bowel movement several times a day; in fact, a child naturally moves its bowels every time it is fed, and that is true of animals. Shortly after a horse is fed its bowels move. Animals that eat all the time have frequent bowel movements. Animals that are fed regularly have bowel movements regularly. The big apes at the London Zoo had four bowel movements every day. They are fed regularly and had regular bowel movements, whereas the small monkeys had thirteen or fourteen bowel movements every day because the visitors fed them all the time. They are allowed to feed them for their amusement.

Mothers do not know about this and follow the instruction given them by their doctors. I was reading in a medical journal not long ago in answer to the question "What is the best thing to give a baby when the bowels are constipated?"

"Do not give the baby anything at all. If the bowels move once in a couple of days that will be quite sufficient."

The consequence is the residues will accumulate in the colon until the colon becomes enormously overstretched and colitis is produced. When colitis is produced it extends into the wall of the intestine and penetrates through the wall and gets on the outside, and that causes adhesions. Sometimes the colon gets down in a wrong position and then an adhesion will occur, and so there is a mechanical obstruction to bowel movement.

It takes two or three times as much bulk to move a crippled colon as it does a thoroughly normal colon, which is a very rare thing indeed, and so a person who has once found out how to make his colon act in a normal manner-- this problem has to be worked out for every individual case-- a person who has found just how much bran to take and how much psyllium seed and how many Paramels and how much lactose or Lacto-Dextrin or B-Lac, how much to use of these things in order to make his bowels move regularly, should keep right on not only for a week or two or a month or two but keep right on as long as he lives. As a matter of fact he has a crippled colon and he has found out how he can make it act in a normal way. He should adhere to that formula and not depart from it. As soon as he does he will find himself in the old rut again.

QUESTION: Does a crippled colon ever become entirely restored?

ANSWER: Not without an operation if it is badly crippled.

However, there are many persons who suffer from constipation that find themselves almost completely restored by the adoption of regular habits and with the proper diet.

The natural diet of human beings is a very bulky diet. The diet of the higher apes, the chimpanzee and the gorilla, is supposed to be practically the same as that of primitive man who lived in the forest and did not have the art of cookery as we now have. Mr. Akeley told me that in studying the habits of the gorillas in Africa he found that the gorilla lives almost entirely upon bamboo shoots, wild parsley and berries.

QUESTION: Is acidophilus milk a specific for colitis?

ANSWER: No, it is not the best remedy for colitis for the reason that milk sometimes aggravates colitis. The best remedy is to keep the colon empty by a hot enema (temperature 110° to 115° or even

120°) and a diet which excludes meat and eggs and which includes about 8 or 10 or sometimes as much as 12 ounces of lactose a day for at least a week or ten days, and after that B-Lac or lactose should be substituted for ordinary cane sugar and should be used in quantities of 6 or 8 ounces a day at the table. Lactose or Lacto-Dextrin should be taken also in very bad cases for some little time.

QUESTION: How is the best way to prepare cucumbers to eat?

ANSWER: It is simply to pick them, trim off the skin and eat them just as nature produced them. A little lemon juice may be added if desired, but a cucumber which is cool is very wholesome even raw. It should be very well chewed. Pickles are not so wholesome for the reason that the vinegar renders the cucumber difficult of digestion.

QUESTION: What foods can restore hydrochloric acid to the stomach?

ANSWER: No foods will accomplish that. When a person's stomach has gone out of business, retired, stopped making hydrochloric acid, there is nothing to do but to take hydrochloric acid, and the best thing for this purpose is the Acidone Tablets. Acidone Tablets contain hydrochloric acid. In each little tablet there are two drops of hydrochloric acid, two drops of dilute hydrochloric acid, and so five of these would make a dose of hydrochloric acid. These tablets are so constructed that they give off the acid gradually just as the stomach produces the acid gradually and slowly.

QUESTION: Are the dark outside leaves of lettuce richer than the white ones?

ANSWER: Yes, the green leaves are the only leaves worth eating. Head lettuce so-called, white lettuce is not worth eating. It does not do any particular harm. It is really practically rubbish. It has no vitamins in it to amount to anything and it has no food minerals in it.

It has nothing but cellulose in it and not much of that. It is mostly water. Call for leaf lettuce and you may eat celery leaves if you like. If you want to prepare a real nice spinach mix together equal parts of ordinary spinach, New Zealand spinach or mountain spinach-- they are all good-- and celery leaves and the leaves of leeks.

I must tell you also of a very nice preparation which is exceedingly toothsome for a raw diet. Raw carrots-- raw carrots are exceedingly wholesome. They contain all the vitamins and they contain food minerals in very liberal quantities and are really very wholesome. They are not very palatable by themselves, but a mixture of raw carrots and fresh grated coconut, grated carrots and grated coconut together, or a little fruit of some kind, a little apple or any kind of fruit you like, it makes a most delicious salad.

QUESTION: Why do headaches recur in some people having high blood pressure?

ANSWER: It is the most natural thing in the world. People who have high blood pressure should have headaches. It is not the high blood pressure that makes the headache; it is the same thing that makes the high blood pressure that makes the headache, and the thing that makes the high blood pressure is poison circulating in the blood vessels. Poison in the blood is what makes the high blood pressure and this same poison in the blood irritates the sensitive nerves of the brain and produces headache.

QUESTION: What causes carbuncles?

ANSWER: They are produced by germs that get down under the skin due to lowered vital resistance. This occurs when the blood is impoverished. It is the blood that fights for the body; it is the blood that defends the body. If you have low hemoglobin, a low blood count, why your resistance

is low. A person whose hemoglobin is 50 or whose blood count is 50, such a person is only half alive. "The blood is the life" the Good Book says. You are only half alive if your blood is low. Everybody should have the blood up to one hundred. If it is only 80 you are far from well. You should not be content unless you get your blood close to one hundred at least, the nearer the better. That is very serious, my friends, because when your blood is below one hundred you have low resistance, and the lower it is the lower your resistance is. It is simply an invitation to disease germs to come and invade your body when you maintain such a low vitality.

QUESTION: What do you consider the best method of reducing fat?

ANSWER: The best method is to reduce your bill of fare. That is the best thing. Eat less. Eat more bran and spinach and things of that sort and cut out the butter and the sugar and the breakfast foods. Live on greenstuffs.

QUESTION: What is the best cure for muscular rheumatism?

ANSWER: Hot applications and sun baths are the best cure for muscular rheumatism. Diathermy is an excellent remedy for this condition.

July

DOES PROHIBITION MAKE SCOFF-LAWS?

A writer in the Outlook is very much distressed because prohibition, as he claims, is demoralizing the Negro and destroying his respect for law and making him a habitual criminal and a scoff-law instead of the patient, law-abiding, long-suffering, useful citizen he once was. White bootleggers in the South make use of Negroes in transporting their smuggled liquors. The ignorant, amiable Negro is easily made to believe that there is no wrong in smuggling liquor unless he gets caught at it; and the officials charged with the enforcement of the law seem to have much less difficulty in discovering Negro violators of the law than white violators. The Negro is being victimized by white bootleggers who entice him into outlawry. The arrest and imprisonment of the "higher ups" would soon make an end of the business.

But is the Negro the only scoff-law? How about the society ladies who every year smuggle in millions of dollars worth of diamonds and jewelry of various sorts? And how many of the millions of our good citizens who visit Europe every summer as tourists return to their homes with dutiable and undeclared clothing and bric-a-brac? And how about the school teachers and other genteel ladies who disembark wearing three pairs of stockings, are they not just as truly scoff-laws as the Southern Negro who cooperates with a bootlegger? They are perhaps more guilty than the Negro because they have not only evaded the law, but they have signed a statement which they knew to be false. Nevertheless, they are, on the whole, good law-abiding citizens. The fact is, smuggling is not so universally regarded as a crime as is theft or murder.

The fisher folk of the Irish coast have never looked with disfavor on smuggling, and in many places still protect the smuggler, and in these backward communities officials often look the other way when a group of heavily loaded rum-runners is passing.

In recent years inquisitive historians have discovered that the Boston tea party was not an outburst of popular resentment against English oppression, but was engineered by John Hancock, one of the signers of the Constitution, whose warehouses were filled with smuggled tea, as an effective means of suppressing competition.

When a tariff was imposed on imported books in Civil War times, thousands of good people "dodged" the tariff by having books sent by mail, paying the letter postage rate. The writer recalls the arrest and fining of a prominent clergyman for smuggling Bibles. Another clergyman whose piety was unquestioned was much "exercised" by the fact that when his house took fire the conflagration started in the room in which were concealed a lot of Swiss watches which he had recently smuggled into the country on returning from a European trip.

The demoralization of the Negro so pathetically lamented by the Outlook contributor is the effect of bootleg liquor rather than the lowering of his standard of civic duty.

And how about laws relating to sex morality? Must they be abrogated because not observed by so large a proportion of our citizens? Is the lowering of standards relating to sex morality due to the laws which make fornication a crime, and

would the abrogation of these laws promote purity in sex relations?

And how about laws relating to taxation? Is not "tax-dodging" very common even among "good citizens?" Are there not hundreds of tax experts who are ready to advise rich clients how to reduce their taxes to a minimum without getting into the clutches of the law?

Prohibition has brought to this country priceless blessings. The difficulties incident to enforcement of the Volstead law are due to the same causes which attend the enforcement of many other laws which oppose established customs, viz., the lack of the universal support of an enlightened public. It will take time to secure this by education. But every race betterment agency should labor to this end.

THE BATTLE CREEK IDEAWHAT IS IT?

"Doctor," said a newly arrived guest at the Battle Creek Sanitarium, "what is this Battle Creek Idea anyway? I have been hearing about it for years in various parts of the United States where I have been and I am just back from Europe where I heard it talked about in London, Paris, and Rome, and even in Algiers I found a food shop where Battle Creek foods were sold; and the other day I had a letter from a friend in Sebastopol who wrote me that the day before he had enjoyed a delightful light bath which the attendant told him originated at the Battle Creek Sanitarium in Michigan. This thing seems to have spread all over the world. I should like to know what it is. What is its dominant purpose and how did it get started, and just what is it?"

The doctor was on his way to his office, but he stopped a few minutes to chat ~~to the gentleman~~ ^{with} and the little group of guests who for half an hour had been swapping opinions about the new things they had encountered in the few days since they arrived at the Sanitarium.

"The Battle Creek Idea", said the doctor, "is a philosophy, an art, and a system of living. It may even be considered a cult.

"As a philosophy, the Battle Creek Idea regards our bodies as precious and sacred gifts passed down to us by long generations of herob ancestors and hence to be treasured and respected, trained, developed and cared for in such a way as to perfect them in skill, efficiency and endurance, protect them

from attacks of disease and fortify them against the encroachments of the Old Man with the Sickle.

"Of course," said the doctor, "this idea is not new. The old Greeks wrote over the portals of their temples, Mens sana in corpore sano (a sound mind in a sound body). And even savages sometimes entertain this same noble regard for the human body as the supreme gift of the ages. I recall very vividly an incident which indelibly impressed this upon my mind. I had been called to the city of Guadalajara, Mexico, to do some surgical operations. One of my patients was the niece of the governor of the State ^{of} Jalisco. Among the patients waiting for me was a wealthy Indian who had come with his whole family from the interior of Yucatan to consult me about his son. I found him waiting for me with his family in the beautiful tropical garden connected with the hospital. As I approached the group, I saw them all standing like statues, the Indian a gigantic figure, his wife and two tall sons. When I was within a few feet of him, he sprang at me with the alertness and quickness of a tiger, threw his arms about me and gave me a great hug, then kissed me first on one cheek and then the other, patted me upon my back and said, "You are my brother," *you are my brother.*

"I was somewhat startled by this vigorous welcome, but said at once, "Certainly, I am your brother. But just how did you know that I am your brother?" He replied,

^c_^ "You say one must never do anything to hurt his body. I say the same. All my life I have never knowingly done anything to hurt my body. No alcohol, no tobacco, no tea and

and coffee, no pepper. We believe alike, we are brothers,' and then he gave me another tremendous hug.

"Many savages, and all the higher mammals, treat their bodies with greater respect and live more in harmony with the laws of Nature than does the average man.

"Battle Creek philosophy inculcates the idea that the laws of Nature are the laws of God, the unchangeable behests of the Master Creative Intelligence of the Universe. To become acquainted with these basic principles of existence and to render and inculcate obedience to them, this is the dominant aim and purpose of the Battle Creek Idea.

"Battle Creek philosophy, then, condemns ^{all} indulgences which involve injury to the body," *said the questioner.*

"Yes, most certainly. We despise a spendthrift, who squanders the hard earned dollars bequeated him by his father. Sabatage is a crime, punishable even when the criminal is the owner. Indulgencies which damage the body are in general gratifications of unnatural and acquired appetites which give illicit pleasure, 'unearned felicity,' and ultimately destroy all capacity for pleasurable reactions. Legitimate pleasures, on the other hand, promote health as well as happiness and increase capacity for the enjoyment of life.

"But you said something about ^{the} Battle Creek Idea being an art, as well as a philosophy. Would you mind telling us something about that?" said another guest who had been listening to the doctor's remarks.

"I was just going to remark," said the doctor, "that the 'fine art of living' is the practical side of the Battle Creek Idea. For more than half a century, a world-wide search

has been conducted for the purpose of gathering from every possible source all available data relating to living habits. The eating habits of all nations, ancient and modern, of primitive people and even savages and animals, have been diligently studied. Nutrition laboratories and other laboratories for animal experimentation conducted by able experts, have been organized and maintained for years at great expense and have added immensely to our fund of knowledge. A great body of scientific facts have thus accumulated data known to be dependable."

"And the System, what about that?" said a lawyer from Missouri. "Do you claim to have discovered a new system of treating the sick and are your claims recognized in scientific circles?"

"The System includes some important discoveries, but consists for the most part in the association and coordination of methods, chiefly so-called natural or physiotherapeutic agents such as hydrotherapy, electricity, physical training, diathermy, dietetics, etc. These methods had all been used before but mostly in an empirical way and not in a combined and coordinated or scientific manner. It was in this way that this institution was a pioneer, and the system developed here though at first, ^{50 years ago,} opposed as 'unorthodox,' is now recognized as scientific and is in high favor with the most eminent medical authorities not only in this country but in the great medical centers of Europe.

"You mentioned that some important contributions to the System had been made here. We would be glad to know about these," observed the lawyer ~~from Missouri.~~

+ "Perhaps the most important discovery made here was Dr. Kellogg's idea of the scientifically controlled, combined and coörrinated use of all sorts of natural therapeutic agents, including dietetics. By means of this combined method, it became possible to apply what might be called broadside attacks in battling disease. This made success possible in many cases previously regarded as incurable.

One of the earliest and most notable contributions to the art and science of healing, was the discovery of the healing virtue of the Edison light, through its power to penetrate the tissues and set up ~~reactions of a~~ healing and *vitalizing reaction*

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"The Battle Creek System combats disease not by a single remedy or a succession of remedies, but by a therapeutic program, a carefully planned mode of life touching the whole physical life of the individual, an elaborate method of health training.

"One of the earliest and most notable contributions to the art and science of healing made here was the discovery of the curative value of the Edison light, through its power to penetrate the tissues and set up reactions in the blood, the nerves and the tissues. This discovery, for years known in Germany as the Kellogische Light Bad, is in use in up-to-date hospitals in all parts of the civilized world

THE REASON WHY

The Battle Creek System, sometimes called "The Battle Creek Idea," is a system of health promotion applicable to human life in both health and disease. It is based upon established and well recognized scientific data, chief of which is the fact that life and health are maintained and disease combated by the mysterious creative energy at work within the body which we personify as Nature, and which 2000 years ago was called by the great pioneers of scientific medicine, the vis medicatrix naturae.

Like many other great truths, this fundamental fact was lost sight of during the Dark Ages, when the light of civilization nearly went out. But in recent times, scientists have been delving deep into the secrets of Nature in an effort to solve some of the mysteries of life, and marvelous facts have been revealed. John Hunter, the famous English anatomist, demonstrated the scientific exactness of the declaration of Holy Writ, "The life is the blood." And Metchnikoff proved by experiments upon minute animals whose transparent bodies enabled him by incessant and amazingly persevering vigilance, to prove that the great fact that "the body heals itself." And his researches penetrated still deeper mysteries. He discovered how the body defends itself against germs, the most subtle and dangerous of all the enemies of human life. He actually saw through his microscope blood cells attacking, capturing and destroying bacteria. And other investigators have since worked out the marvelous details of an elaborated defensive system by means of which the body wages

incessant war against invading enemies.

Fifty years ago, physicians who recognized the fact that "Nature creates and maintains and therefore must be able to heal" () were very few, and were looked upon as erratic or heretical. At the present time, so much has been discovered concerning the body's methods of defend- and protecting itself, creating weapons, manufacturing antidotes, and repairing damages, this great truth is now universally accepted. The Battle Creek Sanitarium owes its existence to the fact that more than 50 years ago, when this unpopular truth was unpopular, a few clear-sighted men recognized and championed it, and established a center for demonstration and propaganda.

But it is one thing to recognize a principle and quite another to make a practical application of it.

Natural forces within the body cooperate with the forces of Nature.

Sunlight and air

Water

Electricity

Exercise

Gorilla

Savages - no cancer, appendicitis, gallstones.

QUESTION BOX LECTURE IN THE OLD LOBBY JUNE 29, 1930

By

John Harvey Kellogg, M. D.

I thought you would be interested in learning something of the history of the use of water. Water is undoubtedly the greatest curative agent in the world. It has been in use longer than any other remedy. Its systematic use began about 150 years ago away out in Austrian Silesia.

These are the Graefenburg hills of eastern Austria¹Silesia and in one of these valleys a man by the name of Priessnitz had a small boy by the name of Vincent.

This is Vincent Priessnitz as he looked 150 years ago, and this is his wife, his frau as the Germans call the wife, and this is the house in which he was born. He was an ignorant boy. He did not know how to read or write. He could not write his name until he was forty years old, but at that time he had become famous all over the world. He was born on this little farm. On the other side of the house the cattle and the sheep lived during the winter.

This boy was out in the woods one day when he was about twelve years old out in the mountains helping his father to cut trees and haul logs down and he saw a deer that had been wounded in one of its legs, and he saw that this deer had its foot in a spring of cool water. It was sitting down on the edge of the spring with its leg down in the water. You see him watching it here in the forest. He observed that the deer came every day and spent several hours with its leg in the water. He was very much interested in the observation. The deer got well. So he began

the use of water for sick animals, and, in fact, at that time it was rather customary in that part of the world to treat animals with water. If an animal was sick they got a wet blanket and wrapped it around it and then another blanket on the outside of that, and so water was quite currently used. He began the use of it systematically. He treated a sick dog, a dog supposed to be a mad dog, and he treated this dog by pouring water upon it. He dashed water upon it and kept on dashing water upon it until the dog was tired out and then it went to sleep. When it awoke it was well.

After a while the boy was hurt. He was hauling logs down the mountains and the horse ran away and a log rolled off on him and crushed his ribs, and the doctors said he was hopelessly injured and could not possibly recover and his case looked very bad. But he applied cold cloths to his side and made a good recovery. As a result he became quite famous. He found sponging with cold water was very helpful. So he used a little sponge and his neighbors began to come for treatment. In a short time his father's house was thronged with people to be treated by the boy with the magic sponge. They thought he had some magic in his sponge. As a matter of fact there was some excuse for thinking there was magic about it because a little before this a man had come, a locksmith-- in those days they did not have blacksmiths or locksmiths who had a stationary place, but they traveled about. This locksmith came and stopped at his father's farm to see if they had any work to be done there, and he inquired also if they had any animals that were sick, because he claimed to be able to cure by magic. He had some magic words that he repeated. They happened to have a cow that had cut the tendons of a foot in backing against a scythe or sickle, so they suggested he might treat the cow. It was arranged he should treat the cow by his magic. He would not allow anybody to go with

him. However, he allowed Vincent to go along, and his grandfather said, "Go along and take careful note to listen and hear what he says. Maybe we can get the magic words ourselves." So he went along and learned the magic words. The smith repeated some magic words and he called for a piece of cloth and he dipped this cloth in water, and after saying the magic words and making a few passes over the cloth he wound it around the foot of the cow and he gave instructions for this to be done regularly twice a day. The cow made a good recovery.

So the little boy used to repeat the same magic words when he sponged patients with cold water.

Here you see him engaged in sponging the patient's limbs.

They made such remarkable recoveries that very soon his fame spread to every part of Europe and spread to other countries and he became very famous so that even princes and royalty visited him.

Here you see him pouring water on a drunkard. The drunkard was lying upon the ground here and he poured water upon the pit of the stomach. Sometimes he poured from a height and sometimes used an enormous syringe. In either case he produced copious vomiting and in that way the liquor was gotten rid of and the drunkard made a rapid recovery.

His first cures were made by means of the douche. He got into trouble with the sponge because the doctors said he was treating his patients with magic and had him arrested for the practice of magic and he was put in jail. So he promised not to use the sponge any more and not to use the formula any more. So he used the douche bath and other means.

Here was his douche. This man is applying the douche to his feet.

He was a very ingenious young fellow. He invented a great many different methods of applying water; in fact, there is scarcely anything new in that line that has been discovered or devised since his time.

But he used only cold water. The water came from a spring about five miles back in the country from the village where he lived.

Here is where they went out to take their treatment. The treatment was all given in this clump of evergreen trees that you see here in the open. It did not even have a roof over it. In the winter as well as summer the treatment consisted of cold water. This douche is about fifteen feet high and the size of the stream of water was about that of your arm, so you see it was quite important he should have something to hang on to while the stream was pouring down to keep him from being washed away.

I have seen this with my own eyes. I made a pilgrimage to this place about twenty-five years ago and found it a very interesting old place indeed. This was the first douche back in the woods and patients were carried out with an ox team, and in the winter time they sometimes had snow ten or fifteen feet deep, so they had to shovel a path all the way.

Here is another little group of patients that are going out to take their treatment. There is a policeman going along to protect them from the bandits that were numerous in those days. It is probably a royal person.

Here was an improvement. A few years later he got wealthy enough so he was able to put up this little building and the douche was inside.

Here was another. This was the douche for the men, I think, and the other was for women.

Here is a later douche. This was in 1832.

Here we have an enclosed douche. After taking the douche they would run about in the air with a sheet floating over them and in that

dry off by contact with the air.

The tub bath was one of his inventions. This was a tub bath on wooden wheels. There were several persons to treat the patient. The water was very cold and it required a good deal of activity to prevent severe chilling. I tried this bath myself and had quite enough of it in about half a minute. I stopped over night in the place and in the morning-- as a matter of fact I did not go to bed. I worked all night as I found some very interesting old books there that I wanted to get a copy of, so I spent the night dictating to my stenographer from some of the old German records I found there. Along toward five o'clock in the morning I heard thunder. The thunder was so loud that it shook the building, and I waited a few minutes and the thunder started again and the thunder continued to come right along down the hall and finally stopped just in front of my door. I peeped out and it was one of these big baths that was being rolled down to give a bath to the man across the hall to me. They had only one bath tub for each floor and the bath tubs were rolled from room to room after being filled up with water. As the wooden tubs went over the cement floor they made a loud roaring sound that sounded throughout the whole house.

Here are the different kinds of baths they used.

Here is a wet bandage like coarse toweling and then over this a dry bandage-- sometimes they were waterproof-- and then over this was a flannel or a woolen bandage so as to cause the colder bandage to warm up. The idea was to produce a good reaction and the stronger the reaction the better the effect. By making these applications to the surface of the body strong reactions are produced.

A very curious thing is that the whole body is represented on the

skin. Every organ in the body has some representation in the skin. This area, for example, over the heart is the heart area, and the whole chest in front and behind is the lung area. Just in the small of the back is the kidney area and there is a second kidney area in front just below the sternum, and the region over the liver is the liver area.

When one is very tired and very warm on a very hot day and comes in from the outside the first thing one wants to do is to bathe his face with cold water, because the brain is represented in the face and when you apply cold water to the face that causes contraction of the blood vessels of the face and contraction of the blood vessels of the brain and so congestion of the brain is relieved. When you apply cold water over the liver it causes contraction of the blood vessels of the liver. When you apply hot water it causes the blood vessels to dilate. So if you apply hot water to dilate the vessels and apply cold water to contract the vessels the blood current has to go forward, and by repeating this you can actually pump blood through the liver at any rate you like. If we want to make a permanent increased movement through an organ, why we apply a moderate degree of cold so it will be just enough to stimulate the action of the blood vessels.

The blood in the liver often becomes stagnant and when there is stagnation there is soon inactivity because all the activities of the body depend upon oxygen, and when the blood does not circulate through a part the oxygen is soon used up and the organ becomes asphyxiated. You know when a baby cries and holds its breath the baby gets black in the face. The same thing happens to the liver when the blood stagnates in the liver, does not circulate through the liver. The liver gets black in the face in the same way. Every blood cells that does not have a

sufficiently active supply of blood gets asphyxiated and stupefied because of the lack of oxygen and the accumulation of CO₂. Now, the great value of the cold application is to stimulate the blood movement, and by applying cold and heat to different parts of the body we can regulate the circulation of the blood to any part of the body. Priessnitz did not understand the philosophy of it, but he knew from experience the effects that could be produced. He invented these various applications.

Here is the chest pack, a long bandage over the chest. It was a very ingenious thing. There were a great variety of methods. One of the most vigorous measures was the application of the plunge bath. You see this man coming along all wrapped up in a sheet. That man has been having a wet sheet pack which I will show you in a moment in another picture.

Here is one in the bath. He will soon be out and this one will follow, and here comes another one. I will show you about that a little later on.

Here is a tub bath. I took a bath in just that kind of tub. The cold water came down from mountain springs at all seasons of the year. It was never warmed a particle, for Priessnitz' method was cold water cure.

Here is a patient covered up with a feather bed so he sweated profusely.

Here are elbow baths and leg baths and head baths of various sorts. Here is another air bath. He has had a tub bath and now he is being dried by shaking a sheet about his body.

Here is a pouring douche, and here is another form of douche,

a douche applied to the chest, and this is a pack. The patient has the pack to the legs. He is covered up with a feather bed.

Here is a foot pack and spine pack. In very chronic cases the patient was wrapped up the first thing in the morning with a sheet and then a feather bed was put over him. The sheet was wrung out of cold water. Here he is now. He is all wrapped up in a wet sheet and covered up with a feather bed.

Here is a foot pack and a spine pack.

In very chronic cases the patient was wrapped up first thing in the morning with a sheet and then a feather bed was put over him. The sheet was wrung out of cold water.

Here he is now. He is all wrapped up in a wet sheet and covered up with a feather bed and by and by he would get to sweating profusely.

It is reported-- a gentleman who actually had treatment there and knew Priessnitz and was there when he was a boy, Mr. Prang (some of you remember the famous Prang chromos), Mr. Prang, the publisher of those chromos when he was a boy at the time Priessnitz was practicing he was a patient when he was about fifteen years old, told me that in some cases the patient would perspire so profusely that the perspiration would actually run down through the floor. The floor had cracks in it, so the patients down below would make bitter complaint of the rain from above.

After getting wet in this way the patient usually marched down to the bath in the basement of the building. Sometimes in the case of feeble persons-- this looks like a feeble young man-- the bath was brought into the room and the patient was given a bath in the room. The furniture was very simple.

This was a wet sheet rub, a sheet wrung out of cold water and put around the patient and rubbed until it got warm and then cold water was

put on and the patient rubbed again. This was repeated three or four times.

Here is the application of the heating compress to the legs. First a wet stocking was put on and then a dry woolen stocking and then the patient went to bed and he was supposed to warm it up.

Here the patient has been having a sweat and is now going to have a sitz bath.

Here is a patient being taken out of his pack in the morning to march down to the big tub in the basement to have a cold douche.

This story was told of a man, a wealthy Spaniard from South America, who was suffering from rheumatism and other troubles. He had taken a six months' journey. He traveled by ship to France and by stage clear over to Austria and then by horseback up into the mountains until he finally reached the water-cure at Graefenburg. He was given his bath in the morning to which he submitted, and then he was brought down to the basement to see what was required of him, which was to jump into the cold water. He declined. He said, "I will die first" and returned to his home in Rio de Janeiro.

The patients were not all happy with the crude methods that were used at that time. The patients had to be pretty hardy to survive.

Priessnitz believed in exercise as well as in baths. Here are patients out for a walk. There were fifteen of these springs where cold water poured out around through the mountains. It was a trip of about nine miles, the entire circle of the springs. I took this walk and drank at each spring as did the patients who made pilgrimages there 150 years ago.

These springs were in a crude state at that time. The water was dipped out of the spring with a horn. This man is drinking from a horn. Now these springs have been improved and are very elegant and have all sorts of modern appliances.

The patients were expected to put on a moist abdominal bandage wet with cold water, and they had to walk until the towel was dried out and drink anywhere from 10 to 30 glasses of water a day. So this was very crude.

A patient taking a sitz bath and reading a book. These baths were cold water baths and usually lasted for one to three hours. As soon as the water was warm it was taken out and cold water put in, so you see the treatment was really very strenuous. Everybody did not survive it.

Here is Priessnitz himself out for a walk with his dog that was always with him. These are patients he has met on the walk with their drinking horn. This was his regular custom, to walk or ride horseback all through the mountains and meet his patients in the morning.

Priessnitz introduced the dew bath-- walking in the wet grass. Some of you remember that 30 or 40 years ago it was quite a fad in New York for people to go and walk in the grass in the parks. This method originated with Priessnitz a hundred years before. The dew bath passed out of fashion, but this was the dew bath in 1845 and here was the dew bath again in 1857. Before they were going down hill and now they are going up hill. That is all the difference I can see in the method.

Priessnitz believed in vigorous exercise and in practical exercises of various sorts. This man you see is sitting in bed, a poor rheumatic. You see saw horses have been brought to his bedside

so he is getting his exercise in a very practical way. Priessnitz, in fact, managed to get all his wood sawed by his patients. He is splitting wood, you see. He is getting exercise by that method. Even titled ladies had to engage in wood sawing. Priessnitz set his patients to work. Here they are beginning to shovel out a path. They have had a heavy snow and they are shoveling out a path up into the fields up to the douche bath.

Here is a monument which has in late years been erected to the memory of this peasant. He was so successful in his work that doctors traveled there as well as lay people from all over the world, from this country, and his methods were introduced in France, Germany, England, and finally here in America. The Surgeon-General of the French Army spent several weeks with him learning how to use water and adopted his methods for the French Army. In this country water-cures-- the first water-cure was opened in Maine and afterwards numerous water-cures were established. When I began my work in the institution here some fifty-seven years ago there were still two or three water-cures of this sort active in this country, one known as the Cleveland Water-Cure which acquired quite a reputation. That was closed soon after. This institution was then a water cure. It began in 1866 and was started as a water cure.

But the water-cure era came and went and people lost their faith in water. The cold water particularly was too strenuous for America, so the water-cure failed, and it was because it failed that we have a sanitarium. The managers or the board of trustees of the place here came to me and told me that they decided to close the place up unless I would take charge of it. So I took charge of it with the understanding that I would reorganize it and put it upon a scientific basis and adopt more

scientific methods, eliminating some of the crude methods. After I began my work here the institution very soon began to fill up with patients when the crude methods were eliminated and more modern methods were adopted, and the next year we put up a large building accommodating several hundred people and we have been growing ever since.

Here is one of the modern springs. It was put up by a patient who was so grateful that he decorated one of these springs and put up a stone wall about it and improved it, and this was done by other grateful patients to other of the springs. So all of the springs have now been beautified in various ways and the original crudeness has almost entirely disappeared.

Here is a great monument that has been erected to the memory of Priessnitz and here are other monuments that have been put up at the different springs and different places about the place.

Here is Priessnitz himself as he was after he had become famous. He was granted a license to practice medicine by the Austrian parliament. The government issued to him a special diploma. Although he had never been in a medical school, knew nothing about anatomy, knew nothing about physiology and knew nothing about drugs, he had acquired the art of the use of water in such a way that thousands of people who had been pronounced hopeless by the most eminent physicians in all parts of the world, these people came there and recovered.

Their recovery was due to the fact that water has the power to stimulate the vital functions of the body. It has marvelous restorative power. The power of water consists in the reaction that is produced. You know when you apply cold water at first it chills you and you feel awfully cold, but shortly after that you feel warmth perv

QUESTION BOX LECTURE IN THE OLD LOBBY JULY 7, 1930

By

John Harvey Kellogg, M. D.

It is very delightful to come here in the evening and find you all smiling notwithstanding the hardships you have had to endure and the punishments you have been subjected to. You are certainly very amiable and patient people.

I should like to inquire whether you were smiling here a moment ago because you were happy or are you happy because you smile. Which way is it? Actually, the great psychologists have not been able to settle that question. A man has written a book for the purpose of discussing the question, Are we happy because we smile or do we smile because we are happy? Which way is it? As a matter of fact it is both ways. If you are unhappy and you smile you become happy and if you are happy of course you cannot help but smile. That is perfectly natural. But the important thing is to smile when you are not happy and in that way become happy.

There is a wonderful relation between the face and the brain. A dog can generally tell what his master is thinking about by the expression of his face. I think we naturally intuitively form some opinion as to the character of what is behind the face, don't we? The face is said to be a mirror of the mind. Why? Because the brain is associated with the face in such a way that the face expresses changing states of mind, changing thoughts that are passing through the brain. For example, suppose a person is depressed mentally, is

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in a very melancholy state. I saw such a man the other day who was in a very melancholy state. That is the way he looked. The corners of his mouth were drawn down here. What is the reason for that? The man really was not to blame. He had simply surrendered himself to his mental states and he was automatically put into that attitude. His countenance was automatically put into that shape. And why? Because here are some little muscles in the face, one end of which is attached to the skin and the other end attached to the bone. In some instances both ends of the muscle are attached to the skin. For example, here at the corners of the mouth are little muscles that pull the corners of the mouth down. This little muscle, called the depressor anguli oris, is the depressor of the corner of the mouth, and when one is in a melancholy state of mind the corner of his mouth draws down. If he is very melancholy both corners pull way down. In case a man is happy, on the other hand, the happy state of mind stimulates another set of muscles that pull the corners of the mouth up, the levator anguli oris muscles, and so the corners of the mouth are pulled up toward his ears. In one case they are pulled down toward his face and in the other case pulled up toward his ears.

So the only thing in being happy is to pull the corners of the mouth up. The minute you pull the corners up that way you begin to feel happy, because that is the state of the face when the mind is in that condition. Here is a sort of couplet, you see, two links in a chain. One is in the brain and the other is in the face and they work together. When the brain is in a certain state, why it puts the face in a corresponding state. Now, if you put the brain in this condition, why the face is at once adjusted to suit that state of the brain,

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and if you put your face in a happy state, that is, if you put a smile on your face, why that automatically puts a smile in your brain. The two things go up and down together.

Other emotions affect the face in just the same way. Here is a little muscle at the corner of the nose. It is the scoffing muscle, because when you contract these little muscles here it pulls up the corner of the nose and upper lip. The corner of the nose is lifted by the levator labii superioris alaeque nasi. This muscle when it is pulled up lifts up the end of the nose. When one has the habit of thinking scornful things and carrying this look of scorn upon his face, turning up his nose at everything, the nose gets in the habit of turning up all the time and he gets that sort of wrinkles in his face and carries that expression with him all the time.

A lady came to me some time ago and wanted something for wrinkles. I have noticed that people who want wrinkles changed are people who have a certain kind of wrinkles, these wrinkles that put the face into an unhappy unpleasant state. People who have that sort of wrinkles want to have them smoothed out. I never saw people want to have this sort of wrinkles removed. People who have a happy expression on the face do not want to get rid of them.

These wrinkles on the face are due to the fact that the face is put into a certain shape and kept in that shape so much of the time that the muscles get into the habit of holding it there and the skin becomes more or less rigid and formed to that particular shape. So all one has to do in this world is to keep his face straight. He may keep his face straight by keeping his mind happy or he may keep his mind happy by keeping his face straight, either one.

That is a very important principle to learn. It is the secret

and if you put your face in a happy state, that is, if you put a smile on your face, why that automatically puts a smile in your brain. The two things go up and down together.

Other emotions affect the face in just the same way. Here is a little muscle at the corner of the nose. It is the scoffing muscle, because when you contract these little muscles here it pulls up the corner of the nose and upper lip. The corner of the nose is lifted by the levator labii superioris alaeque nasi. This muscle when it is pulled up lifts up the end of the nose. When one has the habit of thinking scornful things and carrying this look of scorn upon his his face, turning up his nose at everything, the nose gets in the habit of turning up all the time and he gets that sort of wrinkles in his face and carries that expression with him all the time.

A lady came to me some time ago and wanted something for wrinkles. I have noticed that people who want wrinkles changed are people who have a certain kind of wrinkles, these wrinkles that put the face into an unhappy unpleasant state. People who have that sort of wrinkles want to have them smoothed out. I never saw people want to have this sort of wrinkles removed. People who have a happy expression on the face do not want to get rid of them.

These wrinkles on the face are due to the fact that the face is put into a certain shape and kept in that shape so much of the time that the muscles get into the habit of holding it there and the skin becomes more or less rigid and formed to that particular shape. So all one has to do in this world is to keep his face straight. He may keep his face straight by keeping his mind happy or he may keep his mind happy by keeping his face straight, either one.

That is a very important principle to learn. It is the secret

of the Christian Scientist's philosophy. The thing that is good in it is that the Christian Scientist is always in a comfortable, happy, contented state. He is sure that everything is all right and he is so thoroughly sure of it that it is going to be all right that he does not worry. Now, it is not the thinking that you are happy or the making yourself happy that has any positive good in itself. It simply keeps unhappiness away. It is the worry, it is the unhappiness, it is the fear, it is the dread, it is the envy, it is the jealousy, these depressing emotions, these are the things that make people sick. That is, people are sick because of the psychic effect. It is not everybody that is sick because of his psychic condition. Many people are sick because they have abused their stomach, abused their liver or worn out some part of the vital machinery, but there are people ill simply because they think they are sick. There are other people that are ill because they allow the depressing mental emotions to rule them so constantly that the body has been damaged by the poison produced by these depressing emotions. When a person worries or is angry, poisons are actually produced in the body. There is a set of glands in the body called the adrenals and these glands produce adrenalin. Adrenalin is a poisonous substance. When produced in the body in excessive quantity it does a great deal of harm. It accelerates the machinery of the body injuriously. It makes the machine run too fast. It excites the muscles, irritating them so that they even get into a state of trembling. When a person is angry his hands shake and his fingers shake. When a person is afraid he trembles and his knees shake as they say. So the effect of these depressing emotions is actually to produce poisons in the body which really do harm.

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Now, smiling, happiness, good cheer and optimism put all these poisons out of the way. They are an antidote for the poisons; they stop the formation of poisons and that gives the natural forces of the body an opportunity to lift it out of the ruts of disease and build up health. That is why optimism is beneficial. This, you see, is a real thing.

QUESTION: Are tomato and sauerkraut cocktails wholesome?

ANSWER: Well, I never tried that sort of mixture. The tomatoes are all right and the cabbage is all right, but about the sauerkraut and the cocktail I confess I am a little afraid of the cocktail. I do not like the word cocktail. Still it may be all right. I would not guarantee it. I would much rather have the plain tomato and the plain cabbage and allow my stomach to make its own cocktails.

QUESTION: What is your opinion of Roman meal?

ANSWER: Roman meal is composed chiefly of linseed, I believe, and linseed is entirely wholesome. It is a mucilaginous product that has somewhat of a laxative effect. Some people find this very satisfactory as a laxative.

QUESTION: What is the cause and cure of arthritis of the knee?

ANSWER: Well, I confess that is a pretty hard question to answer. In the first place we do not quite know what arthritis is. Perhaps I should put it a little differently. Arthritis seems to be about twenty or thirty different things. That is the trouble about arthritis, it is so many different things, and they are all grouped under the same head. Now, a person may have a headache from a number of different causes. Maybe his liver is out of order or his stomach or duodenum or colon or some other part of the body may be the cause of the headache. Maybe it is a diseased tooth that causes the headache. The headache is a symptom, not a disease.

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Now, this same thing seems to be true to a large degree of these joint troubles that are in general called rheumatism or arthritis. We are coming to differentiate quite generally between arthritis and rheumatism. Arthritis is generally applied to a condition in which the bones have become changed. Changes take place in the joints so that they sometimes become distorted and enlarged, and rheumatism is rather confined to the condition in which the soft parts of the joint are involved and to acute conditions in which the joints are the seat of pain; but there are quite a number of different diseases which are accompanied by this symptom. For instance, in scarlet fever we may have a rheumatism of the joints. Even in diphtheria there may be disease of the joints, and in measles and in small-pox and in typhoid fever. Nearly all the infectious fevers may involve the joints. Then we have infectious rheumatism, perhaps several different kinds of infectious rheumatisms, as a matter of fact.

The same thing is true of arthritis. Some sorts of arthritis seem to be due to poisons absorbed from diseased teeth, or a chronically diseased appendix, or a diseased tonsil, or a diseased ear. In my opinion the most common cause of arthritis, or of the focal infection which gives rise to arthritis, is the colon. In the colon we have the same sort of infection that we have in the tonsil. The very same germ that infects the tonsil sometimes affects the colon, and when the colon is infected a much larger area is involved than when the tonsil is infected. So I am inclined to think that in a great majority of cases the arthritis-- infection of the colon is the original seat of the trouble.

QUESTION: Are acids such as orange juice, grapefruit juice and the juice of other acid fruits harmful for persons suffering from arthritis

No. 7.

WHAT MAKES A MAN TIRED?

Fatigue
Route Creek

A New York banker, consulting a physician at the Sanitarium, asked a question which is of great interest to thousands of business and professional men. He said, "Doctor, what makes a man tired? I am tired all the time. I get up in the morning tired. I haven't any pep. I have lost my appetite for work. I am not sick. The doctor can't find anything the matter with me. I am just tired. Now what makes a man tired any way?"

"Sometimes it is work," said the doctor. "More often it is something else."

"I am sure that is right," said the banker, "for often I am more tired in the morning than I am at night."

"That is a very common observation," said the doctor.

"Another thing that makes business and professional men tired is the office chair. Bad posture, chiefly due to badly constructed chairs and seats, is a common cause of chronic and disabling fatigue. There are many other things which make a man tired, such as worry and smoking," said the doctor, "but I'll give you a little booklet that you can read at your leisure, and you can get extra copies if you wish at the extension department of the Sanitarium. Ask for booklet, "What Makes a Man Tired?"

Fatigue due to work is dissipated by sound sleep, which is Nature's method of recharging the storage batteries of the brain and nerves. Fatigue is the signal that the

nerve batteries need recharging. Insufficient sleep leaves the batteries incompletely charged, and hence the tired feeling. Eight hours' sleep is the normal requirement. Men who, like Edison and Napoleon, spend but four or five hours in bed, take naps in the day-time totaling three or four hours more.

And the sleep must be sound, undisturbed by noise, in which, as scientific experiment has shown, lessens the restorative value of sleep even when the sleeper is not awakened. Evidently, drugs which prevent sound sleep are harmful and sleep-producing drugs are also harmful because the sleep which they produce has not the restorative value of sound, natural sleep.

A tired feeling that is not relieved by sleep is toxic fatigue. Dr. Lee, professor of physiology in Columbia University, found by experiments on animals that the malodorous substances which develop in the colon are powerful fatigue poisons. When they were injected into an animal, even in minute amount, the creature at once became tired. The coated tongues and foul breath of many tired persons, show the source of their fatigue to be deficient elimination. In such cases, proper regulation of the diet will effect a speedy cure of the insomnia. A chronic tired feeling is a danger signal which should not be neglected. A premature breakdown in health is the logical result of neglect. The cause must be found and eliminated by a change of habits. If you desire, the Health Extension of the Battle Creek Sanitarium will send you on application a copy of a little booklet in which you will find helpful suggestions. Ask for booklet about that tired feeling.

The Battle Creek Sanitarium is known the world over as a health center. While it has been a pioneer in progressive medicine and under scientific direction has become a Mecca for sick people from all parts of the civilized world, its chief service has been that of an educational institution.

QUESTION BOX LECTURE IN THE OLD LOBBY, JULY 14, 1930

By

John Harvey Kellogg, M. D.

For more than sixty years a great experiment station has been carried on here at Battle Creek for the purpose of finding out how to live, and for almost fifty-six years I have opened a Question Box every Monday night in an effort to spread abroad the information that has been obtained by our experiment here.

About sixty years ago, Dr. Willard Parker, the great New York surgeon, said, "Every dose of medicine is a blind experiment upon a patient's vitality. Some of you have found that out by experience. So I may say that every morsel of food you eat here is an experiment. Every time we make a diet prescription for a patient it is to some extent an experiment. We have been watching the results of these experiments during all these sixty years, and every Monday night I try to give you the latest news, the summing up of all these years of experiment. Of course I am not willing to

say that these are blind experiments. We are doing all the time the very best we know.

When I began my work here I recall that the first time I was making prescriptions for my patients I had a great deal of anxiety about how my prescriptions would work. We could not be absolutely certain that the results obtained before were going to be secured again, for every patient is a problem a little different from any other one, and I recall very well how I felt one day when a venerable looking man asked to see the "old doctor." They brought me in, and I said, "I am not very old" because I was only twenty-three years of age. The man looked at me and said, "Are you Dr. Kellogg?"

"Yes, that is my name. Did you wish to see me, sir?"

"Well, I do not know whether I do or not," and he turned around and looked out of the window and then he looked back at me and said, "I am very much disappointed. I expected to see a larger and an older man."

"No," I said, "I am a very small potato." And what do you think he said?

"That's a fact."

I never approach this Question Box without a certain amount of feeling that I am a very small man, for there may be some question in their too big for me to answer. I have not the slightest idea of what I have to meet here tonight. Sometimes I meet my Waterloo.

QUESTION: Do you agree with most specialists--

ANSWER: No, I disagree with most specialists.

QUESTION (continued)-- that catarrh of the head is due to outside infection rather than to poisons from within the body?

ANSWER: Nasal catarrh, like any other catarrh, is an infection. The mucous discharge comes from the nose. The normal mucous discharge is clear. It has no patches in it. It becomes opaque when germs and pus cells are present in it. When you take a cold and you begin to sneeze, by and by the nose begins to run. There is a watery discharge. That watery discharge is a natural discharge. That is nature fighting off the germs. The watery discharge is composed of serum from the blood and it contains substances which are deadly to germs. The reason why nature pours it out is to kill germs and fight off the germs that are seeking entrance. By and by the germs get a foothold and begin to grow and

the discharge becomes thicker because pus is being formed and the germs are then present in great numbers.

QUESTION: I find sandals are being offered in the Occupational Therapy Department. Do you endorse the wearing of sandals as a health measure? Is there any danger of breaking the arches down from wearing sandals?

ANSWER: I think that the sandal is undoubtedly the most healthful footwear possible. I do not know of anything that is more healthful for the foot than the sandal. These particular sandals I am not particularly acquainted with, but I think sandals of all sorts are the most healthful footwear you can find.

QUESTION: What is the difference between arthritis and neuritis?

ANSWER: Arthritis is a disease of the joints, while neuritis is a disease of the nerves. They both often have the same origin. The same poisons and the same germs will produce both of these conditions. A person who suffers from rheumatism or arthritis often has neuritis also.

QUESTION: Is it necessary in changing the intestinal flora to have the teeth cleaned and the mouth attended to? How often should one visit a dental hygienist?

ANSWER: When one wants to change the intestinal flora it is necessary to begin at the top. The alimentary canal is thirty feet long, and when a person has an infected alimentary canal the infection usually extends from one end to the other. Of course this infection begins in the colon. The infection consists of colon germs, the bacillus coli and the Welch's bacillus. These are the two worst germs that infect the colon. They are found present in vast multitudes, several hundred trillion. One bacteriologist estimated the number of germs produced every twenty-four hours to be not less than three hundred trillion, and when these germs are of a bad sort they can do an immense deal of mischief.

Nature protects us against bad germs by furnishing us with an outfit of good germs. Nature never intended the alimentary canal to be aseptic or free from germs. That is one mistake some specialists have made. They have the idea that there should be no germs in the body. That is a great mistake. It is necessary that the alimentary canal should be occupied by germs, but it should be occupied by germs that will not produce poisons, friendly germs that will protect the

body against the attack of unwholesome germs. Just exactly as in the case of your front yard you do not undertake to keep it entirely free from vegetation of any sort. You take care to see that it is well covered with grass or clover, that is, kept green with some agreeable sort of vegetation. If you undertook to keep everything out of it you would have to be pulling weeds all the time. To keep your lawn in good condition you sow grass seed so there is no room for weeds to grow.

Nature protects the alimentary canal in just the same way.

She supplies the baby at birth with the bacillus bifidus and the bacillus acidophilus, a germ which makes lactic acid, and this germ is entirely harmless, just as harmless as the germs that produce souring of milk, and so long as it thrives and is dominant in the alimentary canal no disease germs can get a foothold there. It is when these germs are driven out, when they are lost and wild germs get in, called meat germs by Dr. Herter, of New York, because the bad germs are found most abundant in meat, that there is trouble. Meat is where they come from, meat and bad eggs, and from old cheese and from decomposing foods of various sorts. These germs are present in vast numbers in such foods, and when they get into the alimentary canal in such numbers that they

drive out the healthy germs, it is just like a lawn all grown up to
thistles and noisome weeds. Then the wild germs will produce poisons
which inoculate the whole body. When we find these germs present in
the body in such numbers that a person has a coated tongue and has a
bad taste in the mouth that means that the entire alimentary canal is
infected. An examination of the coat upon a person's tongue or of the
saliva of a person who has a bad breath, examination in the bacterio-
logical laboratory shows that the mouth is occupied by colon germs.
Millions upon millions of colon germs are swarming in the mouth just
the same as in the colon, the same sort of germs, and that is the reason
that the teeth decay. The teeth do not decay so long as these unwhole-
some germs are not present. Germs are the cause of decay of the teeth.
The real cause of decay of the teeth is not the accumulation of food
or remnants of food left between the teeth, but it is because the power
of the body to resist germs has been lost.

The dentists used to tell us that the reason why we had de-
cayed teeth was because we did not keep our teeth clean. That is not
true. That is not the original cause of decayed teeth. The original

cause of decayed teeth is lowering of the vitality of the body,

lessening of the germ-resisting power of the body.

Four or five years ago I was out in the Sahara Desert. I had a book to write, so I ran away to Europe to get a little time to write it. I went to southern France in the region of Nice and Marseilles, and I had a friend living at Monte Carlo, so I stopped with him a little while; but I found it was so cold I could not get out into the sunshine as I wanted to. So I crossed the Mediterranean and went over to Algiers and there I found it still cold and rainy and very unpleasant weather, so I finally went away on down into the Sahara Desert. I did not stop until I got to Biskra, an oasis in the Sahara Desert. I went down to Biskra and stopped there to do my writing in the sunshine.

I now and then book a few hours off for a little recreation. One day I made a little excursion to a neighboring oasis in the mountains forty or fifty miles away. I found there an Arab boy who had not slept indoors since he was seven years old. He was about fourteen years of age and he had lived outdoors the entire time. He had been turned out by his stepmother when his father died. He was a little shepherd boy.

The man who owned the sheep gave him a bit of bread every morning and now and then gave him an onion or a carrot or a turnip, and then he had the milk of the sheep. That is the way the little boy lived. When it came night he simply laid down beside a wall somewhere and pulled his cloak about him and went to sleep. He had never had shoes on his feet.

I felt rather sorry for this boy, so I asked him if he would not like to go along and I would send him to school and give him an education. He said he would love to go.

"Suppose you run home and get ready. In a few minutes I shall be starting back and I will let you go with me."

He said, "I haven't any home."

"Get your things."

"I haven't any things. It is just me and my coat, that is all there is."

So I took him into my car and drove him to Biskra and I found an Arab school for him and paid his tuition for one year. What do you think it cost me? He had a chance to work for his board by taking care of a little baby boy. I paid for his tuition for a whole year. What do you think it cost me? Just four dollars. I left him hard at work

learning to read and write the Arab language.

This boy had grown up under natural conditions and it was very interesting to me to see how he took on civilization, how he reacted to it. The first thing I told my guide was to take him down to the village and get him some clothes, for he had never had anything but just a little piece of cloth wrapped around him. He had no shoes and no cap. He never wore anything but just a little piece of coarse cloth that he wrapped around his body. That was everything he had worn in his life. By and by my guide brought him back with some second-hand clothes he had picked up. For ten dollars he bought a complete outfit of clothes. I noticed he had his sleeves rolled up six or eight inches and his pantaloons were rolled up eight or ten inches at the bottoms. I said, "These clothes are rather large for him."

"Yes, but wouldn't it be better for him to grow into them than to grow out of them?"

So we gave him a start in growing into his clothes. We put some shoes on him and the poor fellow could not walk. He begged

to have them taken off as soon as possible. He had to take his shoes off and clothes off before he was comfortable and happy. This boy was a natural boy, so I was very much interested in studying him thoroughly. I gave him a thorough examination from head to foot. He had the finest teeth I ever saw. They were as smooth as glass and glistened like ivory. There was not the slightest film on his teeth, not the slightest evidence of tartar nor the slightest evidence of pyorrhea. He had absolutely perfect teeth, not a defect of any sort. I said to him, "Did you ever see a toothbrush?"

"Toothbrush?" he said, "What is that?"

He had never heard of a toothbrush.

I said, "How do you clean your teeth?"

"Once in a while I take a sip of water and rinse my mouth."

The only thing he had done for his teeth was to rinse his mouth once in a while, yet they glistened just like ivory. They did not have to have any cleaning because his resistance was so high

from living a natural life that his saliva was able to take perfect care of the teeth. Normal healthy saliva will do that.

A cat has a clean tongue and clean teeth. Have you ever noticed how red and fine and smooth a cat's tongue is? Its teeth are clean and white and glistening also because its resistance is high.

Now, unfortunately we have lost that resistance. We have wandered so far away from the road of biologic living that before we are ten years of age most of us already have decay well started in our teeth. Examination of school children some time ago showed that of the 20,000,000 school children in the United States at least three quarters of them have decayed teeth.

I wonder if there is a single person in this audience that has thirty-two sound teeth. There should be sixteen sound teeth in each jaw. Is there anybody in this audience that has thirty-two sound teeth? Here is a lady about eighteen or nineteen years old, perhaps, and she says she has thirty-two sound teeth. That is a very unusual thing. I have often asked that

question of an audience of a thousand or more and seldom found one or two people who laid claim to thirty-two sound teeth. On one occasion a lady held up both hands. She was very anxious to testify to her sound teeth. She had thirty-two sound teeth. I asked some one near her to examine her mouth and she took the teeth out and held them up and they were perfectly sound.

We are losing our teeth and becoming a toothless nation, and the reason is our alimentary canal has become inhabited from one end to the other with disease-producing germs. In order to get rid of these germs we must change the intestinal flora. That is what the change of flora is for. The change of flora is getting rid of all the bad germs from the whole alimentary canal from one end to the other. It must begin with the mouth to be thoroughgoing, for these germs in the mouth, if they are swallowed with the food as they are certain to be if the mouth is not as clean as it ought to be, are carried into the stomach and then the duodenum becomes infected, and no matter what you do with the lower part of the intestine the alimentary canal becomes continually infected.

How many people are there here who will testify that they give their teeth a thorough cleaning three times a day? Hands up. There are

six or eight people. How many are there who will testify that they cleanse the mouth thoroughly twice a day? That is pretty good. About twenty people. How many are there who cleanse the mouth thoroughly at least once a day? Twenty-five or thirty people. One-half the people here do not pay any attention to their teeth at all. It means a great deal to lose teeth, my friends. We are finding out in recent years that many of our worst troubles begin in the teeth. For instance, arthritis begins in many cases in the teeth.

Benjamin Rush, one of the great men who signed the Declaration of Independence, was a doctor, and in one of his lectures he gives an account of several cases he observed, very curious to him and which he could not explain, but nevertheless he made the observation that a patient who suffered terribly from rheumatism suffered frequently from pain in his teeth, toothache, and finally had a dentist pull his teeth and the rheumatism disappeared in two or three weeks. Several cases of this sort occurred, and a number of other clinicians made a similar record, so it was discovered that there was a relation between the teeth and rheumatism and neuritis.

Dr. Rosenow made some interesting experiments. He had a dentist pull out a diseased tooth and he got some germs from the root of it and then injected these germs into animals and these animals suffered from neuritis. In one case he found a man who had a diseased tooth and neuritis in his left arm, and he injected some germs from the root of this tooth into an animal and the animal got neuritis in the left foreleg in the same nerve that was affected in the case of the man.

So we know there is a close relation between these conditions in the mouth and general conditions. A person who has pyorrhea is very likely to suffer from neuritis and rheumatism, and not only that, but hardening of the arteries and high blood pressure is now known in many cases to be due to diseased teeth. People who suffer from disease of the heart are often affected because of a diseased condition of the teeth. I just saw a gentleman this afternoon who came here some little time ago with his blood pressure above 200, and he was suffering very seriously with an affection of the heart. We examined his teeth and found them very bad indeed. Several teeth were

drawn and he already is beginning to get well. We believe that the condition of his teeth was largely responsible for his heart trouble and disease of the arteries.

So the teeth must have attention. Every person should have thorough attention to the teeth by a dentist often enough to be sure to keep them free from tartar. I confess I am rather careless about my own teeth myself. I am so busy and get so occupied that I forget about my teeth, and so in order to atone for my neglect I go regularly to the dental hygienist once a week. She goes over my teeth thoroughly. In fifteen or twenty minutes the teeth receive thorough attention, and then I am sure I am all right for another week. It is impossible for a person to give the teeth quite as good attention as they ought to receive anyway, but if you visit the dental hygienist once a week you may be sure your teeth are in proper condition.

A person who is going to have a surgical operation should have the teeth attended to before the operation. I would not think of having an operation in which I had to take an anesthetic without

having the teeth attended to for this reason: One of the greatest dangers connected with an operation in which a person takes an anesthetic which has not yet been fully overcome is from the mouth. If a person while taking the anesthetic happens to get some of the saliva down into the lungs he is likely to have pneumonia. A little saliva is likely to be sucked in by some respiratory effort. The mouth almost always contains pneumonia germs, at least this is true of an unclean mouth. A mouth that is not kept thoroughly clean is pretty certain to have pneumonia germs in it. When these germs are sucked down into the lungs the patient is likely to have pneumonia.

A person who is going to have his tonsils removed should have the mouth thoroughly cleansed before the operation by a dental hygienist. Sometimes serious inflammation sets up because the mouth was not clean and the raw surfaces become infected.

QUESTION: How can ringing in the ears be cured?

ANSWER: It cannot always be cured. Sometimes this ringing in the ears is due to conditions that cannot be removed; but these troubles can often be mitigated by applications of gal-

vanic electricity and sometimes by vibratory applications made to the ears and treatment of the ears themselves. A skilled aurist can usually do something to mitigate this trouble, but it cannot always be relieved.

QUESTION: Is there any truth in the statement that air pockets in the colon are made by the use of bran and psyllium seed?

ANSWER: None whatever. Bran and psyllium seed are perfectly innocent substances. They cannot do any harm at all. We must remember that in the case of bran when the bran is wet it is like wet paper. Paper that is dry and stiff may sometimes even cut the skin under some conditions, but wet paper loses these harsh properties entirely, and the same thing is true of bran. There is another thing true of bran. Bran is insoluble material. It is not food. It is a foreign substance. When it is taken into the stomach, the stomach simply gets rid of it as quickly as it can. If there is a little bit of bran left in the mouth after eating bran, the tongue at once begins to get rid

of it. The tongue hunts it up and disposes of it. You do not have to think about it, but it does it involuntarily. You do not have to think "I have a little bit of bran over there beside the third molar on the lower jaw on the right side." You do not have to think about that. "I must put my tongue over there and get it." Not at all. The tongue goes right over there after it and it keeps right after every little bit of bran until they have all been removed.

When the bran gets down into the stomach it does the same thing. The stomach keeps at work upon every little bit of bran until it has passed it on out into the pylorus, and in the intestine all the way down the presence of bran causes the mucous membrane of the intestine to act. It stimulates its activity by a sort of titillation. Bran does not irritate, it tickles instead. It simply titillates and this sort of stimulation is what gives activity to the intestine.

QUESTION: What is the cause of the distressing gas which develops in the alimentary canal?

ANSWER: This is due to the wild germs that get

into the alimentary canal. Acid-forming germs produce no gas. When there is a great deal of gas in the intestine it means that the wild germs are dominant and the flora needs to be changed, and when the flora is changed the gas will disappear.

But you say, "I took some Lacto-Dextrin and I had more gas than before." I remember one patient said he thought he came very nearly bursting because he had such a tremendous amount of gas develop.

This gas is due to the fact that these wild germs are very fond of lactose. They are fond of Lacto-Dextrin, and so when it is introduced they immediately begin to grow and develop and make these enormous quantities of gas. If you have a large amount of gas, it is because you have a great number of bad germs, and you are in great need of having your flora changed. "How am I going to get rid of them if they are fond of this food and it makes them grow?" When they feed upon lactose or Lacto-Dextrin they produce acids instead of ordinary poisons. When they produce gas they produce along with the gas acids and these acids are poison to them, and so in a short time the amount of acid produced

is so great that they die. They destroy themselves by the products of their own activity and they disappear. So persevere for a few days and the gas will disappear.

QUESTION: What diet should be employed in diarrhea?

ANSWER: The only thing that needs to be done is to change the flora. I met some little time ago a doctor and he said, "I often had attacks of diarrhea and I was generally sick for several days, but I had an attack the other day and took a dose of Lacto-Dextrin at night and in the morning I was well." It is only necessary to change the flora. These germs that produce diarrhea cannot live in the presence of Lacto-Dextrin or lactose. Ordinary sugar of milk has the same effect. The principal advantage of Lacto-Dextrin is that it tastes better and is more agreeable to take. B-Lac, the new lactose, will answer the same purpose.

QUESTION: After taking two tablespoonfuls of Lacto-Dextrin in hot water two hours before each meal for the past month and having the flora changed, is it beneficial to keep on taking it indefinitely?

ANSWER: If the flora has been thoroughly changed the change can be maintained by the use of B-Lac, that is soluble milk

sugar. When sugar of milk is crystallized at a temperature of 200° or a little less it is soluble. It is usually crystallized at a lower temperature, which makes it insoluble and with very little flavor; but when it is crystallized at the higher temperature then it is three times as soluble and three times as sweet. That is what beta-lactose is. You will find it here on the table in little white jars. If it is used freely in place of cane sugar at the table after the flora has been changed, it will keep the flora changed. Just simply adopt the use of this new lactose, the new sugar, and you can keep the flora changed for an indefinite length of time. It is necessary to use it very freely.

QUESTION: Is there any danger in tanning the skin?

ANSWER: No. Tanning of the skin renders the skin very much more finer and more delicate. We talk about exposure of the skin to air and light making it tough. It toughens it in a peculiar way; it toughens the skin by making it more resistant to disease. The skin becomes much finer the darker it gets. When it becomes very tanned it becomes as delicate as the finest silk. It is the white skin that is really tough. A thoroughly healthy skin that is well tanned is extremely delicate.

The next time you meet some amiable colored person who is very black, black as soot, a pure blooded Negro, examine his skin and you will be amazed to find such a fine delicate texture. It is much more delicate than your own skin. You will be ashamed of your skin when you compare it with that of a full blooded Negro. The Negro's black skin is finer than the finest fabric you ever handled.

I made that discovery about twenty-five or thirty years ago when I was in Egypt. I was making anthropological studies, and in a little section of Cairo I found where there were people from away up the Nile. So with proper police protection I got in there to make a study of these people. I found in studying a black girl from away up the Nile who had never worn clothing to amount to anything that she had the most wonderful skin I ever saw. It was wonderful. In making other similar studies I found this universally true. The dark skin is the finer skin.

QUESTION: Can psyllium seed be taken indefinitely without harm?

ANSWER: Certainly it can. It is just as harmless as to

eat bread or potatoes or any other vegetable substance, and the quantity may be increased from day to day until you get the effect desired. You can take several tablespoonfuls if you want to. It can do no possible harm.

QUESTION: Has bran any food value?

ANSWER: Bran has about one-half the food value of bread.

QUESTION: What causes a diverticulum?

ANSWER: A diverticulum is caused by colitis. Colitis causes disease of the intestinal wall, the mucous membrane, and when it becomes diseased and weakened by disease the accumulation of gas in the intestine will cause a little pouching of the wall just as you sometimes see in a rubber balloon a little place get a little thin and a pouch form on it.

QUESTION: What can be done to improve this condition?

ANSWER: The thing to be done is to change the intestinal flora and keep it changed. That is really the only thing that can be done. Avoid an accumulation of residues in the colon and keep the colon empty and keep the flora changed.

QUESTION: Can sciatica be cured? What is it?

ANSWER: Yes. What is called sciatica is neuralgia of the sciatic nerve. It may be due to various causes. Sometimes it is due to pressure of a growth. A person who has a pain in the sciatic nerve should have an X-ray examination and a surgeon should be consulted. Sometimes it is due to a cancerous growth, sometimes to a bony growth, but most commonly it is simply an inflammation of the nerve. It is sometimes due to colon poisons and sometimes to diseased teeth. It is more often due to chronic colitis than any other one cause.

QUESTION: Is lemon juice a germicide?

ANSWER: Yes, pure lemon juice will destroy most germs. All the dangerous germs may be destroyed by lemon juice.

QUESTION: Is it good for a cold?

ANSWER: It does not do any harm. It will not cure a cold, but it is entirely harmless and sometimes gives some relief, especially when there is plenty of hot water taken with it in the form of hot lemonade.

QUESTION: Does not the Bible recommend meat eating?

In Peter's vision was he not commanded to eat the flesh of animals?

ANSWER: This is an old question. In the first place, about the Bible recommending meat eating. I do not think it does. If you read the first chapter of Genesis you will find that after God had made everything and pronounced it very good, then he said to Adam, "Every herb bearing seed and fruit tree bearing fruit to you they shall be for meat." So you see the original meat grew on trees. It would have been entirely inconsistent for God to have made meat for man to eat and then give it four legs to run away from him so he could not get it. That would be very inconsistent and unreasonable and so we do not find that arrangement of things. The meat for man was hung out on trees and God invited man to come and help himself. That was very reasonable.

Now, about Peter's vision. That was certainly a very interesting circumstance. "Peter went to sleep about the noon hour," it says, I suppose a little before dinner, and perhaps he overslept and may have been hungry, and that is perhaps the reason he dreamed about something to eat. He saw a great sheet let down out of heaven and in this great sheet there were cattle, sheep and other four footed beasts

of various sorts and "all manner of creeping things." Remember, there were all kinds of animals there, "four footed beasts of all sorts and all manner of creeping things." That is a part of the text, you will find, if you read it. "And he heard a voice saying, 'Arise, Peter, slay and eat.'" That has been put to me I guess five hundred times. How can you in the face of such a text say we should not eat meat when here is a voice from heaven saying "Arise, Peter, slay and eat." Do not forget about those creeping things. I confess that puzzled me a little, but when I came to read it carefully and think about it, the very first thing that came to me was this: Did Peter do it? That is the question. Peter had orders to arise, slay and eat. Did Peter do it? No. Peter said, "No so, Lord." He did not have any appetite for those creeping things at all. Now, what happened to Peter when he refused to eat those things? Why that sheet was lifted right back into heaven again, and so we were all excused from eating four footed beasts and creeping things.

QUESTION: Why is it harmful to eat candy? Is the reaction acid?

ANSWER: There are several reasons why the candy habit is a

very bad habit. One reason is candy consists of pure sugar. Pure sugar is not wholesome food. It is one ingredient of food separated by itself, so it really is not food in the proper sense. It contains no minerals and no vitamins, and it contains no protein and not fat. It is just one thing, carbohydrate, and so when a person takes a great deal of candy, for instance, he may get calories enough without getting vitamins enough. He may get so many calories that he cannot take enough other food and thus gets only half enough iron, manganese, copper or other things he needs. So when we take foods of this sort by themselves, particularly protein (meat) by itself or carbohydrate or starch or sugar by itself, we are likely to get the diet unbalanced. It is better to take food in the way Nature gives it to us in the natural foods in which it is properly associated and properly balanced. If you are going to take candy at all, it should be taken at the close of the meal, not at the beginning of the meal, and only in very small quantity. It is better on the whole, I think, not to acquire the candy habit.

July 28/30

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THE REASON WHY

The Battle Creek System, sometimes called "The Battle Creek Idea," is a system of health promotion applicable to human life in both health and disease. It is based upon established and well recognized scientific data, chief of which is the fact that life and health are maintained and disease combated by the mysterious creative energy at work within the body which we personify as Nature, and which 2000 years ago was called by the great pioneers of scientific medicine, the vis medicatrix naturae.

Like many other great truths, this fundamental fact was lost sight of during the Dark Ages, when the light of civilization nearly went out. But in recent times, scientists have been delving deep into the secrets of Nature in an effort to solve some of the mysteries of life, and marvelous facts have been revealed. John Hunter, the famous English anatomist, demonstrated the scientific exactness of the declaration of Holy Writ, "The life is in the blood." And Metchnikoff proved by experiments upon minute animals whose transparent bodies enabled him by incessant and amazingly persevering ~~vigilance~~ vigilance to prove the great fact that in the battle with disease "the body heals itself." And his researches penetrated still deeper mysteries. He discovered how the body defends itself against germs, the most subtle and dangerous of all the enemies of human life. He actually saw through his microscope blood cells attacking, capturing and destroying bacteria. And other investigators have since worked out the marvelous details of an elaborate defensive system by means of

which the body wages incessant war against invading enemies.

Fifty years ago, physicians who recognized the fact that "Nature creates and maintains and therefore must be able to heal" (), were very few, and were looked upon as erratic or heretical. At the present time, so much has been discovered concerning the body's methods of defending and protecting itself, creating weapons, manufacturing antidotes, and repairing damages, this great truth is now universally accepted. The Battle Creek Sanitarium owes its existence to the fact that more than 50 years ago, when this now popular truth was unpopular, a few clear-sighted men recognized and championed it, and established a center for demonstration and propaganda.

But it is one thing to recognize a principle and quite another to make a practical application of it.

Natural forces within the body cooperate with the forces of Nature.

Sunlight and air

Water

Electricity

Exercise

Gorilla

Savages - no cancer, appendicitis, gallstones.

at a meeting of the American Soybean Grower's Association,
at Urbana, Illinois, held on September 11, 1930.

SOYBEANS AS HUMAN FOOD

The Plant Introduction Bureau of the U. S. Department of Agriculture, under the inspiring leadership of Dr. David Fairchild, has added billions to the wealth of this country by the introduction from remote regions of new food plants. Of all the hundreds of introductions made, perhaps the most important is the legume which is the special subject of consideration at this convention, the soybean.

The Occident has learned much from the Orient, but only recently have we begun to recognize our opportunity for profiting by the ripened experience of a nation that during long ages has been accumulating practical data gathered in the hard school of dearth and famine. China has been compelled to study dietetics by the widespread failure of crops through floods and other elemental disasters that exposed millions of her subjects to death by starvation. Her vast areas, so crowded with human beings that every possible food resource must be utilized to best advantage, have been great experimental nutrition laboratories, in which lessons have been learned at vast cost, but with results the commanding significance of which cannot be disputed.

The most outstanding, and perhaps the most important of all the dietary facts evolved by the age-long experience of the Chinese is the complete adequacy of the

original bill of fare which served our primitive forebears, along with their congeners of the primeval forests of the ancient world, the chimpanzee, the orang-utan and the gorilla, when man was just beginning his conquest of the earth.

Man is a very old-fashioned animal, like the elephant, the oyster, and his forest relative, the gorilla. The elephant, the gorilla and the oyster have stuck to their original diet, while wilful man, seeking variety, has adventured the bills of fare of almost the whole animal creation.

The Chinese, who, with their affiliates, constitute nearly one-fourth of the whole human race, because of their restricted cultivated areas and their teeming multitudes to feed, adhere to a simpler feeding program which must tally rather closely with that of primitive man, who, according to Professor Elliot, of Oxford University, Prof. Ami of Montreal, and other distinguished paleontologists, subsisted wholly upon plant products.

For more than 5000 years the soybean has been the chief source of brain-and muscle-building food for the teeming millions of the Far East. This legume has been known in this country for more than 200 years but only began to attract attention when Admiral Perry, returning from his history-making expedition to Japan, in 1854, brought back the Mammoth white bean and a red variety.

As a food, the soybean is unique. It easily takes precedence over all other natural foodstuffs in the great

percentage of protein which it contains, and protein of such superior quality that in animal feeding experiments it has proved itself to be capable of replacing proteins of all other sorts, even milk proteins, the superior character of which is universally acknowledged.

The soybean yield of protein is nearly twice that of average meat, four times that of eggs, wheat and other cereals, five or six times that of bread, twice that of lima and navy beans, and double that of walnuts, filberts, and most other nuts.

Its chief value from a human dietetic standpoint, is as a source of protein, and this fact places it in competition with meat products. If the soybean becomes a prominent feature in the American bill of fare, it will necessarily replace equivalent quantities of beef, mutton and other products of the animal industry, and thus it must be regarded as a potential competitor of these products. And its competency to meet any demand that may be made upon it has been fully shown by carefully conducted animal feeding experiments. Osborne and Mendel demonstrated that the soybean, unlike most other seeds, not only supplies protein capable of supplying all the needs of the body, but that it supplies what beefsteaks, pork and mutton chops and most seeds do not supply, an adequate amount of both fat soluble and water soluble vitamins. It is rich in lime and bone and brain building elements, in which flesh meats of all sorts as well as cereals are deficient. And so the eminent editor of the Scientific American is fully

justified in saying that "Given enough soybeans and granted the art of preparing them to be so developed that they might be served as food having sufficient diversity and palatableness, neither meat nor fish nor fat would be needed."

And among its other superlative qualities, the soybean possesses a most extraordinary versatility. The culinary art of China and Japan is based upon it, and the number and variety of food staples, sauces, entrées and piquant, appetizing ragouts prepared from it is almost beyond belief. When our American cooks become really interested in the problem of developing a national soybean cuisine, as the Japanese have done, instead of imitating the inventions of French chefs created for the purpose of utilizing under picturesque titles slaughterhouse remnants the names of which they would hesitate to print in plain English, we shall soon find our bills of fare enriched with a greater variety of substantial and palate pleasing viands than can be produced from any other plant product. For not only the nutrient elements supplied by meats are furnished by the soybean, but even the palate pleasing osmazomes which give to roasts and steaks their attractive flavors, the chief cause of the popularity of meats, may be developed in it in rich abundance as evidenced in the world famous Soya Sauce, which has for years been in current use in this country as the basis of a popular brand of table sauce, and more recently under its own name, being now manufactured here.

In the Orient the soybean so completely replaces animal food products that according to Dr. Shih Tsin Tung, "there is no large-scale animal husbandry in China as in the new countries. Neither are there many farms solely or even primarily devoted to the rearing of animals. Cattle, the most important of farm animals in the West, are kept in China primarily to furnish power for the farm rather than for the purpose of producing meat or milk. Many or most of the Chinese people do not eat cattle meat, largely because of superstition perhaps based on a real mercy to the poor, hard-working beast. Sometimes the government officials even forbid, by heavy fines and bodily punishments, the slaughtering of cattle. Cow's milk is very rare throughout the country. So there is no meat or dairy type of cattle in China."

Last year the Scientific Monthly published an article by Dr. W. H. Adolphe, professor of chemistry in Yenching University, from which it appears that in China the soybean so completely fills the place of meats in the national bill of fare that there is no need for an animal industry. The percentage of legumes consumed in South China is the same as that of fish and meat in this country, while fish, meat and even eggs and milk do not appear in the national food budget.

These facts clearly prove the high value of the soybean as a nutrient and its adequacy to fully fill the place of animal proteins in a nation's dietary.

That this is a matter of no small consequence is clearly indicated by the steady rise in the price of meats in this country during the last third of a century. This economic change was not unexpected. Many years ago (1899), the United States Department of Agriculture, called upon me to undertake the preparation of a vegetable meat. The Assistant Secretary, Dr. Charles Dabney, wrote me, suggesting that the navy bean might be used for the purpose. I found, however, as I expected, that this legume was not suited to the purpose. At that time the soybean was not grown to any extent in this country, I was wholly unacquainted with it, and so naturally sought to find in nuts, especially the peanut, a solution of the problem, and succeeded in producing a vegetable meat, Protose, of which several thousand tons have been since made and consumed.

But the introduction of the soybean renders quite unnecessary any other substitute for flesh meats. As a matter of fact, the protein rich foods of vegetable origin, such as nuts, which the soybean resembles, as Prof. Sherman of Columbia University suggests, are not meat substitutes, but are the original meats for which the flesh of animals became a substitute when the glacial cold of the Ice Age drove our prehistoric forebears into the caves and grottoes of Southern Europe.

The proteins of the soybean are, according to McCollum, distinctly more valuable from the point of view of nutrition than are those of the other legumes. The work of my own

laboratory as well as that of others has shown that this bean is almost unique among seeds in its vitamin content.

One obstacle in the way of the introduction of the soy as a food staple in this country is its peculiar flavor. The Chinese and Japanese overcome this difficulty by exposing the bean after cooking to the action of certain molds which develop flavors resembling the osmazomes of meat and meat sauces, such as miso, shoyu sauce, etc. These fermented preparations have not found favor in this country, and we shall have to develop our own methods of utilizing this remarkable and richly endowed legume. Considerable progress in this direction is already being made. A soybean meal of very good flavor, now available, may be made into excellent buns and other breads by the addition of wheat meal in the proportion of 20 per cent. or even less. A very palatable meal may be made by steaming and drying the beans. The Japanese prepare a very toothsome product by soaking the beans over night in a ten per cent. solution of salt and then slightly roasting. The result somewhat resembles roasted peanuts.

Experiments by Holmes, of the office of Home Economics, United States Department of Agriculture, have shown that the well cooked soybean (cooked for two hours under steam pressure) is very easily digestible, and is an exceptionally wholesome article of food, superior to most other legumes.

The soybean may not become really popular until the pressure cooker comes into general use. In the meantime, any

resourceful housewife may improvise a perfectly good and satisfactory pressure cooker from inexpensive materials close at hand. Get a stone jug or jar that can be hermetically closed. The little stone jars in which apple butter is sometimes sold are well adapted to the purpose. After soaking the beans over night put into the jug with a little salt and enough water to cover, seal up tight and secure the cover well, remembering that the pressure will be from within. Set the jug in a saturated solution of common salt, place over a hot fire and boil for two hours. The salt solution boils at a temperature above 220° F. and so the beans are exposed to a higher temperature than in ordinary boiling.

As a proof of the efficiency of the soybean as a nutrient, I may cite an experience related to me by the late Dr. Geil, who explored from end to end the Great Wall of China. In traversing a very wild mountainous district with a train of donkeys to carry his supplies, he reached a region where the trail was so steep and rocky that even the sure-footed donkey could proceed no farther. He called upon a native chief for human carriers and was shortly provided with a dozen giant porters each of whom took upon his shoulders two donkey loads, and traversed the rugged trail for a week, at the rate of 25 miles a day without difficulty. And these men had never tasted flesh in their lives. Their religion forbade its use.

When we have learned to add soy meal to our breadstuffs and to give to this remarkable plant product the prominent place in our dietary that it deserves, the expensive viands which now figure so largely in our food budgets will largely disappear, the cost of feeding our growing population will be materially lessened, and the death rate will be notably diminished.

Another property of the soybean which gives it great value from a dietetic standpoint is its basic-ash quality. All meats yield a highly acid ash. The excess of acid in these foods produces a lowering of the alkalinity of the blood and tissue fluids when they are freely used, a condition which is known as acidosis. This condition is associated with Bright's disease, arteriosclerosis and many other grave disorders. It is one of the causes of general physical deterioration and of premature old age.

It is probable that a large section of the American people are suffering from chronic acidosis of a mild degree, and that this is a factor in causing the alarming increase in the mortality rate from diseases of the heart and bloodvessels, Bright's disease and other degenerative disorders.

It is acidosis which makes a man tired and short of breath after violent exercise. Whenever you cannot hold your breath for 30 seconds you are suffering from acidosis, which may be due to a passing physiologic activity or to a chronic state which may be making you prematurely old, shortening

your life, and greatly impairing your mental and physical efficiency. A sprinter produces lactic acid at the rate of half a pint a minute. The blood is made alkaline to help in the quick removal of this acid so as to make possible the continued activity of the heart and other muscles.

When one is short of breath and tired when he has not exercised vigorously, the cause is likely to be chronic acidosis due to the free use of meats or eggs, or a too exclusive diet of cereals. We are certainly eating too much meat and probably more breakfast foods and other cereals than are good for us. Such a diet is heavily charged with acids which lower the alkalinity of the blood and tissue fluids and tend to cause acidosis, thus causing chronic fatigue, lowered resistance to disease, and setting up degenerative processes in the liver, kidneys, bloodvessels, and other parts. More people die in this country every year from these causes than from any other, and the number of decedents is increasing every year.

The proteins of cereals as well as those of meats, are of the acid-ash class. This fact makes bread, breakfast foods and meat the staple foods of this country, as McCollum of Johns Hopkins and Gautier have pointed out, an unphysiologic bill of fare. We need to eat more potatoes, spinach and garden vegetables. If, instead of eating more meat, as we

are exhorted to do by every newspaper and most authors of syndicated "health talks," under Meat Board stimulation, we should exchange a large part or even better all of our roasts, steaks and chops for soybeans, milk and garden products, we might safely predict from the experience of Denmark during the World War, under the guidance of the wise Hindhede, a drop of at least 20 per cent in the mortality rate and the annual saving of several hundred thousand useful lives, and this repeated every year!

By proper treatment, the soybean may be converted into a very palatable liquid food which has the appearance and somewhat the flavor of cow's milk with a nutty flavor added. In composition, this vegetable milk resembles cow's milk so closely that it may be used as a substitute for cow's milk even in the feeding of young infants. In certain parts of China and Japan, soy milk is made in quantities and distributed in bottles like milk in this country. Cheese is made which closely resembles the dairy product. This vegetable milk may be condensed or dried, as is milk, and in certain forms of food allergy or anaphylaxis, is of priceless value as a curative and life-saving measure, of especial service in the case of young infants who are sensitized to milk, which seems to be increasing in frequency. In 175 cases of food allergy, Rowe found 31 per cent. sensitized to milk. This milk poisoning manifests itself in a variety of ways, particularly in the form of asthmatic attacks, eczema,

urticaria, gastric colic from pyloric spasm, joint tenderness and swelling, irritation of the bladder, so-called "biliousness," headache, hemicrania. These symptoms which follow the use of cow's milk sometimes in incredibly small doses, are promptly relieved by the use of vegetable milks.

Fischer recommends vegetable milk for ulcer of the stomach and duodenum and other disturbances of motility of the stomach because it causes less secretion of gastric juice and more rapid emptying, and for uric acid diathesis because of the absence of uric acid. The same investigators found that soy milk was useful in kidney disease, exophthalmic goiter, cholecystitis, cirrhosis of the liver and mild degrees of jaundice.

Both von Noorden and Fischer found vegetable milk to be of special value in cases of irritation of the peritoneum and cases in which the use of cow's milk gave rise to spasmodic pains, especially when caused by adhesions associated with duodenal ulcer or inflammation of the gallbladder.

Vegetable milk was found particularly good in cases of typhoid fever and has been freely used with great advantage in cases of tuberculosis.

Vegetable milk was also found useful in cases of kidney disease, especially in acute nephritis associated with attacks of chronic uremic kidney.

Extreme cases of intestinal toxemia were promptly relieved by a diet of vegetable milk with milk sugar. The results were much better than when cow's milk was used.

Vegetable milk is found highly valuable in cases of diabetes with insufficiency of the kidneys (Therap. Monatshefte).

Professor Raudnitz (Prag. Med. Wehnschr.) highly commends the use of vegetable milk in cases of hepatic insufficiency, especially in jaundice of the new-born, cases in which vegetable milk is often better borne than breast milk, and whenever cow's milk disagrees. He finds it a precious resource in cases of acute intestinal toxemia, diarrhea, vomiting, fever and putrid stools, conditions in which animal proteins of all sorts should be suppressed.

This author also finds that plant milk is digested more easily than cow's milk. The curds formed in the stomach are smaller, less gastric juice is required, and gastric digestion is completed sooner.

While in South China, cow's milk is practically unknown, in North China, the per capita consumption of milk is only one-tenth that of this country. The cow is not yet domiciled in China, but the soybean fills her place.

The soybean differs from other legumes and cereals in the fact that it contains practically no starch. Its food values are protein and fat, as is the case with meat. It is, in fact, the vegetable analogue of meat. It contains in fact much more protein than average meat. It is evident

then, that if eaten, it will take the place of an equivalent amount of meat.

The economic advantage of this will be apparent when the comparative cost of meat protein and soy protein are considered. A bushel of soybeans costing \$2.00 contains more than 20 pounds of available protein, and half as much fat. The fat is worth more than \$1.00 leaving the first cost of the 20 pounds of protein less than five cents a pound. The cost of flesh protein is much more than ten times greater.

And the protein of the soybean is a pure product, absolutely free from disease and unwholesome products such as uric acid and the poisonous non-protein substances to which Newburgh has called attention.

To make room for the soybean on the bill of fare, the popular superstition concerning the superior excellence of meat must be corrected. Modern nutrition research and dietetic studies have wholly upset the old traditions respecting the essential or superior qualities of flesh foods. They have shown that meats as universally eaten, are greatly deficient in many particulars. They are almost wholly lacking in vitamins, contain almost no lime,--one ounce of milk supplies more calcium than a pound of meat,--and supply less iron than a dozen common plant foods, and the iron is of inferior quality. Besides, meat is subject to parasites,--tapeworm, trichina, etc. --and when eaten in a fresh state, is always in a condition of more or less advanced decomposition, and swarming with

colon germs,--pus-forming and putrefactive bacteria,-- and so a cause of infection, giving rise to colitis, appendicitis, gallstones, and other internal infections. McCarrison, Senn, Lucas-Championnière and other eminent medical authorities have pointed out that the maladies mentioned above are unknown among people whose dietary for religious or other reasons does not include flesh foods.

In recent years the importance of suppressing intestinal putrefactions and infections has been emphasized by Bouchard, and many others and the great rôle played in disease by autointoxication has been clearly demonstrated. Metchnikoff and Tissier of the Pasteur Institute showed how Nature protects us by providing friendly germs to keep guard in the intestines, the lactic acid forming bacteria, bifidus and acidophilus. This discovery enables us to drive out the bad germs from our interiors by drinking acidophilus milk or better by the use of lacte-dextrin, which makes the friendly germs grow luxuriantly and kills off the undesirables, thus "changing the flora," and so combating constipation, colitis and all the evils of autointoxication. The chief sources of the putrefactive and other pernicious germs which render change of the flora necessary, are the tender steaks, chops, sausages and other products of the slaughter house which

necessarily become infected in the process of slaughtering, as shown by Professor Tissier, and so are swarming with colon germs when they appear upon the table, for ordinary cooking will not destroy them.

It thus appears that change of the flora is, in fact, a battle between *B. acidophilus* and "meat germs" (Herter).

Von Noorden, the world famous German physician, has demonstrated that the soy bean is of very great service in changing the intestinal flora, helping materially in driving out the offensive germs which pollute our bodies, and give rise to colitis and other acute and chronic infections besides headaches, skin troubles and a great variety of obstinate chronic maladies. Meats, on the other hand, are the chief source of these mischief makers. There are a hundred other very good reasons for eating less meat instead of more and choosing our protein foodstuffs from such pure and health-promoting sources as the soybean and other plant sources among all of which there is none to be found superior to this product emigrant from the Far East.

In spite of the frantic efforts of vested interests to promote the uneconomic live-stock industry, it will no doubt gradually disappear as a true science of agriculture is developed and the country becomes more densely populated. The conversion of vegetable into animal protein by feeding to steers and pigs, is one of the most wasteful of all human activities. Arnsby has shown that one hundred pounds of

digestible vegetable protein are required to produce three pounds of meat protein, and when produced, this pitifully meager 3 per cent return of the original food investment is not a concentrated, choice, improved product, but is actually inferior in vitamin and mineral content to the choice protein of the soybean. The soybean is rich in the highly essential vitamin A which muscle meat lacks, and contains twice as much blood building iron and ten times as much bone building lime. And recently, Professor Newburgh of the University of Michigan, has made the important discovery that flesh protein contains about one-fourth its weight of non-protein nitrogen, which consists of waste and poisonous compounds which when eaten produce toxic effects and must be at once removed by the kidneys.

The toxic effects of a heavy meat diet were clearly shown in Stefansson's absurd, so-called "meat-eating experiment," which was, in fact, merely a publicity stunt which proved the opposite of what it was intended to show. When Stefansson was fed on muscle meat, that is, real meat, he became so ill in less than two days that it became absolutely necessary to change his diet. He was vomiting and purging, the effect of the meat poisons found by Newburgh in lean meat. With a radical change in his diet, he was able to continue the experiment, but took great care all the rest of the year to avoid taking more than one-fifth (calories) of his food

in the form of lean or muscle meat. The balance, four-fifths, consisted of fat in various forms. So we may properly call the experience a "fat-eating experiment." Certainly, it was not a scientific demonstration of the harmlessness of an exclusive diet of what is generally understood as meat, since the amount of actual meat daily consumed was no greater than that eaten by the average mixed feeder.

The exploitation of this experiment as a part of a campaign to increase the consumption of meat, is an assault upon the lives and health of the American people. Thousands of men and women will be gravely injured by this misleading encouragement to increased eating of meat for which no excuse can be found except that offered by the Meat Board, "To save the live-stock industry," a new and unique dietetic indication, which would seem to be more properly associated with the pocketbook than with the stomach.

This misleading propaganda is perhaps the biggest obstacle in the way of progress for the soybean as a food staple in this country. It should be countered by giving to the public the scientific facts as this convention is doing, to correct so far as possible the misinformation which is now being persistently spread abroad by amazingly audacious and mendacious publicity campaigns.

Excessive meat consumption is one of the besetting sins of the people of this country. Our per capita meat consumption is 5 ounces per day, just five times that of Italy (1.0 oz.) and ten times that of North China (0.5 oz.), while the average native of South China eats no meat at all, and is one of the hardest and most industrious of the world's workers. The Chinaman, as Dr. Hunter, the Actuary of the New York Life Insurance Company, has shown because of his meatless diet, has a blood pressure ten points lower than that of the average American, and hence should be able to keep his heart going for some years after the American heart has stopped, worn out by excessive and unnecessary work.

Thanks to the efforts of our efficient Plant Introduction Bureau, the soybean is beginning to get a start toward recognition and appreciation in this country; but it is evident that a plant possessed of such superlative values and such astonishing versatility and adaptability should receive far more serious attention than has heretofore been given it by the agriculturists of this country. For many generations, it has not only saved the millions of the Far East from starvation, but has produced such sturdy races and such myriads of sinewy and brainy men, Japanese, Chinese, Siamese, Manchurians, that today many statesmen are forecasting that half a century hence a modernized and unified yellow race will rise and seek to dominate the world.

For some reason, the great populations of the Far East have largely escaped the race deteriorating influences which have already carried our Western civilization so far down the hill of degeneracy that such eminent scientists as Major Darwin, Dr. C.P. Davenport and many others have abandoned all hope of recovery and see only race extinction waiting in the distant future. It may be that the soybean has been their salvation from the cancers which are eating at the vitals of decadent Western nations. Certainly, it has helped to preserve their racial vigor during a longer history than that of any other of the world's people, and it is capable of doing for America as great a service as it has rendered China in preparing it to meet its coming racial responsibilities and protecting it against the perils of over-population, about which some of our statisticians are much concerned. The soybean has food potentialities of far reaching significance and magnitude too great to estimate. The thorough research and active educational work which are being carried on by the U. S. Department of Agriculture through its highly efficient representatives, Messrs. Morse, Hollowell and others, is certainly sowing the seed for a great and fruitful harvest of wealth and health through the culture and use of the wonderful soybean, and, although we are thousands of years behind Oriental nations in our appreciation of the food merits of this highly endowed legume, there can be no doubt that it is destined to play a large part in the feeding of America's millions in the long and brilliant future which is opening up before this greatest and most highly privileged of all the nations that have ever lived.

John Harvey Kellogg.

Dictation October 1

QUESTION BOX LECTURE AT SANITARIUM OLD LOBBY
Monday, Sept. 29, 1930 at 8 P. M.
By John Harvey Kellogg, M. D.

I wonder how many of you have acidosis tonight? If you can hold your breath for thirty seconds you do not have acidosis. Some years ago my stenographer made a mistake and put it down thirty minutes, and an article went out all over the United States that anybody who could hold his breath thirty minutes did not have acidosis. I had letters coming in asking how in the world a man could hold his breath for thirty minutes. Remember, it is thirty seconds. If you can hold your breath for thirty seconds you do not have acidosis. I am going to make a test here tonight, and I will send a box of chocolates to the person who holds his breath the longest.

We have a young lady here in town, in one of our swimming classes, who remained under water the other day, swimming under water, for two and a half minutes. I hardly believed that a person could hold their breath for that length of time, though it is reported that pearl divers in the South Seas sometimes remain under water three minutes, which is certainly a very long time. Those of you who were able to hold your breath for thirty seconds can be happy in the fact that you do not have acidosis. And the reason is that you had your dinner and supper here. A beef steak is full of acidosis. Why? Because the protein of the meat and the fat of the meat are just the thing that produce acidosis in the body. Sugar, carbohydrates, starch and cereals do not produce acidosis. You cannot get acidosis from those things. If you do not eat anything at all, you will get acidosis quicker than if you eat anything you like. To eat nothing at all, is the worst thing possible to do to get acidosis. Why? Because when you do not eat anything at all you are living on yourself, and you are an animal; so you are eating animal food; you are carnivorous, you see.

The other day, Bernard Shaw, the dramatist, who, you know, is a radical vegetarian, who has not eaten meat for thirty years or more, and is a very strict vegetarian, very much opposed to the eating the flesh of animals, largely I think on humanitarian grounds, was talking to a woman who had been eating a lamb chop. He said, "Now, you think a lion is a very carnivorous animal. What do you think that mutton chop would say to you if it had a voice?" He said, "You certainly are a carnivorous animal if you are eating beef. A lion doesn't do anything worse than kill a sheep and eat it. He has just as good a right to kill a man and eat him, as he has to kill the sheep."

When Noah was given permission to eat animals, he was told, "But the blood thereof, which is the life thereof, thou shalt not eat of it." And "To every beast of the field have I given the herbs for meat", but Noah was told that if he ate meat, the Lord said to him, "Your life will I require of you. At the hand of every beast will I require it." Think of it ! I looked up the original of it, and I found that this word meant the life of the man. He said you may eat the beast if you want to and think you have to, but if you do, the beast will turn around and eat you. Imagine what a state there must have been before the flood. When Moses and Noah wanted to gather the animals into the ark, all they had to do was to go out and whistle and in they came. The creatures all came into the ark and lived ^{so} peacefully for a whole year. And they did not eat animals either. The lions did not eat sheep in those days, because if Noah had had to feed sheep to his lions, he would have had to have a sheep for every pair of lions for every day, and for every day they were in the ark. So, for every pair of lions that he took ~~in~~ he would have had to have three hundred and sixty sheep, you see. So there would not have been any room in the ark for such a family, for such a multitude of animals. He would have

Had to have a whole flock of sheep and a whole herd of cattle, of these vegetable eating animals, and it would not have been possible. None of the animals ate flesh before the flood. Call it a tradition, if you wish to. The early memory of the race is of a time away back where, somewhere where animals were not eaten; where there was peace and friendliness throughout the whole animal creation. The old Greeks had a legend of a "Golden Age which fed on fruit, nor durst with bloody meal their mouths pollute." "If men with fleshy morsels must be fed, and chaw with bloody teeth the breathing bread, what else is this, but to devour our guests, and barbarously renew Cyclopean feasts?" That is what Ovid said in his account of the Golden Age. It is a beautiful thought, isn't it, of a time when the whole world was at peace, and there wasn't such quarrelling among men and among animals, as we see at the present time.

The geologists tell us the same story at the present time. Prof. Ami, one of the greatest (?? Paleontologists), who is now in France delving into those ancient caves, where the cave men dwelt, and discovering most interesting things there. I know Prof. Ami very well. He comes here often. He is a vegetarian himself, by the way. He became so after he came here,-- like Mr. Rockefeller, Jr. A friend of mine called on Mrs. Rockefeller a while ago and she said that "Mrs. Rockefeller wrote her, "My husband has become a perfect crank. He went to Battle Creek, and Dr. Kellogg converted him to the Biologic Life and he has become a radical vegetarian, a regular crank." I had a letter from Mr. Rockefeller the other day and he said, "What I learned about Biologic living at Battle Creek is still of great service to me." When Mr. Rockefeller was coming here he wrote me, "I want to come to Battle Creek to learn how to live." I can say, that I felt rather complimented. Mrs. Rockefeller wrote me a letter. He came right by Yale University and Harvard University, Cornell University and the Pennsylvania University and came out here to this little town in Michigan to

Why did he do it? It was because he found out that here was the place where, for fifty years, we have concentrated our attention to that thing-- to learn how to live in a scientific way, to learn how to apply science to human lives, just as we apply science to agriculture and industries of all sorts. When Mr. Rockefeller got here, he came into my office and said, "Dr. Kellogg, I want to live twenty years more. I think it will take twenty years for me to accomplish the things that I have in mind that I want to do before I die." He said, "I want you to show me how to do it." We endeavored to show him how to do it, and he is doing it. Mr. Rockefeller's secretary told me that he was tired, so tired with all the things he had to do, with all the things he had to think of, with his great business enterprises and great philanthropic enterprises, with his agents that were out doing good all over the world. I do not know of anybody on earth that I think is doing so much good as Mr. Rockefeller. He is spreading out his great wealth that he has acquired, distributing it. Nothing ever does so much good as to see a rich man's wealth distributed. When I hear of a rich man dying, and I hear of his son throwing it away, throwing it about with extravagant weddings, thousands of dollars spent for dollars, and all of that sort of thing, I just chuckle. I delight to see it, because that means that the money is being distributed. It took a lot of things and a lot of work to make those bouquets of flowers, and the money is going back, being re-distributed. I like to see it. Mr. Rockefeller is not distributing his money in that way. He sends out careful experts,--gets the most expert men possible, men who are thoroughly trained, that know the needs of society, of humanity in general, that know all about health, about sanitation--and he send them to the ends of the earth to distribute this money, and he is doing good.

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We have recently had a visit from our friend, Mr. Doherty, who created the City Service Corporation, a corporation worth a billion and a quarter. He is one of the wealthiest men of the world. I had a long chat with him last evening up to near midnight, and I was surprised to see how his mind is ^{so}completely filled with humanitarian projects. He wanted me to join him. In fact, as he went on and told me the things he was most interested in, I found that they were the very things that I am most interested in. He said, "Doctor, I am giving a great deal of time, and I have spent thousands of dollars in trying to find out how to build houses, the best kind of houses, for a warm climate. You know, among the thirty thousand men working for me, I have at least twenty thousand of them exposed to warm climates, and ten thousand of them in very hot climates and," he said, "I feel distressed when I have to send a man to those climates, because I know that in a few years they will be coming back broken in health. So, for years I have been working hard to find out how a man could live in such a climate, and how they ought to eat, and what kind of houses they ought to live in, what kind of clothing they ought to wear so that, instead of coming back sick, they will come back healthy and well. And I want you to help me about that. If you will pick out an expert and go to work on that problem, I will be very glad to pay all the expenses. I want to solve some of those problems." He is coming back in a few weeks, and is going to spend some weeks with us here hoping to lay plans to solve some of those problems. In all my talk with Mr. Doherty, he never said one word about how much money he made, or how he was going to make more money-- never a word about it. He did not even suggest to me that I should buy some City Service Stock. He did not discuss that question at all. It was all about how to

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make better clothes for men, how to make better houses for people, how to induce people to live in a more rational way. He, himself, came in the front door here on a stretcher, and not able to move a finger, and could not feed himself. He was in a terrible condition from rheumatism that had involved every joint in his body. His hands looked as though they had been cast in a mold.

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There wasn't a wrinkle or pinple in his fingers anywhere. I spent hours at his bed side helping to straighten his fingers out, and instructing the nurse how to manipulate his fingers. It did me so much good that I almost shed tears when I sat beside him and saw his nimble fingers working with all their natural appearance, and all the symptoms of disease had entirely disappeared,-- and all though Biologic Living. He learned how to live biologically. He formerly smoked; he does not smoke any more. He used to take a few cocktails now and then; he doesn't take cocktails any more. He used to eat plenty of beef steak, because he supposed that nearly everybody else thought beef steak was necessary, and he thought it must be necessary, when it was the very reverse. A portion of the beef steak is digested and utilized, but a portion of it is left lying around and decays. And when you eat meat of any sort you have down in your interior exactly the same situation that you find in a fence corner when there is a dead cat lying there that is exactly the same sort of condition that exists down in your interior. This undigested portion lies in the colon for days and days. When a person's bowels move but once a day, when the colon only empties itself once in two days and a quarter. People whose bowels move only once a day think they are all right. In fact, most people think they are all right if they are only regular. An English doctor once told me and he once asked a lady about her bowels--if they were regular, and she said, "Oh, yes, perfectly regular." He afterwards asked her how often her bowels moved and the answer was, "Once in

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three weeks." We had a man here some years ago whose bowels had not moved for three months. There was a man in New York that told my old teacher, the grandfather of the present Dr. Austin Flint of New York, that his bowels moved regularly once in ~~seven~~^{three} months and once in six weeks, and that had been going on for years. This poor man had to retire from business for three weeks once in three months, which time he spent at home entirely in getting rid of the load of refuse which he had accumulated. Auto-intoxication is almost universal. Think of the condition of a person with a bad breath. I met a man the other day whose breath was so bad it made me sick, and it took me fifteen or twenty minutes to recover from it after he went away. It was not his tongue that smelled bad, it was the man himself. If we had cut off his leg and carried it away somewhere, it would have carried along an awful stench with it, because his whole body was saturated with these poisons. That is the situation of everybody who has a bad breath. The bad odor comes from the body, from the colon in nearly every case. It is taken into the blood, distributed all through the body, saturating every tissue, finally to the lungs, coming out through the lungs because the poisons are volatile. A person who has a bad breath should be informed right away. The first person that meets him should tell him, "Your breath is so bad you ought to isolate yourself until you get over it." I remember a story about Napoleon, who had an officer who came to him once with a bad breath so bad that he asked him to go out of doors and stay until his breath had acquired a different sort of fragrance. I want to make this clear enough so that you will understand what the real situation is. When the breath is bad, the brain is bad it would simply stinch. The whole body is saturated with this filth, the odor of which comes out through the breath. It is simply the immanation from the body; the poisons are in the blood and in the tissues. And this is no exaggeration. I was talking with a butcher many

years ago. I went to get a hog's liver. He said, "Do you want a hog's liver?." I said, "Yes". I wanted it for my medical students to study under the microscope; I did not want it to eat. He said, "Why, doctor, I haven't any such thing in my shopp. I do not have a hog's liver on the premisses. A hog's liver is not fit to eat. Ninety-nine out of every hundred hog's livers have abscesses in them. They are all so filthy. I would not have one in my shopp." I said to him, "How about these hogs that eat other hogs? If you ate the hog, you would get the liver second hand, wouldn't you?" He said, "I do not have any such hogs in my shop. I tell the farmers when they bring me hogs that have been eating dead calves and other hogs, that I know them the minute I come in contact with them and smell them. They stinch. That means that those hogs have been eating awful carrion, and they are not fit to eat. I won't have them in my shopp." I want to tell you that the things you buy in the ordinary meat shop, you haven't any idea what they are made of at the present time. One-third of all the meat that is eaten in the United States is not inspected at all. The inspection performance is a very superficial one. Not long ago, an expert confessed before a congressional court in Washington that was appointed to investigate the question of the meat industry, an expert in the government service testified that, if every animal should be condemned, some part of which had been found to be diseased, there would not be more than one animal in one hundred that would pass the examination. That means that ninety-nine percent of all the animals slaughtered in the United States is more or less diseased. They simply cut off the diseased portion and use the rest. The diseased portion goes to the rendering establishment, and sometimes, perhaps, goes into the beef tea tank. I had an article written by the former superintendent of a packing house, a man who was superintendent of one of the largest packing houses in this country for many years. He had written me the whole inside secrets of the packing house. I have it at my residence, and sometimes it

may come to light. At the present time, I think that this poor man would be in a delicate situation if that should be published, although he sent it to me to be published. I did not publish it, because it was such a terrible revelation and tells all about what goes into the meat extract tank. My friends, I assure you that you would never want to touch that thing again, if you knew what went into it, because you would not that it was nothing but the concentrated extract of pollution. It is amazing what the people are eating in the consumption of meat. Not long ago, we had with us a manager of one of the largest hotels in this country, a hotel which had over a thousand rooms-- a very profitable and prosperous hotel. This gentleman came to my office and said to me, "Doctor, I have been here three weeks, and have become converted to the Biologic idea. I cannot feed it to my clients, or guests, entirely, but I want to make the diet at my hotel as nearly biologic and possible. I thought you would make me a suggestion." "Yes," I said, "I can make you a very good suggestion right away. This is it: Instruct your steward that, when he goes to the meat market to buy meat for your hotel, that he select that which has been killed the most recently, and not that that has been hung a long time." "Ah, then," he said, "He an on to that. He knows all about that, and he is very particular. ~~My~~ ~~chef~~ The meat that one gets for hotel consumption has a beard on it, a green mold about an inch long. He said to me, "My chef always selects meat that beard on it, but my chef never allows the beard to be more than a quarter of a inch long. Though, sometimes it is an inch long." You have sometimes seen a decaying animal somewhere, that was so far gone that mold was sprouting all over it. That is the way with this beef steak that is served in many hotels. I cannot imagine that the difference would be very great between a beef steak with a beard an inch long, and one with a beard a quarter of an inch long. It is rotten, far advanced in decay.

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I was down in Florida two or three days ago, and when I returned I was invited to a little dinner party to be introduced to the mayor of the city, and they discovered that I did not eat any meat, and they all had quite a shock. One gentleman said, "Dr. Kellogg, why don't you eat meat?" I said, "I do not know as I dare tell you right here at the table. I am not sure you will be able to stand it." He said, "Oh, yes, oh yes, we would not mind anything." He said, "Then, in the first place, I do not have any right to eat it; and besides that, meat does not belong to my bill of fare anyway. Only members of one family of animals eat the same kind of food. I belong to the monkey family, and the monkeys all eat the same thing. The gorillas, the chimpanzees the orangutangs, all eat the same things. I belong to the same monkey family, the family of primates, as they are called, and man is the highest of them all, of the so-called anthropoid apes, all of which have organs and structures like ours, and they all eat the same diet--The diet that our ancestors of twentythousands years ago--our remote ancestors of away back, nobody knows how long ago--they followed the same bill of fare. It does not belong to me to eat meat. I eat the same as the gorilla eats, and as others members of the same family."

A lady wrote me some time ago that in their local zoo they had a chimpanzee that was getting sick, and she said, "I want you to write to the keeper and tell him what to feed this Chimpanzee". So I wrote to the keeper and I said, "I do not think my suggestions will amount to very much, but my advice would be to take that chimpanzee down to the city market and let it loose and it will help itself to what it ought to eat." If you want to learn how to eat, it would be a great deal better for you, instead of coming to me, to hunt up some wise old chimpanzee and sit down and watch him eat to see what he ate. He could tell you a great deal more than

I could tell you, and would give you a great deal more dependable information. The next thing I told him was about the germs in meat. When an animal is slaughtered, its body is all covered over with filth. No pains is taken to wash the animal, scour them, to shampoo them, to prepare them as a person is prepared who is going to have an operation, who has to go through a very thorough course of cleaning. That is what they ought to do with the animals that are going to be slaughtered. If you want to have really clean beef steak, you would have to slaughter the animal with all antiseptic, surgical precaution in order that the beef should be clean. But, instead of that, the animal has its throat cut, or is knocked in the head, or something, and falls on the floor, and the men get their hands covered with filth, and they take off the skin and roll the animal over on the floor, and the bare flesh comes in contact with the manure covered floors. The moment they come in contact with this ~~they~~ warm, raw flesh, the germs spread all through the body. Meat is the finest kind of culture medium for these colon germs. And the result is, that in three or four days, the whole carcass of that animal is simply swarming with colon germs. Dr. Tissier of the Pasteur Institute went into a meat shop and got hold of a little bit of beef as quickly as he could get it after the animal was killed. He did not allow it to get in contact with anything. He put it into a glass vial, shut it up tight, took it home and put it into a warm place and in three days found in that little vial every germ that is found in the colon. All the colon germs were there. Every slaughter house is full of them, so that every piece of meat that you ever eat become inoculated. Unless it is meat that has been canned, that has been roasted, or has been cooked in deep fat, so that it is heated at a temperature of 240 degrees or more, every bit of it is swarming with these colon germs. That is why it ~~decease~~ becomes tender. When the animal is killed at first it is very flexible and the muscles are very tender. The ~~you~~ you know, have a very slender knife, and as the cow goes along, they run the knife in and pull out a strip of very tender, toothsome flesh, and they are very fond of it. Then they ~~parive~~ drive the cow along to the next station, and

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then they take off another piece in the same way. They milk the cow, take the beef steaks off the cow and keep her going just as long as they can. That meat is tender and that is really the way to eat meat, if you want really good meat, if you take it alive, because it is then tender. We surgeons, when we operate upon people, have to be very careful. The muscles, the lean meat, is so tender it is almost like jelly and it has to be handled with the greatest care. But, within a few hours after the animal dies, death-stiffening occurs, and this is hardening of the flesh, and the flesh never becomes soft and tender again until it decays. The flesh never becomes toothsome and tender until it has undergone decomposition, putrefaction. And that is why it is hung. They talk about the ripening process. It is not a ripening process, but it is a rotting process. It is nothing on earth but decay, putrefaction. If you eat the freshest meat you can find--take a piece of chicken that has just been killed, or a live oyster that you swallow alive and kicking, off the shell-- take that kind of meat into your stomach. Some portion of it is not digested, and that portion, about one third of it, remains undigested, and that goes into the colon and lies in the colon, and undergoes the same kind of putrefaction. It is not what is in the meat when you eat it that does the harm, but it is what happens to the undigested remnant of it lying in the colon. That is the reason why the bowel discharges-- (if anybody is alarmed about this, I will excuse you. I am going to tell you some worse things than that.) I once had to dissect a great tumor off a big vein in a man's arm. Every time the man took a breath, the vein would collapse completely. So I had to make my cuts between the man's inhalation. I had there a complete demonstration of the fact that when you breathe deeply, as you draw in a breath, the and the blood is drawn through the body from the veins and the abdomen. That is why we have these exercises in the gymnasium in the morning and several times a day, is to make you breath deeply.

You have to march around a little while in order to create an appetite for air. You cannot eat very well if you are not hungry, ^{and} so you do not take a deep breath very well without feeling the need for air. By taking exercise first, you feel an appetite for air, and it is very easy to expand the lungs. Every invalid ought to practice deep breathing several times an hour.

Once in a medical society, I shocked the doctors very much when some doctor announced the discovery of a medicine that would unload liver and the portal circulation. The doctor told how he would unload the liver completely in the course of a few days. When I told ~~him~~ ^{them} I knew how to unload the liver in three minutes, they thought it was perfectly ridiculous. I showed them how to do it. Put up the arms, take a deep breath, swell up the chest, and every time you do that you are sucking blood out of the liver. Take a few deep breaths. If you are lying in bed at night and cannot go to sleep, take ten deep breaths and it will put you to sleep almost every time. But you must stop thinking about anything else. Every time you take a breath, make a mark with your finger on the palm of your hands. It is a good thing to have a little card and a pencil. Take a very deep breath and make a mark. If you try that tonight, you won't find ten marks on your card in the morning. I have tried it myself a great many times, and I think three is the most I ever found. The purpose of making the marks is to divert your mind so you won't be thinking about other things. It takes so little brain work to make a little mark, that it is not enough to keep you awake, you see. So it is a very good trick.

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Well, we must get into the question box.

Q. What causes pain in the chest?

Ans. The most common cause of pain in the chest is that you have had a pleurisy when you were young, and a little adhesion was formed in your chest. That is the most common cause of chronic pain in the chest. One may have pain in the

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as a result of a little neuritis, what is called intercostal neuralgia, ~~and you~~
But the most common cause is an adhesion that you got when you had an attack of
pleurisy or pneumonia, or flue, or some lung infection, that you perhaps thought
was a bad cold.

Q. Should a person who has had his blood pressure lowered here,
go home and take hard exercises; or, ought he not to take any exercise?

Ans. A person who has high blood pressure because he is getting
old, or because he has hardening of the arteries, needs exercises more than anybody
else. He is greatly in need of exercise; but violent exercise is very bad for him.
Such a person needs to take a great deal of exercise, but very moderate exercise.
Such exercise as walking at a moderate rate, about three miles an hour, for example.
We have a system called the health ladder, which gives a series of exercises, including
arm and leg exercises, which are very good. The exercises of such a patient should
never be severe enough to get him much out of breath.

Q. What do you recommend for a diastolic pressure of 100 and
systolic 160.

Ans. I recommend that such a person should at once adopt the
Biologic ~~the~~ diet and stick closely to it; that he should have his flora changed
thoroughly; that he should take a sun bath at least two or three times a week,--
a good thorough sun bath or light bath, which amounts to the same thing-- until
his skin is tanned. Then he should keep that skin tanned by frequent sunlight
baths. When you get the skin tanned, you have not accomplished all that is neces-
sary. You have got your skin trained into a healthy state, so if you take the
light baths every few days, at least once or twice every week you get a long
light bath, this tinting of the skin will take those light rays and transmit them
into potent healing rays that will pass on into the body. That is what the pig-

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ment of the skin will do; it will concentrate the rays of light and pass them on into the body, so that you get more benefit, after you get the skin well tanned. When the skin is well tanned in this way, you have only prepared yourself to receive the benefit with the greatest facility. Another thing, a person who has high blood pressure should be very careful to avoid acid forming foods. Acid forming foods are not foods that give you ~~are~~ a sour stomach. That is not the kind of foods we are talking about-- but the kind of foods that leave acid ash in the body. If you take a piece of meat and burn it, and examine the ashes, you will find that they are full of acid. They have phosphoric acid, sulphuric acid, and hydrochloric acid in them. They are present in large amounts. If, instead of that, you burn an apple, a pumpkin or a potato and examine the ashes, you will find that they are strongly alkaline, and the very opposite of the ashes you find from meat. I am sorry to have to tell you that if you take the loaf of bread and burn it, the ashes of it also are acid. They are not so acid as the ashes of meat. If you burn eggs, the acid of the eggs are very acid. Eggs and meats of all kinds and cereals of all kind have the effect to leave acid ashes in the body. On the other hand, all kinds of fruits and all kinds of vegetables, including potatoes, carrots, parsnips, spinach and green leaves of all kinds, everything except cereals, meat and eggs, all the other things, including nuts and milk have the opposite effect. It is only meats, eggs and cereals that are the acid ash product of foods. So, when you eat bread, do not eat too much of it. I am satisfied that many people are eating too much bread, too much cereals. For twenty years I have been agitating that we should eat more potatoes than bread, because the potato is alkaline, while the bread is somewhat acid. You say what is the harm of these acids? They make your arteries harder.

You say, what is the harm of these acids? They make your arteries harden;;they make you grow old sooner than you ought; the y wear out the kidneys and the liver. So, if you want to keep young live on the diet of the Irish. There are forty times as many old people in Ireland as there are in England, and the reason is, that the Irish send their cattle to England for the English people to eat, and they live on potatoes, butter milk and oatmeal. There was old Thomas Carr, who lived to the age of 152 years. I read the epitaph on his tomb stone in Westminster Abbey myself. It says, "Here lies Thomas Carr, who died at the age of one hundred fifty-two years and nine months." He lived on potatoes and buttermilk. Eat more potatoes, more green things, spinach and such. For myself I eat no cereals, but bran. I eat Fig Bran. I do not think I eat a slice of bread in months. I eat about two eggs a year, and I never eat meat of any kind.

Q. What is your advise to a child that had one eye crossed.

Ans. I would advise him to see a good oculist right away. I do not know of any diet that would cure crossed eyes.

Q. Would it be well for one whose blood pressure has been reduced to use the Oscillator, or the so-called Health builder?

Ans. That is a very good means of imitation exercise. It is not exercise to the fullest degree, but it does help some. Riding horseback is a very good exercise for a person with high blood pressure, but it is a moderate kind of exercise. Walking, however, is a most excellent exercise. There is nothing better. You might work out of doors, such as gardening, raising potatoes, raising flowers, raising ~~anything~~ any sort of garden stuff, is a very very good occupation indeed. Naturally man is an agricultural animal. But if you do not find other exercises convenient, the health ladder is an excellent thing. I would recommend every patient in this institution to make use of the health ladder exercises. They are very in-

dispensable, and cost only four or five dollars. And with a victrola in every house you have a leader right there nearly all the while. The victrola shouts out the order for you, tells you just what to do, and the music is very well adapted to the exercises. The Columbia Company, some years ago, asked me to come to New York and put these exercises on records for them. So I spent three or four days in New York for that purpose. I took a great deal of pains to get up some exercises that I knew, from my own experience, would be best adapted for health building, and for the average person. The so-called Daily Dozen is much too violent for the average person, especially for ladies, semi-invalids and people getting along in years. They found it out some years ago, when a very eminent Yale University unfortunately suffered an attack of apoplexy and died in a few days while using these daily dozen exercises. They are much too violent for the average person.

Q. What causes hardening of the arteries?

Ans. Colon germs are the most common cause. I found that out many years ago, that this colon germ is the germ of old age, and that the poisons produced by the colon germ in the colon, these bad smelling poisons, Indol, Skatol, Pyrrol, Brenz Cathechin and other poisons produced in the colon are the cause of old age. And the old age sign is often written out upon the hands, the face, and upon the whole surface of the body, to indicate that a person is really old.. Look at your hand and you will see some brown spots. I look every morning to see if they are coming. They have not appeared yet. If you are past fifty you are likely to see brown spots on your hands. They mean that your kidneys are worn out and have become so worn out that they cannot eliminate this poison, Brenz Cathechin, that is produced in the colon from animal protein. It cannot be produced from vegetable protein. If you do not eat eggs or meat you are not likely to have these brown spots. I haven't eaten meat in sixty-four or sixty-five years, and I eat very few eggs. I do not even eat milk. I eat soy bean milk. It is

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really very palatable. It looks just like cows milk, ^{tastes} ~~is~~ very much like it, and has the same chemical composition so that with fruit it takes the place of cow's milk very well. We have some little barros at our house. We bring them up on soy bean milk, and they are thriving and getting on very well. They sit up and call for it, and lay hold of the medicine dropper with which they are being fed and eat with avidity.

Q. What is the cause of neuritis.

Ans. Neuritis is produced by poisons, by germs usually. Of course, I think it is an infection in a great majority of cases. Sometimes people get exposed to colds. Or it may be due to a bruise, but it is commonly due to poisons that get into the blood. Germs themselves swarm in great numbers. If you have diseases tonsils, you have a box full of such pus forming germs, which are being absorbed from those tonsils all the time. Not only the germ poisons, but the germs themselves. If the x-ray shows a little disease at the root of a tooth, from that focus of infection poisons are scattered all th ough the body, which are likely to set up rheumatism, neuritis and other diseases.

Q. What is the cause of eczema?

25064 Ans. It is sometimes due to what is called food allergy or anaphylaxis. It is often due ^{to} that cause. A person, for instance, would take a dish o' strawberries, and in half an hour would have a breaking out all over the body. It might be sometimes and eczema instead. It may come not so often from strawberries or fruits, as from some other source. The most common causes of these skin troubles are shreds of milk, eggs and meat. They are the most common of all substances, including some certain oysters and milk. The most common are wheat, white bread, milk and eggs. Many people are sensitized to these foods, and suffer from skin troubles, from asthma, from eczema and other skin trouble, without being aware of the cause. Now, we have means of testing. If you have any trouble of that sort

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you should have your skin tested. You should call at Dr. Pritchard's office and have yourself tested to find out what particular foods you are sensitized to. The more common cause of eczema is poisons absorbed from the colon. I have known a great many people to get entirely well from eczema as soon as they changed the flora. I had a letter some months ago from a lady away out west who had a child who had eczema all over. The doctors had given up the case, as hopeless. I told the lady to change the baby's flora--sent her a box of Lacto Dextrin, and in a little while I had a letter from her and she was tickled to death to say that the baby was well. In three weeks from the time she began feeding the baby Lacto Dextrin the eruption entirely disappeared. I saw a similar case in California some years ago. I saw the most wretched little fellow, who had been scratching himself continually to make himself as comfortable as he could. The mother said she had had him in the hands of every specialist she could find, between San Francisco and Kansas City, and nobody could do him any good. I said to the lady, "Probably he is sensitized to milk." So she began to feed the baby on soy bean milk, instead of cow's milk and on milk prepared from nuts, and in 24 hours he stopped scratching himself and in a week was wonderfully bettered, and in a few weeks was entirely well. We have not understood this fully until recent years.

Q. What are paramels?

Ans. Paramels are a mineral oil that is prepared in such a way that it melts at the temperature of the body, while it is solid at ordinary temperatures. The trouble with the ordinary paraffin oil is that it separates from the food. If you have a heavy cart to carry a load down the street, you would not carry the load yourself would you. It is the cart that carries the load on wheels. It is exactly so with food. It is not the alimentary canal that needs to be oiled, but

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the food. If you take paraffin oil before the food, it goes down ahead, and it leaves the food behind. If you take it after the food, then the food goes along ahead of it and it comes along behind. It does not mix with the food, and it cannot mix with the food. If you use the oil in the form of an emulsion the same thing happens, because this emulsion soon disappears. The proof of this is found in the fact that in the toilet bowl, after the bowels move, you find the oil floating on the top. When you use the solid mineral oil instead, taken at the meals, chewed up with the food, it mingles with the food and stays with the food. And then, in the toilet, as you examine the stools after the bowels move, which everybody should do to keep track of his condition and know just what the situation is, you will find the whole residue floating on the top, and no evidence of a separation of the oil at all. It very soon loses its offensive character because it is dismissed quicker; it does not remain in the body long enough to undergo putrefaction—factive change. One parafin at each meal is sufficient. It is equal to half a tumblerful of ordinary oil. It has more efficiency because it remains with the food. It adheres to the residues of the food so that the food itself is lubricated and slips easily along the alimentary tract. When you take some oil in the mouth, in five minutes it is all gone. The mucus that comes out floats it off and carries it on. You can make the food a lubricant in itself.

Q. Is there such a thing as a colon bacillus infection of the bladder.

Ans. Yes. The most common of all forms of bladder infection is the colon infection.

Q. Can pyorrhea be cured?

Ans. Certainly it can be cured. People who suffer most from pyorrhea are those who eat meat, because the germs found in meat are the very germs that attack the teeth, and the little particles adhering between the teeth feed the

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germs that set up decay. So, meat eaters are most likely to suffer from pyorrhea. Five years ago this winter, I spent several weeks in the Sahara Desert. I went down on the Sahara Desert to an oasis, on which is located the Garden of Allah. and I had the pleasure of writing a book in the Garden of Allah. I sat down among the beautiful trees and flowers in that garden and wrote a book on health, which is just coming from the press. I found some very interesting people down there. I heard of a very interesting tribe some distance away that did not use meat, or rarely ate meat. So, I went over there to see them. And I found there a fourteen year old boy that had scarcely tasted meat in his whole life. His diet consisted of wheatbread. Perhaps all day long a piece of coarse bread, an onion, a carrot, and perhaps now and then a potato, and sheeps milk. He was a shepherd boy and got his living by taking care of the sheep. He had not slept in a house for seven years. He was turned out doors by his step mother ^{after} when his father had died, ~~and~~ when he was six years old, and he earned his living by taking care of sheep. He lived in that way. I was sorry for this boy, so I said to him, would you like to go home with me. I will send you to school. He said, "Yes". I said, "Won't you run home and get your things." He said, "I haven't any things. I haven't any home." "But", I said, "You have got a few things, haven't you?." "No", he said, "I haven't a thing but what I have on. So he hopped into the carriage and he was all there. He hopped into my car and we drove back to Biskra. When I got there, I put him in school so he could learn to read and write and get an education, and I paid for his education one year in advance, and what do you think it cost me? Four dollars for a whole year in a private school. That boy had never worn a thing in his life but a pair of sandals, ~~and a piece of leather and grass~~ and a little long smock, a gown of coarse cloth that he wrapped around his body. And at night he slept by the wall.

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And sometimes it is very cold at night. I said, "Don't you get very cold? What do you do?" "Well," he said, "I shiver until morning then I get warm." He always wanted to sleep down at the market because he thought it was a little safer than anywhere else. I looked him over with a great deal of care. He had the soundest, finest teeth I ever saw. He was thirteen years old and not the smallest trace of decay or of pyorrhea did I find in his mouth, and his teeth were like ivory, they were wonderfully polished. I said to him, "What sort of tooth brush do you use?" He said, "A tooth brush? What is that?" He had never used a tooth brush in his life. His teeth were sound and polished like ivory, with not the slightest film on his teeth. This was because of the fact that he ate hard bread. Actually I had to use the hammer to break one of these little bread cakes that he ate. When he got some sores on he said "I cannot walk. I must take these things off." I ~~said to my guide, who had been to buy some~~ ^{sent my guide} clothes for him. He brought him back with his pants rolled clear up and his sleeves rolled up above his elbows. I said, "Aren't these clothes too large for him?" What do you think my guide said? "Don't you think, sir, it would be better for him to grow into them, instead of to grow out of them?" His gums were perfectly clean. He usually ate only once a day, because he could not get enough to eat. When it came supper time, after eating dinner, and we had called him to supper he said, "I have eaten enough for today". So he refused to eat any supper. Then we gave him a nice bed to sleep in, and where do you think we found him the next morning? We found him lying on a hard board next to the wall on a porch. He was reared in a natural way. We get too far away from nature, my friend. We get too sophisticated. We acquire so many bad habits, and I am devoting the rest of my life to an intensive study as to how we ought to live. That is one reason why I am spending my winter in Florida.

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Next winter I hope to live out doors the entire winter. I am going to build a little hut like an Indian, where I can live out doors day and night, because I have lived all my life, almost eighty years, now, in doors, and I think it is about time for me to reform, to live in a natural way.

Q. Will mineral oil cause a spastic condition?

Ans. No. It has the opposite effect. A good many people are taking the preparations known as Agarol, Petrolagar, or some other things that have the word agar attached to their name. That is purely a trade trick. The amount of agar in a whole bottle full of agarol or petrolagar is about enough to be a proper dose for a canary. There is not one-tenth part of one ordinary dose of agar in a whole bottle full. The agar put in there is one and a half percent. It is simply used for making an emulsion, and it is put into the name simply to make people think that it has the laxative effect of agar, and so is more efficient. As a matter of fact, it is far less efficient, for the reason that it contains thirty percent water. If you had pure oil you would have much greater efficiency than you get in any of these emulsions, because, by putting the emulsifying element in, they are able to add a quantity of water, which does not amount to much. The chief efficiency is in the name. I should add, perhaps, that in the use of the agar preparations, the emulsion separates soon after it enters the body so that it is not effective as regards mixing with the food then the ordinary oil, but it tastes better. It does have that advantage.

Q. Would an excessive flow of urine indicate a diseases condition of the kidneys?

Ans. It is a suspicious symptom, but not necessarily evidence.

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Q. How can one obtain a correct posture for walking?

Ans. It is very simple. Simply remember to carry the hips behind and the chest in front. When you see a man walking with his coat hanging straight behind, you know he has a wrong posture. He is carrying his hips in front. It should be carried behind. The way to get a good posture is to lean forward a little ~~bit~~, throw the head up, then push the chest forward and push the head back.

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Q. What is the cause of angina pectoris?

Ans. These poisons that produce hardening of the arteries, colitis and rheumatism and headaches, they are the same things that produce angina pectoris.

Q. How can it be cured?

Ans. The best cure for angina pectoris is not to have it. The best way is not to get it. The remedy should be applied before you get it. I had a surgeon call on me some time ago and ~~he~~^{he} said to ~~me~~^{me}, "Doctor, what do you do for post-operative ~~anemia?~~ pneumonia?" I said, "We do not have it?" He said, "You do not have it?" I said, "No, sir. Because whenever we give a patient an anesthetic, and do a serious operation, we begin immediately treating the patient for pneumonia, and we keep right on treating the patient for pneumonia for three days after the operation, and by that means- by treating the patient for pneumonia before he gets it, the patient does not have it." Suppose, for instance, you knew somebody was going to set your house afire. You would go to the fire department and say, "Come here, and put water on this building. I am expecting a man to set it afire." And you would be sure that you would save the building from burning if you could put water on it before it was set afire. But if we wait until the building is burned up before doing anything, we are likely to have difficulty with the insurance company, aren't we?

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Q. What would you recommend for relief from heartburn?

Ans. A person suffering from heart burn can get relief quickly.

The only thing to do is to take a little food of any kind, no matter what it is. Eat something and it will always give relief. But there is an objection to eating something. That is, if you eat some food, bread or something else, or some meat of some kind, you are likely to have the heart burn come back again. That is the difficulty--you have the same condition return. It took me a good many years to learn how to get over that difficulty. I finally found out by accident. A man came to me suffering terribly from heart burn, acidity and pain. He had been in the hospital for six weeks at a time. He said his wife came here for treatment and she got some lacto dextrin. The doctor told her to take it for her stomach. She is taking it. I tasted it and thought I would try it, and I have not had heartburn since. I saw that that was the solution of the difficulty. Lacto Dextrin is food, but it is a completely digested food, and does not require digestion to pass into the stomach, and soon passes out. The reason you have heart burn is because the duodenum is probably too sensitive. It has probably become infected by infection traveling up from the colon. Every person who has heart burn has colitis; and in colitis, there is infection which has worked up through the small intestine, until by and by it has gotten to the duodenum. The duodenum is sensitive to the acid, and the acid when it gets into the duodenum causes contraction of the pylorus and it remains shut up as long as there is any acid left in the duodenum. But the bile comes from the gall bladder and the liver neutralizes the acid, and when the acid becomes completely neutralized, the pylorus opens and some more comes out. When it become infected, it become hypersensitive, just as any other part of the body become hypersensitive when it is inflamed or infected. So, when these acid

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products from the stomach come in contact with the duodenum they cause a strong contraction. In other words, the pylorus shuts up too tight, and remains shut up so long that the acid accumulates in the stomach to an excessive degree, and that is what we call "Heart burn". When you take food into the stomach, it causes the stomach to dilate. Whenever you take food into the stomach ~~is~~ the stomach relaxes, and that opens the pylorus and allows the acid contents to pass out. If you take food that requires digestion, that remains behind in the stomach ~~and~~ allows the pylorus to keep closed, ~~the~~ and the acids to accumulate; but, if you take food that does not require digestion when the pylorus opens, the food passes out along with the acid contents and the difficulty is relieved. I think a little honey, or a little corn starch stirred up into a paste-- anything that does not require digestion in the stomach,--would relieve it.

Q. Are baked apples wholesome?

Ans. The baked apples is the most digestible thing I know of. Dr. Beaumont, a few years ago, experimented with baked sweet apples, which he found would digest in an hour. It is one of the most wholesome things one can eat. I am glad to tell you this, because just now, we have a lot of very nice Talman sweets. They are being gatered in now. The finest Talman Sweets we ever got from our orchards. There will be enough for breakfast, I am sure, as 30 bushels were brought in today.

Q. Do you think it a good idea to have a sun lamp in your home.

Ans. I have one in my home, and in this northern country where the sun is so scarce in the winter time, it is the only way to get sunlight. I would advise everybody to have this sort of a lamp that makes ultra violet light.

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I was very much surprised to find one of these lamps in El Centro, one of the sunniest places in the U. S. I said to the man who had it, "Why do you have this here when you have so much sun?" He said, "Well, I have to work in the day time; I haven't time to take a sunbath, but just before I go to bed I do have time to take a light bath. The sun, in the meantime, has gone to bed before I do, so I have my sun lamp here. It gives me a good bath."

Q. Is high blood pressure curable?

Ans. It is a slier to cure high blood pressure before you get it. Still, I have seen wonderful things happen to people who had high blood pressure. A man came here with a blood pressure of 260, and he never expected to do business any more. He was a broken down man; but in three months, his blood pressure had fallen to 160, and he was feeling so fine that he went home and resumed his business. Seven and a half years later he came back to show us how well he was. By biologic living he kept his blood pressure down to 160.

Q. Are ^{saccharin} ~~green~~ tablets injurious?

Ans. They are more or less injurious. The habitual use of saccharin causes injury to the heart.

Q. What causes headaches?

Ans. The most common cause is poisons absorbed from the colon.

Q. What is the cause of gall stones?

Ans. One cause is a deficient amount of vitamin A, which is found in green stuffs, spinach and carrots and in butter. It is found in spinach in a larger amount than in butter. In carrots it is found in a larger amount than in milk. Liberal quantities are found in the carrot, in onions, spinach, kale and in the ~~root-of~~ rutabaga, the sweet potato and in the yellow vegetables. Butter is yellow because it gets the yellow coloring from

grass. This is obscured in the grass by the chlorophyll, but it is there, and along with it goes this vitamin A, which is a very important vitamin. It holds the resistance up, and enables the body to resist the attacks of bacteria and germs. It keeps up the resistance and endurance and maintains a high type of vitality.

Q. Is it possible for the disabled gall bladder to be repaired without surgery?

Ans. Probably nine out of ten of all diseases gall bladders get well without surgery. Surgery is only required when the gall bladder gets so bad that it is beyond recovery. Then it is time for it to be removed. Surgeons never remove the gall bladder unless it is so bad that it is absolutely useless. The gall bladder itself determines itself when it is so bad that it is useless, and a source of infection. An incubator of germs. I removed a gall bladder some time ago and found, along with the gall stones, some typhoid fever germs remaining from typhoid fever that the patient had had 15 years before.

Q. Is it advisable to take mineral oil, psyllium seed and agar all at the same time?

Ans. Some cases of constipation require the combination of psyllium seed, bran and mineral oil in some form. The best form is the paraffin, or the solid form of paraffin oil.

Q. Does the continuous use of mineral oil cause constipation?

Ans. The very opposite is true. It trains the colon into normal activity. The enema does the same.

Q. What is the best sugar substitute.

Ans. There is no sugar substitute. The thing to do is to educate yourself to dislike sugar. Think of it as an enemy. Train yourself to get

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along without sugar to overcome your sugar appetite. > Somebody reminds me here, that thirty years ago I ate two meals a day. I still do. My friend, Mr. Boharty said to me yesterday, "I never eat anything but fruit for supper, and I find it very much better." Literary people and business people, find it advantageous to eat nothing but fruit for the evening meal. When they eat a heavy meal they will go to bed, and about two o'clock in the morning they will wake up when the digestion is completed and the food is being absorbed, and this gets up steam. The brain is stimulated and all the organs of the body being filled with blood, ~~see-ee~~ and new nutriment, are ready for work. And, instead of sleeping, you are naturally aroused to activity., so you wake up before you are rested enough. If, instead you eat ~~fruit~~ ~~fruit~~ for supper, then, in the morning take a heavy breakfast, you have something to support you through the work of the day. But, if you eat a hearty dinner at night, you have no appetite for breakfast, so you do not eat the substantial meal you ought. And if you are engaged in physical labor, you are not properly supported. For myself, I am happy if I get only one meal day. I have had only one meal today and it was not a very big meal at that. I had breakfast and supper at twelve o'clock today, and have had nothing since. But that is not a good example for you; you need more food. I get along with very little food. I have a tendency to accumulate flesh, so I keep myself trained down to a small, meager ration all the time, and I am sure it is greatly to my advantage to do so. I keep a clean tongue; I am not ashamed to show it off, either. I hope you will all have just as clean a tongue before you go ~~to~~ ~~see-ee~~ away from this institution.

Q. Should people who have heart trouble drink all the water they want?

Ans. Generally, yes. But if you are suffering from dropsy,

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maybe your heart is not able to circulate so much fluid, and you better not drink quite so much. Ask your doctor.

Q. What causes moles on the face?

25074 Ans. Generally it is inherited. If they are pigmented moles, they are very dangerous and should be removed. The removal should be complete. If the mole is cut during the removal and a little fragment left behind, it is likely to develop into a cancer. Pigmented moles are very dangerous and never should be allowed to remain; they should all be removed. Such a mole can be removed by electricity, but the best way is to cut it out completely. Be sure to get every bit of it. Have the work done by a good surgeon.

The time is soon coming when we are likely to have cloudy weather and do not have so much sunshine. Every person ought to have a light bath of some kind at least two or three times a week. And it should be strong enough to make the skin red, and make a little burning of the skin afterwards. If you have a little sunburn, you get the best effect. If it is a real burn it would smart right away; but ^{if} you do not feel it for several hours afterwards, that proves that it is not a burn at all. It never leaves a scar and never does an injury. If it makes a little sunburn, especially it increases your immunity. My skin is as dark as that of any mulatto you ever saw in your life. I wrote an article while my skin was exposed to the light in my bed room. I frequently do this, and sometime I fall asleep and do not wake up until I find I am getting a nice sunburn on my back. At this time of year there is a great advantage in it. Patients make more rapidly improvement at this season of the year than at any other. One of the reasons is the tonic effect of the cooler air. Cold air has a wonderful tonic effect. A year ago last winter, we made

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some interesting experiments with people who were having a metabolism test. We took them out into the open air and ~~see—see~~ ^{at once}—this is a remarkable discovery nobody every knew before --these cases began to breath twice as deeply as before. Thier lungs began to play much more fully than before. The reason was this: Nature instinctively undertook to supply more oxygen. The contact of the cold air to the face indicated the danger of being chilled, so nature pulled the draft open and let more oxygen in to make more heat to keep up the patient warm. And the effect is to set all the vital machinery into greater activity. When you expose an arm to the cold, immediately the lungs will begin to work deeper. Let me call your attention to some experiment you participated in when you were young one time. Someone dropped a piece of ice down the back of your neck. You immediately gasped. Perhaps you remember going swimming sometime, and when you first stepped into the cold water you gasped. When the cold shower first strikes you there is a gasp. There is a pulmonary reflex. When you expose any part of the body to cold water or cold air, it immediately sets the lungs to going deeper, to making a greater play, and that sets all the vital machinery of the body to going with greater activity, and the whole body to working with greater efficiency, taking in more oxygen. This cooler air that you are going to get for the next few months here affords the average invalid the best opportunity for making rapid progress toward health. The warmer climates are not needed by many people. Most people who go to warm climates, go because they have acquired luxury of habits, and do not like contact with the cold. They are afraid of it. Some of these people need to go to a warm climate.— People who are threatened with pneumonia, who have arteriosclerosis, people who have angina pectoris, who have Bright's Disease, who suffer from rheumatism, or neuritis, often

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profit by a warm climate; but the average invalid, who has auto-intoxication, the patient who has indigestion, the patient who suffers from an inactive liver, even those who have tuberculosis, are a great deal better in the cold climate because of the constitutional uplift they get from the cool air. The body prepares for the cold air by hardening the skin, and the quickening of all the vital processes. If you go to a warm climate, you lose that effect. You do not get the winter constitution that the body puts on just as the animals do, and the trees and plants, all of which make this preparation for the winter. The preparation for winter that the body makes, is a preparation to resist disease as well.

Do not live this place until you have accomplished two or three things. If your blood is down, see that it gets up to just as nearly 100 as possible. Nobody ought to be contented with 80 or 85. If you are down to 60, you are in danger. The blood is the ~~thing~~ life, the Good Book says; The life is in the blood; It is the blood that protects the body; It is the blood that makes the fight against germs. So, if your blood is found to be down to 50 you are only half alive, my friends. You have only half the resistance you ought to have. Half of the garrison have left the citadel. The gates are open, and the enemy can walk right in. I wonder how many people there are in this room who know what their blood is. I admonish everyone of you tomorrow to see your doctor and ask him what your hemoglobin is. Is it going up or down? It is so important, my friends. The biggest thing you can accomplish is to get your blood up as high as you can. About a dozen years ago during the War, I found myself taking on the job of one man after another, and I was working all the time, getting down early in the morning, never stopping sometimes even for meals, and sometimes I worked all day until the next day until six o'clock in the evening before I got my breakfast. I never went home until eleven or twelve o'clock at night.

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and I worked so furiously that I forgot all about myself. I forgot to eat, forgot to sleep. And one day I found that I had a little rise of temperature. Further investigation showed that my haemo_globin had fallen to 84. The next day I had a pain in my side and had a pleurisy, and I had to go to bed. And I had to stay in bed three months and a half for my chest filled up with fluid and I had to lie down. In the mean time I wrote a book. I wrote three thousand pages of manuscript lying in bed and writing with my pencil. I got well after a while and my haemoglobin came up. In two weeks it was 85, and in two weeks more it was over 90, and in a few weeks further it got up to 100, and the next time I had it taken it was 107. I said I had better stop here or it might go to high. I just lived on spinach. I ate spinach at every single meal--a regular mountain of spinach. It has live giving qualities in it. I never eat a meal without spinach if I can get it. A very nice combination is spinach combined with celery leaves. The green leaves of celery ~~leaves~~ are richer in vitamins than anything else you can get. Also it gives the spinach a very fine flavor. You can make other good combinations, also, with different kinds of greens. You hear about the Chinaman living on rice. He could not do that, for he would die. But the Chinaman has his large plate of rice and then he has, as a missionary said to me, "A mountain of spinach", and every time he eats rice he eats this great mountain of spinach along with it. The Chinese have forty different kinds of greens, and they are able to live on rice, because they eat the greens.

Sombody asked why people have kidney stones. I did not finish the story. A Japanese made an experiment and found out that, as he deprived animals entirely of the vitamin A, that they had kidney stones, bladder stones and gall stones. Then, he found a remarkable thing: That ~~he said~~ if he fed a large amount of this vitamin A the kidney stones and bladder stones disappeared and the gall stones disappeared. And that agrees with what a Swiss dairyman

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observed a great many years ago. He observed that cattle had a great number of gall stones in the winter time. I saw in a market in Paris a great heap of gall stones from the size of marbles to that of goose eggs, and I said, "What in the world do you do with these gall stones." He said, "We keep them to sell to Chinamen, who use gall stones for medicine." This experimenter found that the cattle were troubled with gall stones in the winter time, but as soon as grass came in the spring, they started to get better, and by the end of the summer the gall stones had disappeared. We know now the reason for it. It is because of the Vitamin A in the green grass, and there is more vitamin A in carrots than there is in butter. There is as much in a inch as there is in butter, and that is very important. Be sure that you learn the properties of food. You ought to eat greens to bring up the hemoglobin. Eat bran; eat no kind of bread except bread that has all the bran in it, because it is the bran that contains the iron of the cereal. Potatoes and rice contain very little iron. What iron there is in cereals is in the bran. The iron of meat is an inferior second-hand sort of iron, and there are twenty four different kinds of vegetable foods that contain more iron than ordinary beef steaks. Raisins, dates, figs and prunes are all rich in iron. So learn from your dietitian what you ought to eat. A large amount of vitamins, large amount of iron and minerals are required by all invalids. You should concentrate your attention upon those things, and do it habitually. The most important thing you can get here is to learn how to live biologically. after you go home; how to establish a regimen that will keep you getting better, climbing up every week and every month, so that at the end of a year, you will be far better than before. Teach your family how to do it. That is of the utmost importance.

Another important thing is to get your flora changed. Get your tongue clean and your breath sweet before you leave here. I met a lady ~~here~~ the other day who was much distressed because her breath was still bad, although she has been here for weeks. Be sure you get your breath changed, because if you find there is a subtle influence that works, it is going to pass you off prematurely. It will certainly make you old before you ought to be. It will certainly make your arteries hard, wear out your kidneys, wear out your liver, and it is a thing that must be corrected. Get your flora changed and learn how to keep it changed by the free use of psyllium seed and Lacto dextrin. How many of you use psyllium seed? Probably there isn't anybody in this room that ought not to make use of psyllium seed. We are all of us so universally diseased and our colon so crippled that practically everybody needs it. I make use at every meal of psyllium seed, prunes and half a tumblerful of fig bran. That is my regular ration every time I eat. If I am away from home, I carry those things along with me. I carry little sample boxes with me, as they are just the thing to take to the table. Bran you can have in the form of Laxa, a little biscuit. Make up your minds, my friends, to live just as long as you can, and to live just as efficiently as you can. Live by complying with the laws of nature. We should not be victims of disease, but should be well. Make up your minds to enjoy, not just fair health, just enough to get along on, but all the health that there is for you, and to get all the years that are coming that you can possibly have an opportunity to enjoy. This is a wonderfully interesting world, and it is getting more interesting every day. You will be glad to be alive ten years from now, and twenty years from now. I dare say

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there is not a person in this room who could not be alive twenty years from now if you will take the trouble to do it. It takes but very little vitality to do the ordinary work of the body. It is the extraordinary, the unreasonable things that demand of the body by neglect of ourselves. Make it a rule never to go to bed without having your colon empty. If your colon is filled every night when you go to bed, it will be scattering poisons into the body continually, and this is one of the most common causes of lowered vital resistance, and lowered endurance. If you go to bed with ~~an~~ unloaded colon, you get up in the morning feeling tired and wonder why you should be tired after having a night's rest. After you have had a good night's rest, you ought to feel fresh in the morning; you ought to feel ready to leap out of bed, and to seize upon your duties and go on with your work, and enjoy it. And you will, if your body has a fair chance. Eight hours sleep is enough to rest any ordinary person. If you go to bed with an empty colon, you won't feel tired in the morning. There is no excuse for the bad breath and the bad mouth, because you can always empty the colon by the use of water. It is absolutely harmless. In fact, it aids ~~the work~~ in training the colon to proper behavior by keeping it empty; whereas, if it remains full, it becomes overfull and stretched, and becomes the seat of disease. If you can feel your colon in your left side, you have got colitis, and there isn't any doubt about it. You need not think it is a nervous trouble, because it is not. If it is a nervous trouble, the colon won't be tender, or give you pain, or backache or side ache. If you have backache or side ache you have got colitis as surely as can be. Do not let anybody make you believe it is purely nervous trouble, due to nervous exhaustion or something of that sort, for it is not; it is and infection, and if you keep the colon empty by means of a hot enema every night for six months or more, it will put you in the way of getting your mouth clean and getting rid of the bad breath, getting your flora changed, and helping to pro-

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note your recovery to complete health.

I thank you for your attention.