

Welfare Rally at the Sanitarium Gymnasium, Battle Creek, Michigan,

Thursday, October 7, 1915,

at 7:30 P. M.

Dr. Kellogg:

A couple of weeks ago I sent a little card to every member of the Sanitarium family, everyone whose name was on the payroll, and I asked in this letter that each one who believed in the principles of this institution and wanted to be counted as a supporter, promoter, and booster of these principles should sign the card and send it back. I wanted with some little anxiety to see how many cards I would get back. I did not know how many there were in our family here who really heartily supported the principles of the institution. I was afraid that in the lapse of time, and perhaps in part due to our neglect to cultivate enthusiasm for the principles, their might have been a decadence in faith and confidence in the principles upon which this institution was founded and the principles which gave it birth but pretty soon the card began to come in and after a few days I had 200 and I said thank the Lord we have 200. What a splendid little army that is and after three or four days, to my surprise, another count showed 400 and I was much astonished a day or two later to learn that the number had reached 500 and here at the last moment there came in 360 and the total count is 860. This was not intended to be a revival meeting in the ordinary sense yet in the true sense it is a revival meeting. The purpose of this meeting is to revive enthusiasm in the splendid principles that have made all this growth and development that you see here on this hilltop. When this institution was started almost 50 years ago I sat as a small boy just fourteen years old under one of these trees then about as big as my arm. There was a gathering of 100 people here and we thought

what a splendid gathering this was, what a fine congregation gathered at the
Health Reform Institute
dedication of the Battle Creek Sanitarium for that was what the institute
was called then. That tree now is so big I can just reach around it and the
institution has grown right along with the tree so that at the present time
we have a work which covers over a whole acre instead of just one little building.
That little two-story farmhouse where this work started has grown now until
all the property owned by the institution here counts more than one hundred
buildings. We had a family here in the month of August numbering over
2500 persons. That includes patients, helpers and everybody so you see the
work is growing but what you see here in Battle Creek is not a beginning. It
is not a drop in a bucket even, hardly a drop in the ocean, of the real develop-
ment that ~~is~~ has actually taken place in these almost fifty years. Throughout
the world you will hear about the principles that are promoted here. You cannot
go to any city of five thousand inhabitants in the United States that you do not
find somebody who has been to Battle Creek and seen this place. A lady came in
the other day from a small town in Oklahoma and I said, "How did you happen to
come here?" "How did you happen to select our place?" She said, "I heard
about the Sanitarium and I thought it would be a good place for me to go to
get well. I said, "How did you hear about it?" "Oh," she said, "Everybody knows
about the Battle Creek Sanitarium." It has really come to that point where al-
most everybody in the United States, every intelligent person, every person who
reads the papers knows about Battle Creek and knows about this institution and
knows something of these principles. I remember about thirty-eight years ago,
I have been editing our paper that we call "Good Health"/^{42 years}last spring. The name
was then "The Health Reformer", and I thought we ought to change the name because
people were prejudiced against being reformed, didn't like to be reformed, so in
hunting about for a name I finally hit upon the idea of calling our reform journal,
"Good Health". I did not say to anybody we are going to reform you but gave ~~the~~

a suggestion that we had something that would give them good health. The journal has been going on now for thirty-nine years under that name. I spent yesterday at the little town of Alma, about 100 miles north of here, and I found the whole town stirred up holding what they called Good Health Week, and I find it has become the most popular thing in Michigan at the present time to hold a Good Health Week. At the time of our Race Betterment Conference, a year ago last January, there was a clergyman here from Hillsdale, Michigan, and he became so interested he thought he ought to have something like it at home so he went back and they had what they called a Good Health Week and that is where it began so it is a direct feature of our work. At the present time the State Board of Health is holding a Good Health Week every single week of the year. Every week right along there is a Good Health Week and the State Board of Health has some of its agents there and they have an exhibit and have the whole town stirred up. Last night I spoke to an audience three times as large as this in the largest hall of the town of Alma and they were so interested that they stayed from 7:30, when the lecture began, a man spoke before I did and then I spoke, after him, and they remained there until nearly 11:00 o'clock and scarcely a person left the room. They were so earnest and interested to learn about the principles by which better health may be obtained. I ^{talked} taught the gospel to them just as straight as we talk about it here. I found the people thoroughly enthusiastic. I did not say I did not think they ought to eat meat, I didn't say anything about it. I only showed them some pictures of meat on the screen and ^{told} showed them what was in it, and I heard some people saying afterwards, "I'm not going to eat any more meat" and I heard one lady say, "I found out something about this about a month ago and I have not eaten any meat since and I am not going to." So I find people are crying for knowledge and ready to take up these principles and carry them out just ^{as soon} ~~xxxxxxx~~ as they learn of them. There are thousands and thousands of people all over the United States ~~xxxxxxx~~ and hungry and

thirsting for the knowledge that we have here. We want to hold up our standards so high that the people who come here cannot help but feel impressed that here is a body of men and women who believe what they talk about, who practice what they preach, so I think it is a good thing for us to gather here tonight. We are going to have a gathering once in a while here to cultivate loyalty to these principles. We want every man and woman who believes these principles to have a part in this work. This movement has swelled to such a proportion that it is spreading throughout the world. Professor Fisher said to me recently, "I tell you, Dr. Kellogg, within five years this thing is going to go like wildfire because it is true." You know the Bible says "His truth endureth forever," and Christ said, "I am the way the truth and the life". Now this is a part of God's truth that we are dealing with here, truth that will bear the test of actual practical experience, truth that is made up of great and eternal principles that have their foundation in the very constitution of things, in the very constitution of man so ^{that} we do not need to feel a place. We can trust our feet upon this solid foundation and what a splendid thing it is ~~is~~ to be able to look back ^{over} almost a half a century and see a steady growth, a steady climbing up, never any going back, always climbing up and going forward not by the force of wealth or of astute management but by the intrinsic power of truth that is in the thing itself. It is going forward and we are being carried along with it. A man came to my office about twenty years ago and Dr. Paulson said to me, "This man is very deaf. It is hard to make him understand but he says he wants to see the old man that built up this institution." I went into the office where he was, he looked at me and then he looked out of the window and then he looked back again and said, "Are you the Dr. Kellogg that built up this institution, are you the man that built this institution up from a little beginning of thirty years ago that I used to see when I traveled by on the railroad here and people used to

point out and laugh at and say there is a water cure where they starve people to death." He said, "I have been watching this institution all these years. I am the proprietor of several banks up here in Northern Michigan and I got sick and my doctor told me to come down here and he said, "I am amazed at what I find here and at how this institution has grown from the beginning and people don't laugh at it any more." "Are you the man that built it up?" "I said, "No; I didn't do it". He turned to Dr. Paulson and said, "That's just what I told you. I want to see the old man and it must be the father of this man." He said, "This is Dr. Kellogg." "Well;" he said, "I want to see his father then, I want to see the man who has done this thing." My friends I could hardly keep back the tears from my eyes as I assured this man again and again that I had not done it but it was God that did this thing. It is not I. It is the power of the eternal truth that has built this institution up and I want everybody to know that and to feel it. I don't want you to feel that anybody here takes honor or glory and I don't want you to do honor to the Board of Management, to me or to anybody else. The only power on the face of the earth that deserves credit for this institution is God, Himself. It is the power of truth. The trials, tribulations, troubles and harassments and persecutions we have gone through have been enough to destroy dozens of institutions. This institution would have been wiped out long ago if there had not been a power in it and that power was the power of truth. God founded this institution and he wants it to rise and flourish and perform its mission of beneficance to humanity and it is because it has that mission and because there is a power here to heal that is being used and is being represented in a practical way, that is the reason why this institution is going on. What a splendid thing it is to have a part in it. What a privilege it is to have a part in it. When you are working on God's side you are bound to win. When you are helping God to do something you are bound to win. We are trying to do what we can to help

along the cause of truth in the world. You love this truth because nobody was allowed to come tonight unless he loved this thing. That is why we issued the cards. We did not want any doubting promises in here tonight at all or any traitors. We wanted nobody but those who are true blue so before we get through, we are going to organize here a health legion, ~~or~~ or home guard of the Battle Creek Sanitarium. Men and women who stand up under all circumstances, no matter where they are, and stand for the principles that have done so much for the institution and for us ourselves who are here. A doctor called on a lady in New York awhile ago and while she was getting ready to come down he played with a nice little dog and when she came down she said, "You have a very fine dog here. What is his name?" She said, "We call him Chauncey Depew because he has to speak for his dinner," so we are going to give you something to do to pay for your lunch so now we are going to call on Dr. Riley. Dr. Riley has been with us for more than thirty years. Thirty-three years ago last spring when I came home from Europe I found Dr. Riley. He came here himself and he has been here standing by this work now for more than thirty years and I feel very proud very to sit upon the platform with him. I am sure you want to hear from Dr. Riley.

v-m (Applause)

14605. Dr. Riley: I did not comeⁱⁿ here expecting to make any remarks. Dr. Kellogg has sort of got me into it tonight. As the Doctor has stated, I have been connected with the work for thirty-two years and during this time I have been teaching and practicing the principles of the institution and I think you all know about where I stand with reference to them. I did not come here to say anything and I think this is all I have to say. (Applause)

J.H.K. When a man has been studying medicine as many years as he has and has had the privilege of talking with some tens of thousands of people as he has interviewed on the subject of health and he stands up here and says he has been teaching these principles all these years and believes in them,

and practices them, that is endorsement enough.

Here is Elder Tenney. He is one of our old timers. When I first came into this institution and took charge of it thirty-nine years ago, we didn't have any pastor here or any business man, any bookkeeper. In fact, there wasn't much of anything and it didn't require much help because there were twenty patients the day I arrived and the next day there were only twelve, and you can readily understand why. They didn't care to have a small boy for a doctor. In fact, I had to be the whole faculty and business department besides. It wasn't very long before I began to look around for somebody to help us. Patients began to multiply. Not many more people came but they stayed after they got here. It was understood in the institution for several years that nobody ever got away after they got here until after they had their trunk packed the fourth time. As soon as anybody got to packing their trunk, I heard about it and I sat right down with them and did not let up until their trunk was unpacked and we had another chance. One of the first helpers that came along was Elder Tenney. I think he was doing some bible instruction in the College across the road and he came over to help us as a pastor and I think as a bookkeeper and general manager and I think almost everything that we didn't have anybody else to do. He was always ready to help us and was really a friend ~~in~~ in need. He rendered us service that was exceedingly appreciated by everybody at that time and he is still with us, so we will ask him to say a word. (Applause)

Elder Tenney: I remember when a small boy, I used to declaim -----
~~the~~ address to the Romans. It began: "I came not here to talk" and I sympathize with the noble Roman tonight for I hadn't any idea of coming here to talk, but my mind does reminisce somewhat. Dr. Kellogg I think came in here forty years ago this summer instead of thirty-nine. I came to the city in the fall of 1877 and when I came to the city on my second visit I entered the school. I came with a fully developed case of prejudice and suspicion against the new doctor. I didn't want to speak to him or get acquainted with him and

I have a confession to make now for the first time, that many times I dodged across the road to avoid meeting him. The denominational air was so full of stories of his ~~heresies~~ ^{heresies} and infidelity and that he was a dangerous man altogether for a young aspiring preacher to get acquainted with, that I thought my safety lay in keeping a good distance apart from him. One day I was walking down the foot path in front of the Sanitarium where there was a thick hedge and just a little opening for the gate, and as I got to that gate, out popped Dr. Kellogg, face to face with me and it gave me a shock. He turned and very much to my surprise said, "You are Elder Tenney aren't you?" I said, "Yes" and turned around. He said, "Well, wait a minute. I find myself with more on hand than I can possibly do. I have the medical work, the business work, the religious work--I have to carry it all or most of it and I must have some help. Can't you come over and help me?" "No I can't come over to help you. I have made all my arrangements. My time is fully occupied with my studies." "Well, but it won't interfere with your studies at all to come here and conduct our family worship and help us in the institution and you can have your board in the institution." I said, "I have already paid my board in advance for the year. My arrangements are all made." "Well, all right, I'll fix that. I will send a team down for your things this afternoon. Good bye." I said to myself, "Well if he really wants some help in religious lines, I can do some missionary work and perhaps after all I had better go in and try and see." So I was brought into intimate ~~relations~~ relations with Dr. Kellogg and soon came to know him. I can hardly speak my feelings. My feelings become tender at once when I begin to speak of those days and of what I have experienced from Dr. Kellogg and the help he has been to me and the inspiration his life has been to me. If he were not here I would say more than modesty will allow me to say now. I not only loved the man and ~~found~~ ^{found} in him the best friend I ever had outside of my own mother, but I found in this institution and in these principles that which I has redeemed my life physically and has been the joy of my heart.

I cannot speak. I am too full of my admiration for the work and the great appreciation that I have every morning on opening my eyes and my first thought is of the precious work that awaits me down here and of the strength that God still gives me to have some part in this work. It is the highest privilege that I cherish and I would not exchange the place that I have for any other place in this world. I have no higher ambitions than to ~~stand~~ stand by Dr. Kellogg and these principles and I believe we are carrying forward a work which I regard to be the noblest work because it embraces all that is true, noble, grand and great. (Applause)

Dr. Kellogg: Our work kept growing after Elder Tenney came and it developed so fast that in two years' time we had to have a new building. Our first large building was put up at an expense of \$115,000 and we had to go in debt for every dollar of it. The people of the town looked on. I was brought up in this town from the time I was four years old, and they pointed up at the building and said, "Look at Johnnie's folly." Well "Johnnie's folly" was occupied with patients from the top to the bottom the day it was dedicated, a little less than a year from the time we started to build it. On dedication day the building was full. We began finishing at the top and put somebody into every room as soon as it was finished. We had really, people climbing up ladders and getting through a window into the rooms to occupy their rooms before the stairways were build. All the houses about this part of town were full of patients. From the day the building was dedicated, there never was one day when we could get our entire family into it, so our work went on, developed and grew. After two or three years we became so busy that we did not know what to do. Elder Tenney had his hands more than full. About that time a man came here from Boston and I heard he had been a professional bookkeeper, so I laid wait for him as I did for Elder Tenney and captured him and got him in and he is still here. I feel very proud to introduce to you Brother Murphy. (Applause)

G. H. Murphy: Dear Friends, I am not a public speaker or talker. Perhaps I can tell a little story. In 1869, my attention was first called to this movement and I followed it strictly until 1880 when I was invited here by the Doctor. My first two years I was very radical in my diet, but after three years I let up a little bit and ate meat, mutton and beef but never pork. In 1869 I left off tea, coffee and perk and never touched them since. When I came here I found the Doctor and his followers trying to observe this diet and I ~~felt~~ felt somewhat ashamed of myself for I lived here more than eight years before I changed and some twenty-seven years ago I left off eating meat entirely and have not touched it since, neither fish, flesh nor fowl. My health is good as you will see and I am very glad that I have done so. I have been trying to uphold the principles of the institution and will continue to do so. I thank you. (Applause)

Dr. Kellogg: We have here Dr. Roth who is also one of the old timers. Dr. Roth came here when he was a boy and I think he has almost grown up in the institution. We were glad to have him come and we are glad to have him with us. His example has always been on the right side. We always knew exactly where to find him and we are delighted to have him here tonight to tell us what these good principles have done for him.

Dr. Roth: I didn't know that I would have to pay so much for my supper. Dr. Kellogg says I was an old timer which may be true. I came here about thirty years ago, a young boy, came from the mountains of Switzerland where I had already carried the standard of health reform in a very practical way, the most tangible way in which health reform had come to us over there then, because we had already heard about Dr. Kellogg and the Sanitarium, only some seven years after Dr. Kellogg had taken charge of it. Health reform came to us in the form of graham bread and I remember that a brother of mine ten years older than I am who was a baker, began to make the first graham bread that was made in Switzerland. We had the white bread and the swartz bread, our black bread which children are very fond of over there, but he began to make graham bread and that is the way that health reform

was carried around the country. Graham bread was made in the little village up in the mountains and in a short time had to be sent all over Switzerland. It was sent by parcel post. This is new here in America, but ~~it~~ we had it at that time in Switzerland and were shipping anything by parcel post, even barrels. I have taken barrels very often to the post office to be shipped to various parts of Switzerland. I have had very nice experiences in this direction. Many people had a chance to learn about health ~~reform~~ reform through the bread that was made then. Shortly after it was my good fortune to come over here and I came here purposely to be educated in these lines and I am sure that I owe the best of my life to the chance that I have had in coming to this institution. I cannot express my appreciation as well as Elder Tenney has expressed his, but what he has said, I could repeat for myself. I have had occasion to go back to Europe a number of times since and you would be surprised to find ~~how many~~ how many know about the Battle Creek Sanitarium and the work that has been done here under the leadership of Dr. Kellogg. I dare say that every man who reads more or less has heard about the Battle Creek Sanitarium. Many physicians have heard about it and you do not need to travel very far before you meet some one who has known about this institution, about the noble work which is being done here. In fact, the best authorities in Europe envy this place here. They are calling all the time for such an institution as we have here in a number of different places in Europe. There are a few small ones now, but the demand is big. I am certainly glad to be with you in this work.

Dr. Kellogg: It affords me very great pleasure indeed to hear these remarks from Dr. Roth. Dr. Roth is telling you that our institution has come to be somewhat known in Europe. Before we put up our first building, I was talking with a far seeing man about our prospects and about the propriety of this investment and he said, "The time will come when the name of the Battle Creek Sanitarium will be heard and known all about the world". I really think that time has come. I was traveling in Egypt some twelve or fifteen years

ago and I was sitting in a railroad car and we had to have our baggage along with us and my bag was opposite me and my name was on it and pretty soon I noticed a lady and gentleman across the car from me who were whispering and pointing at my bag and then at me, and pretty soon I overheard them saying, "Why that is Dr. Kellogg of Battle Creek" and they seemed to know all about the Sanitarium. I do not think those people had ever been here, but they knew about the institution. I found in Jerusalem a man who knew about the Battle Creek Sanitarium. Not long ago we had here a cousin of Dr. Von Noorden, one of the best known physicians ~~that~~ who lives at the present time, an eminent German physician. His cousin is a wealthy cotton broker of New York City. I told him I was very much surprised that he would come here. "Why," he said, "why shouldn't I come here. I have been all over Europe, through all the different places there, and there is no place that compares with this place. I heard about it over there. When I was in Dresden, there is an institution there that is the most noted one in Europe, and in their advertisements, they announce to the world and to Europe that they give treatment Battle Creek, so I thought I would come to head quarters." He seemed to be very much pleased while he was here. When I visited Europe some twenty years ago I picked up a German paper and found an advertisement in it of ~~Kellogg~~ "Stelloggische marmittel" which means Kellogg's Foods. The people had begun to learn about our institution and our foods. ~~Amixixix~~ The last time I was in Berlin I was introduced to an eminent physician, Dr. Pascari (?), and immediately after he was introduced to me he said, "Dr. Kellogg, I ought to know you pretty well. I lived on your foods for six weeks and didn't eat another thing." I found that Prof. Zuntz had been experimenting with our foods and had made two of his pupils eat nothing else at all but Battle Creek Foods for six weeks in order to test their properties. So people all around the world are taking note of us. It doesn't give me any feeling of pride that the world is thinking and talking about us but it makes me feel a high responsibility. It makes me feel that

I am walking on very thin ice sometimes, that I am in a very critical position, because there is ~~responsibility~~ ^{incumbent} upon me and upon everybody in this institution to hold up these principles so that when people who hear about the institution and come here, they will find the thing that they expect, and I want every man and woman who comes to this institution this year, next year and all the years to come to find a body of men and women who are standing up as representatives and examples of what these principles can do for men and women and I am sure you all agree with me in that. Here is Dr. Martin who has been with us a number of years. He came here as a student and he has been working all along through these years to become better acquainted with the institution and now he is himself coming to be known throughout the United States as an expert in his particular kind of work and I am very glad, indeed that he is here, not only because we are glad to have his help in carrying on his work, but because of his presence here for he has traveled about as Dr. Roth has done and visited various laboratories, and clinics in various parts of the world and he is prepared to judge whether this thing is worth while or not. I am sure you will be glad to hear from Dr. Martin. (Applause)

W.F.

Dr. Martin: There are three stages in a man's life, once when he is young and wants to be old, another when he is afraid of old age, and another when he prefers not to mention it, but I am glad to say that I am here because I like to be hear ~~the~~ and that is the only reason I can give. I like to be here. My mother in law said to me one time that she was proud of me, and do you know why? Because I was connected with the Battle Creek Sanitarium. When you can make your mother-in-law proud of you by being connected with an institution like this, that is something. (Applause)

I am proud of her because she is proud of me because I am here. A man came here the other day from one of the largest industrial institutions of our country and made me a proposition to go and be a physician to that company, and do a certain line of work for them. I said, "I am sorry but I cannot be induced." "Why can't you be induced?" "I like it too well here. It would

take something to take me away from this institution. I have been here now for so many years and I hope to always be here. There is nothing in the world that makes a person so happy as to be in harmony with his surroundings. Anybody who is out of harmony with his surrounding is out of harmony with himself and the man who is out of tune with himself is a miserable creature, but the man who is in tune with himself and his surroundings is a happy creature, so that is why I am so happy, I am in tune with my surroundings. I often have patients say to me, "Why do you stay here? Why don't you come to my town? You can make \$20,000 ~~mak~~ a year there in your line of business. I will start you in business if you will come to my town." Now, I say "That is not for me. I like it ~~hatter~~ too well here." "Why do you stay here," they say. I stay here because I am in sympathy with the work of this institution and that is the best testimony I can give. When I say that, that stops all argument. Now it is worth a whole lot to me to be in sympathy with my work and with the ~~purposes~~ purposes of my work because it gives me enthusiasm to go on and do that which I have to do each day with an interest and with a will and with a spirit of joyfulness. I enjoy it because of that reason. There is nothing in the world worth while like helping humanity and there is no place on earth ^{that} I know of where I can do such efficient work and good work along that line as right here. In Europe right now we see the wonderful results of loyalty to a union, one nation standing up against all the world surrounding them, simply because every man of that nation is loyal to his leader, and as a result of their loyalty, they are standing all kind of onslaughts from the enemy. My dear friends, we have a thousand people among the employees of this institution and if every one of that thousand was loyal to this work, what a lot of boosting we could do, if every man was loyal to his work, to the institution, to the principles, there is no end of good which could be accomplished here. There are many people in this institution who are not in sympathy with the movement and I have heard patients tell about such and such a fellow out here in the bath room that is running

down the principles of the institution, boasting how he enjoyed, this, that and the other thing, and you want to know what that man thought of the fellow that told him that? He thought that that fellow was a fool, or that he was an easy mark or had a vermicelli spine as he would say and was here simply to get his bread and butter and not because he was interested in the thing and didn't feel he could go out somewhere else and do what he thought he ought to do. Whenever anybody feels like running down a thing with which he is connected, you can just better believe that that man that is hearing you say that thing is forming an opinion of you that is not a good one. What would you think of a clerk ~~working~~^{that worked} in a store trying to sell you goods and was running down the merchandise of the store. You wouldn't think much of the clerk would you? The very same thing is true here. People get the same opinion of us when we run down the thing that gives us our bread and butter. My dear friends, we are connected with one of the most wonderful movements of the world. The proposition which this institution is carrying forward along race betterment lines is the greatest movement that can possibly be imagined, and I consider my self a very fortunate boy to be associated with a man and an institution who can do such wonderful things in life. Over in Europe we see two monuments in Paris, one built for Pasteur, a small little monument and one of Napoleon which is a great big monstrous monument that everybody looks up to. There are two men, both great enough to have a monument built to their honor. They built a great monument to the man who destroyed his thousands, and a small monument to the man who has saved his millions. That won't be so in times to come. The world is going to appreciate the man who works and lives to save his fellow men and not to destroy his fellowmen. So we are connected with one of the greatest movements in the world and if every member of this family can join this health league and be a pusher along that line, its progress will go on at such rapid rate that we will accomplish still greater things in life than have been accomplished. Dr. Kellogg has said his eyes have been opened and he had seen four or five

hundred people here on the hill. It reminded me of Elijah when he thought he was alone standing for God, but the Lord opened his eyes and he saw chariots and armies ready to fight for him, so I am glad we can see here so many loyal supporters ready to hold up Dr. Kellogg's hands and ready to do the work that is to be done. We may not all agree in the minutest details of the principles. It is not so much that we want to idealize or realize the ideal as it is to idealize the real. The real thing in life is to work for ^{the betterment} our fellowmen, to advocate the principles which stand for good health and good life, both morally and physically and that is the thing we want to idealize and that is the thing towards which I wish to devote my life.

v-p

Dr. Kellogg:

Mr. Piper reports to me that we have 860 people who have signed the cards and in our family we only have 144 left who have not signed the cards, who have not shown their loyalty by putting down their names as boosters of Battle Creek Sanitarium principles. In other words, we have a family of 1,004 and all but 144 are boosters. Now then we must do one of two things. We must get such a tremendous pressure to bear of influence of public spirit and public opinion here in this institution that those 144 people will either get converted and join hands with us or else they will eliminate themselves. They will feel that this is not the proper place for them and they that will naturally come to pass. Here is Dr. Born who has recently come among us. He comes here from a great center of science and of knowledge, the University of Yale at New Haven, where he has been a good many years as one of the professors in that great center, holding a very important place, a very important post. Dr. Born has come here and wants to tell you why he is here. He didn't have to come. He came voluntarily and I would like to have him tell you why. (Applause)

Dr. Born:

Dr. Kellogg said awhile ago that no patient was allowed to go out of this Sanitarium until he had packed his trunk for the fourth time. That is a little better than the institution out of which it is impossible for any patient to get until he has had his appendix removed. When I thought of coming out here into the West I had heard so many stories about the wisdom and the very distinguished look of the men and didn't hear very much about the women but I have since formed my opinion. I had heard so much about the very fine looking men that I rather feared to make the venture. Prof. Phelps, a friend of mine, said that one time he came out to Chicago and attended a class reunion. He saw a very distinguished looking man with a dress suit on and thinking that perhaps he was one of the principal speakers, he asked him what his toast was to be on. This man drew

V-m

himself up in all his pride and said, "Oh, what do you think I am?
Why, I am a waiter." Another time ^{he} had occasion to go into a restaurant
and he stepped up to one of the waiters and he said, "Do you serve lobsters
here?" He said, "Certainly, Sir, just take a seat right here." I am very
glad of having an opportunity of adding a little testimony to what has been
said. I believe in the principles advocated by this institution not because
they are the principles of the institution but because they are the principles
of biologic living, of right living. When I came here I determined to give
these principles a fair trial, a fair test, because I thought what was good
for a sick man certainly ought to be good for a well man so I tried them out
thoroughly and I am very glad to say that I found they agreed with me
thoroughly. I have never worked harder nor felt better in all my life than
I do today. I lead to this belief not only by my own experiences but also
by the experiences of others. I brought with me a number of very-important
boys from my home town. One of these boys was troubled a great deal with
stomach conditions and had been for the last three years. When he came to
me I said, "Now throw your medicine away and live according to Sanitarium
principles." He did so and today he is able to eat everything and anything
and is in the very best possible health and is a thorough believer in this
way of living. I know when I told him ~~the other day~~ that there would be no
meat here he looked at me with a great deal of disgust and almost made up
his mind not to come but now as I say, he is a firm believer in these principles.
In our school there are a number of girls and boys who have been greatly
benefited by this way of living. I can think now of one girl especially
who has gained in twelve pounds in a few months and there was one young lady
who came only for the summer and it did her so much good that her father
said, "Your place is in the Normal School at Battle Creek" and here she is
today. I wish to do what I can to promote these principles because I feel
that this is indeed a great movement, a movement which is bound to spread
and I want to feel that I have had a share in working for these principles.
v-m

A couple of years ago I had the privilege of visiting the institution of which Dr. Kellogg spoke, the Weisakersch, situated just outside of Dresden. I looked it over thoroughly and after seeing this institution I realized how much greater is the Battle Creek Sanitarium and how proud I am to feel that I am a part of this institution. I know that when I expected to come here a great many of my friends said, "What, are you going to leave Yale and go out to a Normal School of Physical Education?" I said, "Remember, that it is a part of the Battle Creek Sanitarium" and enough had been said. You know that the very last blood of this institution are these principles of right living and you know too, everyone of you have learned that a house divided against itself cannot stand. Now it is up to us to be boosters and to do all that we can to make these principles felt wherever we go, whether it is here or in Chicago or in the East. (Applause)

Dr. Kellogg:

We are going to have just a few more speakers and then have you all talk. We have with us a gentleman who was here as a patient years ago, a man who has seen a good deal of the world, has lived in New York City connected with one of the largest papers in that city, a city editor and was broken down by the pressure of life in the great metropolis. Most everybody suffers sooner or later from New Yorkitis and I am going to ask him to tell us what Battle Creek Sanitarium principles have done for him.

(Mr. Stegman: (Applause)

H. M. Stegman: I am very glad to say a few words tonight because I can speak from personal experience. I feel that one of the most effective testimonies to the religion of Jesus was given by the blind man said, "Whereas I was blind now I can see." I can say it very devoutly.

Before coming to Battle Creek I traveled from Alaska to the West Indies, from the Pacific Ocean to Europe. I went to a number of the leading Sanitariums of the country, consulted a number of eminent physicians from abroad and it was only here that I was restored to health and I hope I may stay here until the last days of my life and help to carry on these principles which have done so much for me. I feel that the people around here would have a better perspective of the Sanitarium if they could get away and could meet people from other places who know about it and could find out just how well known this place is. Sometime ago I began to tell an English army officer about the institution and he said, "Oh, I know^{all} about it. My father who lives up in Glasgow, Scotland, has been reading "Good Health" for years and he believes in the institution and practices its methods." At my reunion at Harvard I found my classmates all knew about the institution and wanted to know more about it and the diet. I believe if we here, just realized what a big institution this is and what it stands for we would be lots prouder to work for it and would be far more proud of it than we have in the past. In the olden times in New England there was a maiden lady of uncertain age who was very fond of preachers and whenever she could get one to come to her house, she was over-joyed to lavish all kinds of attention on him. They had a new preacher in the village who was unmarried and a young man and she invited him to tea one evening and served all the delicacies she could think of on the table and she poured out his tea and began to pour molasses in his cup for they didn't have any sugar in those days and she poured and poured and poured until he said begged her to stop, not to put so much in. She said, "Parson, if it was all molasses, it wouldn't be too sweet for you." That is the way I feel about the Sanitarium.

(Applause)

Dr. Kellogg:

The thing that made this institution known is education. It is the spreading abroad of our principles through literature. I was

surprised a few months ago when a very learned professor from one of the Eastern medical colleges, from Harvard University, was here, a medical man, a man whose name is famous throughout the whole/civilized world, and I told him how much honored I felt to have him here and he said, "Oh, Dr. Kellogg, I have known all about this institution all my life. My father bought a copy of the Home Hand Book when I was a boy and he raised us children by the Home Hand book and he consults it yet" so I discover in many ways that our work here has come to be like a city set upon a hill. The world is looking this way and it certainly is time for us to set our house in order and keep it in order so that every man and woman who stands in this institution shall represent the principles. Whatever fame or reputation the institution has or I have or any of us have in the world may all be attributed to the truth that we stand for. I often remember the verse in the Bible where Moses was giving his instruction to the children of Israel and He said to them, "If you will keep these statutes and these judgments which I give you, then the heathen^{to} whom you shall come will say, when they become acquainted with you, 'Behold what a wise and understanding people.'" Now the reason why we have credit, we must not take it to ourselves, we do not deserve any personal credit at all. It is because of the power of truth of these wonderful principles that we are standing for. That is what attracts attention and commands respect so I am glad to hear these splendid testimonies tonight. I am sure Mr. Piper will be glad to tell you a word about his interest in our work. (Applause.)

E. K. Piper:

this evening

I am going to be unique/and be brief. Yesterday I thought that I felt somewhat like an old employee of this institution being here 3 1/2 years but tonight after listening to these men I feel like a mere infant and so new that I hesitate to open my mouth. I feel like a newly white-washed fence. While I cannot think of the past because I am

so intensely interested in the future, what I have to say will probably be of interest to you. I am convinced that loyalty is the most valuable quality, that it will build for us a better organization and a greater institution. Now comes the question of reward. First I want to say loyalty is its own reward. Every good thing has its reward. Every kind word and noble deed is a sort of boomerang. When you build loyalty you build a foundation for fine, strong character and you will be destined to enjoy a sense of contentment and satisfaction that disloyal and vacillating people never know. The man who is loyal to others is loyal to himself and on this vital quality rests your success here, in Chicago, in San Francisco, in France, in Africa, or wherever you may go. The greatest reward of any good deed is to have done it. In this particular instance I think that what I foresee of my connection with the Sanitarium places me in a position to prophesy. This institution will never stop growing. Its greatest growth is yet to come. You have seen progress in the past and you will see greater progress in the next five years. Financial conditions are getting better. Business prospects are very good. Cotton is advancing in the South, steel mills are running night and day and manufacturing plants and other industries are operating full time. America, God's country, has been preserved as the market place of the world. What does it mean for us? It means more patronage and that is the thing that interests me. The fairs in California close in December. That is more patronage for the Sanitarium. Europe's big health resorts are practically out of commission--more patronage for the Battle Creek Sanitarium. Battle Creek ideas are more highly respected today than at any time in the history of this work--more patronage for the Battle Creek Sanitarium. The business is waiting for us. The Battle Creek Sanitarium is the health resort of the hour. It but remains for us to speak out and in the promotion department, with which I am connected, we are doing that very thing. We are beginning real, active work, a plan to

bring the people who are seeking help and us who are prepared to give help face to face. Dr. Kellogg is directing this great work so I speak with great interest and enthusiasm. As this institution grows, we, the employees, must grow. More executive and people of judgment will be needed as our work progresses. Loyal men and women will be picked for positions of responsibility and so we progress. This is what the Correspondence Department is trying to help to do for you and for the institution and for itself,-- loyal to help so we co-operate in building our own success. We can do it first of all by being loyal. Second, by creating an enthusiastic atmosphere. Third, by working efficiently. Fourth, by giving each patient the best possible service so if, in connection with the special work we are doing, we make every patient a living, walking advertisement for the Battle Creek Sanitarium, our patronage will exceed all bounds and we will have a waiting list soon. Our organization will grow, we will have better facilities, greater advantages, and finally we will claim success in a large way. Press bravely on, reach the goal, gain the prize and wear the crown. Faint not for to the steadfast soul come wealth and honor and renown. To thine own self be true and keep thy mind from sloth, thy heart from soil. Press on and thou shalt surely reach the heavenly harvest time. Toil on. (Applause)

Dr. Kellogg:- Mr. Piper is one of our most efficient boosters. He is a man that is always on hand to do what somebody else is not able to do or not willing to do. We owe the arrangements of the program here tonight and our program to Mr. Piper's work, although he has already enough to do. It is a great pleasure to have a few people about who never have got so much to do that they cannot do a little more and it is the busy people I find that are always ready to do a little more. I was at a large gathering not long ago and one of the speakers, a well known doctor said, in beginning his speech, a new word has appeared in the English language within the last few months. Probably you have all seen it, and I want to call attention to it because it has such great significance and that new word is "Race Betterment."

Now it is a proud thing for us to feel and know that this word began right here, began to go forth to the world right here in this institution. Our great mission to the world now is to proclaim the way of race betterment. We will have another one of these meetings soon and give you all a chance to talk.

END.

V-M

Night

S. Lecture
Nov. 1-15-

Roast beef, oysters, ham
+ eggs, sausage + tidbits of
various sorts cause of
9110, 10 observations of
Colitis - Dr. Lucien Champonier
tells of two ~~two~~ kinds of

Soldiers in Algeria
Appendicitis among French soldiers
rare among Arabs 10

Much meat in Amer. prisons
none in French " 10

or lunatic asylums
Patriciation of fresh beefsteak 11
Meat eaters Colon a potter's
field 11

Oysters - Hives 12
~~Meat not needed~~ 13

Change of diet for anemia - 14

Blood drinking 14, 15-

Sheep's injected 15-15

Question Box Lecture at the Sanitarium Bldg., Battle Creek, Michigan,

Monday, November 1, 1915,

at 8:00 P. M.

By
J. H. Kellogg, M. D.

The milk supply of this institution has been carefully guarded for more than twenty-five years. During this time not a drop of milk has been brought upon the Sanitarium tables that has not been sterilized or pasteurized unless it has been carefully inspected and produced under the so-called certified milk condition. The milk we use here could be properly called certified milk only for the reason that we have not any certified milk association in this town. It with all the conditions of certified milk and is better, in fact, than the requirements made for certified milk. I have just been down to Boston attending the Annual Convocation of the Medical College of Surgeons. The Fellows of this College meet once a year and take in new Fellows and discuss questions of practical interest to the profession made up of surgeons who have been admitted after a careful inspection of their qualifications. There are two qualifications to make a person eligible to the American College of Surgeons. First, the applicant must be a gentleman and second, he must be an expert in some branch of surgery and must be recognized as such by the surgeons of the country. One of the requirements of those who are admitted to membership in this body is that what is known as fee splitting shall be avoided. I get a letter from somebody, from some doctor every once in a while, who says, "I have a patient that I will bring up to the Sanitarium for operation if you will give me half the fee." I sometimes have letters from doctors saying, "What commission will you give me

on patients that I bring to the Sanitarium?" Only one answer is made to such a letter and that is that no commission is paid. We say we do not want you to send a patient here unless you think it is the best place in the world for the patient. If you do think that, it is your duty to send him here whether you get any commission or not. We never pay commissions, never hire doctors to recommend patients to come here. There is, however, more or less of this commercial spirit in the profession. There are surgeons who depend chiefly for their practice upon patients who are sent to them by doctors with whom they divide their fees. Doctors sometimes deliberately ^{split} ~~ask~~ the fee. More often, however, the doctor who sends the patient goes along to act in the capacity of an assistant and if he is of any benefit whatever to the patient, acting in the capacity of an assistant, it is standing at the table with his hands behind him, looking on, and very carefully abstaining from participating in any way in the operation. Physicians have no right to undertake operations unless they have had special training in the art of surgery. The ordinary medical education gives a man practically no training whatever for surgery. No man is fit to undertake surgery unless he has had a long and thoroughgoing training ~~in~~ entirely outside of the training in addition to the training which he gets in the ordinary medical course. It would not have been fair twenty-five years ago to have made this statement because at that time there was no other way for surgeons to get their training except by actual practice upon human beings who put themselves in their care. When I was a medical student I heard a professor of eye diseases, an eye surgeon, say that a very prominent eye surgeon told him that he spoiled a bushel of eyes in learning how to operate upon the eye. Now it is possible that that was inevitable forty years ago but at the present time no man has a right to spoil a lot of eyes before he learns how to operate upon the eye because he can learn how to operate upon the eyes by watching another surgeon. Abundant opportunities

now
are/afforded so that any man who is willing to take the time to prepare
to be an expert
himself/in eye surgery can get abundant opportunities to become an expert
without spoiling any eyes at all. He will first, for months, act as
assistant, watching carefully an expert at work and learning how to deal
with all the different difficulties and obstacles that arise. Then by and
by after he has acquired some of the technicalities by operating ^{upon} ~~an~~ dead
eyes of pigs or human beings then he might undertake to operate upon living
eyes under the eye of his master with him right at his elbow assisting and
guiding and warning him so that he need not spoil any eyes at all, and what
is true of eyes is also true of stomachs, colons and other internal organs of
the body. It would not do at all for me to tell you what I know and what
every surgeon knows of how much the public has had to suffer from
the bungling efforts of tyros and commercial doctors who are willing to
perform any sort of operation upon anybody who is willing to submit to
operation provided he had an adequate fee to pay. The purpose of the organization
of this college is to establish a higher standard of efficiency among surgeons
and a higher standard of honor among surgeons and to educate the public. That
is why I am talking to you now because it is put down as one of the duties of
the members of this college to assist in the education of the public as to
the difference between a real surgeon and a surgeon who is simply operating
upon people who are willing to become his victims and for the sake of the
financial gain which he may acquire. The public will, after while, learn
to know that there is a difference. At the present time I think there are
about 3500 members of the college. These are, most of them, known as
selected
charter members who have been ~~selected~~ because of the work that they have
already done. I looked over this large audience of about 2,000 who were
present at the convocation and I noticed that at least two-thirds of the
entire audience were made up of men who had gray hair or bald heads. I
should think at least half of the ^{whole} audience had shiny pates. Dr. Oliver

Wendell Holmes said, many years ago, that some people like their doctors musty like their cheese. The majority of men who are members of this profession are men of mature years and those who have done a sufficient amount of work to entitle them to recognition. These 3500 men have been selected out of 170,000 medical men in the United States so you can see a pretty high standard has been established and those who become members of the college hereafter will be very small in number because the whole profession has been combed over, so to speak, and every doctor who was interested in the college and in the promotion of these reforms has had an opportunity to present his name and to be inspected. Seven or eight thousand names have been sent in for membership but less than half the total number have been received as charter members. Those who get into the college hereafter will have to demonstrate by actual experience by a large number of major operations and by evidence of having had an adequate amount of special training through their fitness to become members of this college. Nobody can become a member of the college by merely passing an examination. The Royal College of Surgeons of England admits men on examination. A man who never did a surgical operation in his life can become a member of the Royal College of Surgeons. If he could pass an examination sufficiently exacting he can get into the college. I am certain that a good many men have become members of the Royal College of Surgeons of England who are positively and entirely incompetent to perform any very serious surgical operation because they were merely book surgeons, so to speak, but had not had an opportunity for practical experience. The American College of Surgeons is based upon a different foundation. A member must have ^{had} actual practical experience and years of experience and special thorough training and to have demonstrated by his life and his work not only to the public but to the profession that he is an expert in some important line of surgical work and also that he is a gentleman, a man of honor and integrity. The purpose of this college is to, as rapidly as possible, exterminate the commercial spirit which has been growing rapidly among

surgeons in the last quarter of a century, to get rid of it and to educate the public to such a degree that when a man wants a surgical operation performed for himself or a member of his family, he will not apply to the man who makes the greatest pretensions or who is most urgently solicitous for patronage, but will apply to a man who has actual scientific standing which is recognized by his medical brethren. I am very proud to be able to announce that two of my colleagues, Dr. Harris and Dr. Case, were at this convocation made Fellows of the College and I think the honor is very worthily bestowed upon them. One of the interesting incidents of the convocation was the ~~favoring~~ conferring of an honorary fellowship upon Dr. Grenfel of Labrador. Dr. Grenfel at present happens to be in Boston on his way to Battle Creek. He arrives here tonight and is going to spend several days here attending this medical missionary conference which begins tomorrow. We are to have here men who have spent many years of their lifetime among the primitive people, among heathens. We shall have 150 in attendance so far as I know and so far as I know this is the only medical missionary annual gathering held in the world. These gatherings are among the largest gatherings of medical missionary men and women known anywhere in the world. Dr. Grenfel will be here for several days and the doctor was invited to become a member of this college of surgeons and when he was brought up to the platform and the honorary fellowship was conferred upon him, the entire audience burst into a tremendous cheer and they kept cheering and cheering and cheering. It seemed as though they never would stop cheering. I never saw a more enthusiastic reception given to anybody. If Dr. Grenfel had been King of England, I am sure he would not have had any warmer reception than he did receive. I was exceedingly pleased to see this. Dr. Grenfel was welcomed there not simply because he is a great surgeon or the discoverer of any particular surgical operations or because he is known as a surgeon or in medical literature but because of his altruism

and marvelous beneficance of his life and the courageous way into which he went into this dark corner of Labrador and has transformed that entire country and made it really a home, a comfortable place to live in for the people that inhabit that rather dreary part of the earth. I am very proud that he will be here for several days and I am sure you will all be glad to listen to a talk from him and will find it highly inspiring. Some of you may find it in your hearts to ~~lend~~ ^{render} some assistance to the great work Dr. Grenfel is doing. He wrote me that he did not expect anybody to give him a dollar here and was not coming for that purpose but to attend this conference but some of you have money you want to put out at interest where it will bring a splendid return, you want to make the biggest kind of investment, a few hundred or

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v-m

There is a popular idea that it is very harmful to take ~~an~~ milk and acids together because the acids cause the milk to curdle. These people probably are not aware of the fact that the first thing that happens to milk in the stomach is that it curdles. A wise old nurse when the baby vomits and she notices the milk is curdled, she takes that as a good sign, because it is an indication that the baby has a healthy stomach. The natural beginning of the process of digestion is the curdling of milk by the stomach, so when it is curdled by the addition of fruit juice, no possible harm or injury can come from that fat. For many years I made a practice of adding a little lemon juice to milk before giving it to the patients. Patients who ~~are~~ ^{are} likely to form too hard and large curds in the stomach are actually benefited by adding a little fruit juice or something else to curdle the milk before it is taken. Such persons usually get along better with butter-milk.

v-p

Q--Do you know whether many of the gluten flours that are made and advertised are up to the standard?

A--The gluten flours are better than they used to be. Gluten flours that were sold at high prices years ago, on examination were shown to be no ~~more~~ better than ordinary whole wheat flour. It is impossible to make flour richer in gluten than Nature makes it in the wheat by any process of milling. The only way in which we can get a gluten flour richer in gluten than Nature makes it, is by submitting the flour to a process of washing, and washing out the starch, then drying and grinding up the gluten and adding it to the flour in such proportions as will give the proportion of gluten desired. This is done in a certain fashion by certain starch factories at the present time. Gluten is one of the residues of a starch factory. Formerly this gluten was sold to farmers to feed to their hogs. It goes through a certain process of souring and fermentation in the process of sprouting by the usual process of starch making and on this account is somewhat deteriorated. So these gluten flours have a certain unpleasant flavor which most people find rather objectionable. I do not say that these flours are poisonous or have been shown to be actually harmful, but they have a rather unpleasant flavor and are not to be altogether recommended. I think that standardized gluten flours, that is, flours with known quantities of gluten, were first made here at this institution about twenty-seven years ago. I devised a plan for making flour of this sort at that time for the use of our patients and it has been made here ever since. If you will open one of the early volumes of Osler's "Practice of Medicine" on a certain page you will find a statement to the effect that the best gluten flour is made at the Battle Creek Sanitarium. The gluten supplied here has been for more than twenty years supplied to many of the physicians of the East. The best gluten preparations, however, are not gluten flours but the gluten biscuit. Pure gluten biscuit contains not more than half of one per cent of starch.

Q--Will an operation for chronic appendicitis aid in the cure of chronic intestinal inactivity?

A--Yes, but this method will only aid in the cure. It will not complete

the cure. It is probable that there is something else the matter besides this diseased appendix. An X-ray examination in such a case will almost certainly show that there are adhesions of the pelvic colon. The pelvic loop falls and it acts as a reservoir and rises gradually as it fills and when it gets fully risen to the top, it becomes ~~maxxaxax~~ active and ejects its contents. It is the discharging part of the colon. A person who suffers much from intestinal inactivity has in many cases suffered from colitis, congestion and naturally in consequence, inactivity of the bowels. When a person suffers from colitis, this pelvic loop becomes adherent so that it never rises again, then from that time forward, a chemical obstacle exists which cannot always be overcome. In probably nineteen cases out of twenty, ~~the~~ this ~~obstacle~~ obstacle may be overcome by taking a sufficient amount of bulky food material. That is why we feed some of you so much bran, Laxa and Colax and it is necessary in bad cases to add lubricant to the bulky material used, by which the bulk must be large enough to stretch bowel sufficiently so that it can slip under the construction. By lubrication the bulky mass may be more easily passed through and in that way the difficulty may be overcome. Many persons who have been subjected to surgical operations ~~and~~ ^{might have} been made entirely comfortable by this combination of bulk and lubrication. I think that we have made that discovery here and I ~~think~~ ^{feel} it to be really one of the greatest discoveries ever made here. By combining bulk and lubrication, we may overcome the most inveterate and obstinate cases of constipation. Sometimes an operation is necessary to release the adhesions of the pelvic colon. Appendicitis is an extension of disease from the colon to the appendix. The appendix is not a vicious, malicious, depraved organ that goes off on a ravage and gets ugly and makes trouble but it is simply the victim of bad association. There is simply a little pouch attached to the lower end of the colon on the right side. The appendix never becomes diseased till after the colon becomes diseased. The trouble begins on the left side of the colon with constipation, then colitis, infection and obstruction. The whole colon becomes infected and then the infection gradually works its way down into the appendix, but the trouble in the appendix is more likely to ~~be~~ result in ~~serious~~ ^{immediate} serious consequences than any other part of the colon, because

the appendix is a little narrow pouch and has a narrow mouth and when it becomes inflamed, the mouth becomes closed, and when the mouth gets closed, then trouble begins. So long as the mouth is open so that the inflammatory products can be discharged into the colon, there is a little soreness and mischief but no serious symptoms; but when the mouth closes and the inflammatory process goes on, matters accumulate in the colon and the colon becomes filled with pus^{and} unless something is done very soon there will be serious consequences. So when the appendix is removed, the surgeon will nearly always find something else the matter. One of the things is an incompetent ileocecal valve. The ileocecal valve is a point of junction between the small intestine and the colon just above the appendix. This may be one reason why many people suffer from appendicitis, because the ~~appendix~~ intestine discharges its contents right upon the very mouth of the appendix. The function of the appendix is to secrete a thick lubricating mucus which is poured out continually into the botton of the cecum, so that when the small intestine is continually discharging material upon the bottom of the cecum, there will be a lubricating mucus there to protect the mucous membrane and this will surround the material and pass along with it and act as a lubricant all the way through the colon. Suppose you mix with your diet, horseradish, mustard, pepper, pepper sauce, ginger, pepicum, red peppers and spiced pickles, pickled walnuts and all sorts of things that sting and burn and blister down upon the mouth of ~~the~~ appendix, it is no wonder it gets inflamed and irritated. So long as we are going on with this abuse, we may expect the appendix is going to get worse and worse and worse and it will continue to get worse so long as it is abused or constipation exists. Adheisions must be broken up and colitis overcome, because acute appendicitis is really nothing more or less than the extension of colitis into the appendix.

Q--Can colitis be cured to a satisfactory degree?

A--Suppose we have a man here who is in the habit of using tobacco and we cure him of his tobacco habit. Can we guarantee that he is going to stay cured? Colitis is the same sort of thing. Nobody ever has colitis if he does not eat it. You get your colitis at the dinner table. What is the origin of colitis? Beefsteak, oysters, ham and eggs, sausage and a whole lot of things
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that you think are very nice, tid-bits of various sorts. Now you say that is one of Dr. Kellogg's fads. I did not originate that idea at all. I am borrowing this remark from a most eminent french surgeon, Dr. Lucas Champoniere, who was a surgeon-general of the French army and when he was in Algiers inspecting the army, he found two kinds of soldiers there, the arabs and the French soldiers. He noticed a large number of cases of appendicitis, the most common legitimate malady among the soldiers, but it was the rarest thing imaginable among the Arab soldiers, to find one suffering from appendicitis. He fought for the reason for this fact. He made up his mind that the reason was the difference in diet. The French soldiers ate a great deal of fresh meats and canned meats while the Arab soldiers rarely ever tasted meat but ate dates, and wheat and fresh vegetables and they only tasted a little meat just as the ancients did on very special occasions ~~and~~, on a great feast day and generally in connection with some religious ceremony. He went home shortly afterwards and extended his inquiry. He found to his surprise that appendicitis was almost entirely unknown in prisons. In American prisons the prisoners are fed a great deal of pork and meats of various sorts, but in the French prisons no prisoner gets a taste of meat. He has meat soups but he never gets meat. There is no danger of getting appendicitis from eating meat soups. The danger comes from eating the meat itself because of the bacteria which the meat carried. Upon further investigation he found there was no appendicitis in the insane asylum. That agreed with the fact that the lunatics in France are never given any meat. He found also that appendicitis was unknown in certain Catholic institutions, the inmates of which took vows never to eat meat such as the Sisters of St. Joseph and the Monks and other orders. So Dr. Lucas Champoniere, who was not himself a vegetarian published as a ~~serious report to his~~ ^{serious report to his} government that the use of flesh food was the cause of appendicitis. Dr. Combe of Lausanne, a very eminent European physician, states the same thing in his excellent work on autointoxication, that colitis and appendicitis are due to meat eating and that these diseases are unknown among the people who do not make use of meats. When we examine the appendix we find the real cause of the disease is certain germs which cause the appendix to become infected, and develop an abcess just as a boil might form on the back

of the neck or some other part of the body. The germs which produce the infection belong to the class known as "streptococcus" and are a pus forming germ. If you will get the very freshest piece of beefsteak you can find in the market, I will demonstrate to you that that beefsteak is fairly swarming with streptococci. There are millions and millions of these germs which are capable of producing abscesses and appendicitis and colitis ~~and~~ right there in the beefsteak. A single mouthful contains more than twenty billions of these bacteria, an ordinary morsel of meat and you cannot find a piece of beefsteak on the market that is not swarming with these germs. The wonder is that anybody ~~that~~ ^{who} ever ate beefsteak did not die with appendicitis. The only thing that saved your life is the fact that the stomach makes gastric juice which is able to digest streptococci as well as beefsteak. The gastric juice does destroy these germs so long as you have plenty of ^{active} gastric juice. By and by you find whenever you eat beefsteak, stuffed turkey, roast goose or something of that kind, you always have a bilious attack and do not know what the reason is. The reason is the stomach has gone out of the business of making gastric juice and that horrible beef you swallow, piece meal, rots in your stomach the same as a corpse does in a coffin, it rots, putrefies and your colon become a regular golgotha, a potters' field if you please, so it is no wonder you get colitis and appendicitis. ^{Some} ~~Two~~ years ago I ~~wrote~~ wrote to the men in charge of three of the ~~monasteries~~ monasteries where they do not eat any meat and I said, "Won't you tell me what the people of your institution die of? Do they ever have appendicitis?" I got back a reply pretty soon which said, "Our people all die of one disease, 'old age'. They never have appendicitis. We don 't know anything about it here."

Q--"What is the cause of hives?"

A--Hives is due to a cause similar to that which produces hay fever. Hay fever is a phenomenon of anaphylaxis. Dr. Vaughan of the University of Michigan a few years ago made a very interesting experiment. He injected into a guinea pig, a couple of ounces of the white of egg. It did not do the guinea pig a bit of harm. Three weeks later Dr. Vaughan injected into that same guinea pig twenty

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drops of white of egg. It went immediately into ~~xxxxxx~~ convulsions and in a few minutes dead. Why was it able to take two ounces of white of egg at one dose and three weeks later could not stand twenty drops? That is anaphylaxis. The guinea had become sensitized to the white of egg. It had never encountered the white of egg before the first injection and the body absorbed it very slowly and
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The reason is that he has sometime taken in a large quantity of this rag weed pollen, so now if he takes very little of the pollen that is enough to produce these profound asthmatic effects, because he has been sensitized to it. Most persons who suffer from hay fever have been sensitized to the pollen of several plants. Some people are sensitized to the pollen of roses so they have what is known as rose cold, but the majority of people are sensitized by the pollen of plants which mature in the fall, in August, so the hay fever comes on along about that time. In hives the poison is produced by the flowers which grow inside of the body by the intestinal flora. The bacteria of the intestine produce certain poisons which are capable of producing this particular effect. Sometimes perhaps a person has eaten shell fish. A person may have eaten some bad oysters,--oysters are always bad,--these certain oysters happened to be infected with certain germs which produce a poison which produces this nervous phenomenon which is called "hives". Hives may be produced by metal rash or sometimes simply by a bee sting. If one has once been infected by bad oysters or some sort of shell fish, the bacteria obtain a foothold and live there and now and then if the bowels are inactive or the growth and development of germs is encouraged, they will produce poisons in such quantity as to produce a recurrence of the hives. Hives may be produced by the use of certain fruits. Some persons suffer from hives whenever they eat eggs because they have been sensitized to the albumin of the egg. Some persons are sensitized even to strawberries. I knew once a baby that died by eating a pint of strawberries. It died within an hour or two afterwards. It was not from indigestion, but evidently at some time before it had eaten a quantity of strawberries and happened to be sensitized to that particular substance. So the poor baby died. Nothing would give it any relief.

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Q--Is rye bread all right for some cases suffering from diabetes?

A --In small quantities, but rye bread contains carbohydrates and the amount of carbohydrates must be small. The majority of persons suffering from diabetes must be content to take a very small amount of carbohydrates. A maximum of five or six hundred calories and in some cases the minimum amount must not be taken or not more than two or three hundred calories.

Q--What is to be done when when the spleen is enlarged and the liver in perfect condition?

A--It has been found in recent times that enlarged spleens can be gotten rid of without much risk. In anemia, for instance, the blood is being destroyed by a spleen which is abnormally large and eats up the blood cells. In such cases the spleen must be removed. This operation is performed frequently nowadays with most beneficial results.

Q--I have heard that appendicitis has become more prevalent since the typewriter came into use, caused by continuous pounding on the keys of the machine in the sitting position, also that continued practice on the piano is conducive to appendicitis.

A--If this is true it is the sedentary life and not the exercise of the arms, but a sedentary life that leads to inactivity of the bowels and colitis which are very common in persons of sedentary habits.

Q--Is molasses or sorghum made from ^{cane} clean molasses healthful?

A--Just as healthful as ordinary cane sugar. The only difference is it has a little more dirt in it. Fortunately the dirt is not of a very harmful kind.

Q--What foods do you recommend for a person deficient in red blood cells?

A--Just as good food as you can digest and relish. Potatoes make good blood and are excellent blood building food. There is no class of people that have better blood than the irish who are brought up on buttermilk and potatoes. Some people have the idea they must eat meat to build up the blood. ~~This~~ ^{It} is the greatest mistake in the world to suppose that meat is necessary for blood building

er has a special quality for the blood. The very opposite is true. In the majority of cases of anemia it is found that the blood cells are formed in sufficient number but they are destroyed by poisons which are produced in the intestine, and when absorbed into the blood actually dissolve the blood cells, so the important thing is to get rid of these poisons found in the intestine, and these poisons are produced by germs which feed upon protein. Some years ago I was in Vienna with one of my colleagues, Dr. Mortensen, attending some surgical clinics and while I was attending the clinics of Prof. Ewald (?) and other professors, Dr. Mortensen attending others. Dr. Mortensen said to me at dinner one day, "I was very much interested in what the Professor said in the treatment of anemia. He brought in a young lady suffering from pernicious anemia and he said, 'These cases used to die. We didn't know what to do for them, but we have found out what will cure it, how to cure the disease. The thing to do is to put the patient on a vegetarian diet. No medicine will do her any good, but simply put her on a vegetarian diet and she will get well. I don't know why, but I know she will. ~~We~~ ^{We} must not give her any meat.'" This was ten or eleven years ago and since that time the profession have been finding out all over the world that these patients can be cured better without a flesh diet than with. Forty years ago Dr. Janeway (?) with whom I was a private student introduced me to a man one day who was every day going to a slaughter house to drink a glassful of blood. He was taking it on the doctor's recommendation. It was the fashion at that time to send patients who were anemic to the slaughter house to drink warm blood. I said to him, "Do you like such a beverage as that?" He said, "At first it went pretty hard, but now I like it as well as beer." "Has it done you any good?" "Oh no," he said, "It hasn't done me any good at all". And Dr. Janeway acknowledged before the class of students that although this man had been drinking blood for several months his blood had gotten steadily worse all the time, so that horrible practice was given up long ago. Certainly you would think that ~~xxxx~~ if animal food of any sort ~~xxxxxx~~ whatever would be beneficial, it would be the blood itself in such cases. There was also the theory that such ~~xxxxxx~~ patients might

be benefited by injecting the blood with the blood of an ox or a sheep and this ~~was~~ ~~is~~ done in the large number of cases of anemia, but it was found to be without benefit because the blood of these animals is very quickly destroyed after it is introduced. If a quart of blood from an ox was injected into human veins, after a few hours it would all be gone. It would be actually eaten up, dissolved by the blood cells. It was recognized that the blood of a foreign body could not be tolerated. A friend sent me some years ago a newspaper account of a case in which this treatment had been applied to a man in Iowa. I don't believe the story but I will tell it to you. The man had suffered from fever and had become reduced down very very low indeed. As a last resort a sheep was brought in and the arteries of the sheep were connected to the man's veins and the blood of the sheep was made to pass into the veins of the man and a considerable quantity of blood was passed in this way. The man soon showed evidences of consciousness, after a while he opened his eyes and finally he uttered a sound and the sound which he uttered was not a human voice speaking but it was the sound of a sheep. As the injection was repeated, the man revived until he was able to get up and to the great distress of everybody he put down his head and went bunting against everything in the room and exhibited many other sheepish qualities. In fact it was noticed that he had a sheepish look. I don't offer this as an objection to the eating of mutton but this method was as ridiculous as that story. Nature has not so ordered ~~it~~ that the flesh of one animal can be ~~joined~~ joined to the flesh of another animal. Each animal has its own kind of flesh, its own kind of blood, its own kind of tissues and foreign, if you please, to the flesh of every other species of animal. There is only one animal in the world with human blood and tissues will amalgamate and that is our nearest kin, the chimpanzee and orangoutang. The blood of one of these apes cannot be distinguished from human blood under the microscope. They are really our kin. A very young chimpanzee looks so like a human infant it is almost impossible to distinguish the difference. The skull of the young chimpanzee cannot be distinguished from the skull of a human infant except by an expert in the early stages of development.

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Q--- What is the cause of colon bacillus in the kidneys?

A---It may get into the kidneys either by passing through the wall of the bowels and working their way into the kidney or may find their way up from the bladder into the kidney. They may be taken into the ~~blood~~ blood in the intestine and circulated round through the blood and get into the kidney in this way. When the examination of urine shows the presence of colon bacilli, first of all, an examination of the blood should be made to ascertain whether or not colon bacilli is present in the blood, and at the same time a thorough examination should be made of the colon itself to ascertain ~~whether~~ ^{whether} there are ulcers in the colon because this may be the source of the colon bacilli. I remember very well a lady came here a couple of years ago who had been in the hands of physicians on the Pacific Coast. She came here to see if we could suppress the colon bacilli. Examination showed that she had a large ulcer up in the bowel and it was evident that the colon bacilli were being taken in through this raw surface. This ulcer was healed up and very shortly the colon bacilli disappeared.

Q--Can bunions be successfully removed by operation?

A--Yes. Even when the toe has been very badly deformed. A little of the over-developed bone may be removed and the toe ~~restored~~ ^{restored} to a perfectly normal position. This operation is frequently done by our Dr. Harris who is very skillful in ~~that~~ ^{that} particular kind of operation.

Q--Is it theory that the brain cells are smaller at night than in the morning?

A--I suppose the question I have in mind ~~that~~ the fact that brain cells and nerve cells of all kinds are smaller when fatigued and tired. This is true. Experiments made upon lower animals so small that they ~~could not~~ had to be looked at through a microscope and their nerve cells examined. Pigeons too were examined under conditions of rest and fatigue and the brain cells were found to be different in appearance, to be smaller and paler ~~than~~ ⁱⁿ those that were fatigued and to have less stored up energy ~~granules~~ granule there than were found present in a rested cell, so it is actual facts not theory.

Q--How can I make the most of my stay at the Battle Creek Sanitarium?

A--That is a practical question that every one of you ought to be interested in. Everyone of you, I suppose, has made a sacrifice of time, money and perhaps of home comforts and privileges and you come here and devote yourself to the work of getting well in the hope of being relieved of something. Work your doctor hard. Get out of your doctor everything you can. There was probably some particular thing that brought you here. Be absolutely sure that you get rid of that thing before you go home. If you came here with headache, backache, heartache, side ache, be certain to leave it behind. Be sure to get rid of that burden before you go home. If you have a rheumatic joint or a painful nerve, be certain to get rid of it. It can be gotten rid of. If your case is incurable, your doctor will tell you so, but if your doctor does not tell you your case is incurable, be assured you are getting rid of the thing that you came here to get rid of. If you are not getting rid of it, I want to see you. I will get at it and try to see if there is anything more that can be done to make your stay here a success. There is nothing that terrifies me so much as the thought of a man or a woman leaving home and children and coming here a thousand miles and paying out perhaps hundreds of dollars and then going a long distance home feeling that they have not got what they came for and disappointed. You know that picture keeps me awake nights. I simply cannot stand it to think of that thing. I would do anything, my friends, I would sacrifice everything I have got on earth to make sure that that thing did not happen to anybody. This institution is here to help people. We haven't any fad here to exploit. There is nobody seeking to be ~~enriched~~ enriched by this work here. They cannot be. Nobody gets anything but a moderate salary and the people that are working here are working here for the pleasure of helping people to find the way ~~to~~ life, to health and to learn how to live. This morning somebody slapped me on the shoulder ~~on~~ on the train and I saw the jolly face of W. J. Burns, the country's foremost detective. He said, "How are you Dr. Kellogg? I am delighted to see you looking so well." I said, "I am glad to see you looking well." "Yes, Doctor," he said, "the few days I spent at Battle Creek some years ago did me a world of good. You told me to stop eating beefsteak and I am just

sure beefsteaks did me a lot of harm. I quite it. You remember I sent my boy up there and you taught him how to live and he has been a new man ever since. He lives right up to the letter. My brother who was up there ~~■~~ was almost reerrected." The brother of Mr. Burns had had a stroke of apolepsy and his blood pressure ~~was~~ gone way up. He tells me his brother is apparently just as well as ever in his life and he lives right up to the letter of what we told him to do. He said, "Doctor, I am going to send my wife and daughter up there and I want you to do for them what you did for ~~me~~ my ~~xxxxxxx~~ boy for you certainly did him a world of good and I am coming myself after a while." I felt well paid for sitting down with Mr. Burns and telling him the reason why. We have a little book here called "The Reason Why" which explains the regimen which we follow here. Another little book "The Simple Life in a Nutshell" if you haven't already ready it, please read it. Mr. Patterson of the National Cash Register Company has just sent for a thousand copies of that little book, "The Simple Life in a Nutshell" to put into the hands of his men, and a big life insurance company in the state of Texas has sent for one thousand copies to put into the hands of their agents. The insurance people are beginning to see that it pays to do something to keep their policy holders alive. Not long ago I received a letter from ^{the} ~~■~~ medical director of one of the largest life insurance companies in the world and he said, "Doctor, here is a letter I have prepared to send out to a lot of policy holders showing a little albumin. I want you to read it over and if there is anything you can add to it, I want you to add it." The letter was based upon the "Simple Life in a Nutshell". There was not a thing in it that I would not recommend. I added two or three little items and that letter was sent out to ten or fifteen thousand people and they were warned what they ought to do. Why? This medical director was interested in keeping those people alive because it was to the interest of their business to keep their policy holders ~~skx~~ alive ~~sk~~ as ~~k~~ long as possible. I feel that is a pretty good confirmation of the correctness of the principles we are trying to persuade people to accept here,--real business interest, that is, it pays to apply these principles in their business through the increase of the efficiency and

the saving in health and life. Get your doctor to tell you all about your case. Tell your doctor you want to know the reason why for every prescription. If you put your mind to work it will help about it. The doctor says, "I have given you a fomentation to day to take away the pain you have been complaining about." Use a little faith along with the fomentation and that helps a whole lot. If it doesn't help tell the doctor to give you some stronger medicine and he will give you some diathermy or something else. We have got something here that will cure that pain, just be sure of that. You may stay here a year and have something different every single day and you would not get to the end of our rope. We have always something more, some new combination, something further that can be done, so don't get discouraged. Be sure you are living up to all the prescriptions the doctor gives you. Keep track of all the examinations you have to see that you are making progress. If you are doing the right thing, in a very few days you will begin to find yourself some better. We do not have to spend several weeks exploring around to find out what is the matter with a man and making a lot of experiments before hitting the nail on the head. The X-ray and others measures of examination have helped us to get right at the root of the matter early. Within a few days after the person arrives, we can find out just what is the matter with the man and know just what ought to be done for him and can begin hammering away or nursing at once and the best results are obtained when we hit it a good hard whack every time we do anything at all. We go after it with good hard blows and certainly we do more for people in three weeks now than we were able to do in three months twenty years ago. If we have the thorough co-operation of the patient who does everything the doctor asks him to do, he may be certain ~~xx~~ he is going to get results. When we find a case that cannot be helped, we frankly tell him so. I take it for granted everyone of you ~~xxxxxxxxxxxxxxxx~~ is curable and if you are not getting well, may be you are not doing the right thing. Go right to your doctor and say to him, "Get after my case good and hard for I want to get out of this thing all I possibly can." We want you to go home quick because there is somebody at home watching to see what is going to happen to you, to hear your report when you go home. I want you to go home with rosy cheeks, bright eyes, an

elastic step and the evidence of vigor and vitality standing out in your face and your friends will be asking, "What has happened to you? Where have you been?" and pretty soon we will have half a dozen to fill your place, don't you see. So it is to our interest as well as yours to get you well quick and back to your duties as soon as possible. If you find after following these few suggestions that you are not getting along, then I will be very glad to have you hunt me up at Room 100 and you don't have to pay anything at all to get in and have a little talk about your case. I am glad to see you. I assure you we are all glad to work and pull together ~~as~~ in good-natured team work and work together for that is what we do here in this institution to help everybody who comes to the full extent of our ability.

The end.

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

Monday, November 15, 1915 at 8:00 P. M. by

J. H. Kellogg, M. D.

The chronic valetudinarian seems to be just as inquisitive as ever. I think there is no end to the interest we all feel about our bodies and the proper care of our bodies. Perhaps we think too much about it. I sometimes think that Doctors really cultivate disease. The Christian Scientist says, "Think health and health will find you as certain as the day. Disease will lag behind you and leave you on the way." There is really something in that though I am not a Christian Scientist. There is an old adage "As a man thinketh, so is he." The old Germans had an adage "As a man eateth, so is he." The mathematicians tell us that two things equal to the same thing are equal to each other so putting these two things together we have "As a man eateth, so he thinketh," so you see our very thoughts are borne of what we eat. If we think health we may have health. I think there isn't any question about that. Dr. John Hunter one day thought about his great toe and he said to himself "Now I am going to make my great toe have the gout" so he kept thinking gout, gout, gout, gout, hour after hour and after a time sure enough that big toe began to swell and froth and he had a regular attack of the gout. Some cruel doctors made an experiment upon a man. I suppose it was in the interest of science. A man was condemned to die and was turned over to the doctors. They used to do that sometimes in the old days. This man was blindfolded, brought into a room and pretty soon the doctors came in and began to talk about executing him, about cutting an artery in his wrist and bleeding him to death. The doctors

spoke about the lancet, talked about the different instruments and by and by made a little scratch on his wrist, then let some hot water drop, drop by drop, and began to remark about it and began feeling his pulse and noting that it was getting weaker and weaker and weaker and weaker and the result was that this poor man without losing a drop of blood actually died of fright. He thought he was bled to death. More than once people have died of fright. It is said that this has occurred in a great many instances in this present horrible war in Europe, that the explosion of shells and the terrible cannonading and the onslaught of soldiers has frightened a number of people to death. A good many cases are on record in which people died of overjoy. I think almost anybody can make ~~him~~ himself sick if he really sets himself to work to cultivate disease. A story is told of some doctors who made a conspiracy with a man's wife to make an experiment upon him. The wife wanted a little sport and when her husband arose in the morning she said, "Why, Jim, I am sorry to see you looking so bad. You look pale, what is the matter?" "Jim said, "Why, I am all right." At the breakfast table she said, "Jim, what is the matter? You don't seem to have any appetite today." He had really eaten as much as usual. He said, "Why, I feel all right." When he went away his wife looked very anxious and said, "Jim, I shall be very anxious about you all day for you don't look right." He went off down the street, met a doctor and the doctor said, "Why, Mr. Smith, what is the matter with you? Why, you are not well. You ought to go back home and go to bed. You are not going to work, are you? Let me look at your tongue. Why, you are coming down with a fever, Mr. Smith. Let me feel your pulse. Why, the fever has got you sure as the world. You better not go to work." "O, I am all right. I am going to work. I don't believe there is anything the matter with me" but he began to feel weak in his knees. At his office the first man he met said, "Mr. Smith, you are not going to work, are you?"

You better go home. You are not fit for work. You really look sick. You ought to send for a doctor right away." In the course of an hour Mr. Smith began to feel sick. He went home and went to bed and was actually sick and they really began to get scared about him because he got so sick thinking about it but the mind can work the other way just as well. Some years ago when the cholera was threatening in St. Louis, a man in order to make certain that he was ready for any emergency provided a bottle of cholera medicine and put it on a table just beside the bed. One night he woke up in the middle of the night after he had been eating boiled lobster or something of that sort and he had an awful pain in his stomach and he shouted out, "Mary, the cholera has got me. Hand me the cholera medicine, quick." He reached out and grabbed it and took a big dose of it and rubbed some on the outside and began to feel a little better and he took another dose and rubbed some more on the outside and then he went off to sleep and you can imagine how his wife and he both felt the next morning when they found that he had gotten into an ink bottle instead of the cholera medicine but it put him to sleep just the same. There was another man in New York that was somewhat subject to asthma and in a hotel where they were shut up very close one night they went to bed with the windows shut. He woke up about two or three o'clock in the morning and felt himself smothering. He shouted to his friend to open the window quick. His friend got up and ^{hunted around and} found a glass window and tugged away at it for sometime but didn't get it open. His friend said, "Smash out a glass. I must have fresh air quick so he broke out a glass and he felt better right away!" He felt some considerable better but finally he said, "Break out another glass" so his friend broke out another window light and then he felt much relieved and went off to sleep all right. The next morning they discovered that they had broken into a bookcase. It is important to have the mind thoroughly in harmony with the machinery of the body that is at work trying to heal us.

These great vital organs, the liver and the stomach, which are great laboratories of the body are wonderfully accommodating, wonderfully self-sacrificing. The stomach is the most patient old beast. It just allows us to put on load after load of horrible rubbish. Yet it rolls up its sleeves and goes to work on that old greasy sausage or a dose of oysters or any old thing we put in there. The stomach just does its best and generally succeeds, you know. By and by all this effort to help the body and this self-sacrificing effort is often collapsed. If a man eats a big meal, a Christmas dinner, we will say, or perhaps a Thanksgiving turkey or roast goose and cranberry sauce, the stomach simply makes a gastric juice that is good enough to digest it. If the stomach has a small dinner it makes little gastric juice. If it has a big dinner, it makes a whole lot of gastric juice. If it has a dinner that is hard to digest, it makes a gastric juice that will digest that hard-to-digest dinner, strong gastric juice. If it has a dinner that is easy to digest, it makes a small amount of feeble gastric juice. It adapts itself to the needs of the body. If, next day, the man eats a bigger dinner, the stomach makes more gastric juice and so it goes on making gastric juice stronger and stronger until by and by it makes gastric juice so strong that the stomach digests itself, gets a hole in it and you have gastric ulcer. Nobody ever gets gastric ulcer that ~~doesn't~~ takes care of his stomach so when a man comes along with gastric ulcer, that in itself is a confession that the man has abused his stomach. The sturdy backwoodsmen that workin the lumber ~~and~~ camps and in the mines and way up in Alaska are the people who have gastric ulcer. A doctor reported the other day from ~~xxxxxxxxxx~~ a town in Alaska seven cases of gastric ulcer within a few weeks' time. These were the hardest, sturdiest sort of men. They had gone out in the mines and had been living on salt pork and elk meat and eating three or four times as much as anybody in this room could undertake to swallow. Their stomachs digested it all

right but all of the sudden they began to have such awful pain that they couldn't eat anything. Then they had to see the doctor and he found they had gastric ulcer. In several cases the patients had terrible hemorrhages and vomited large quantities of blood because the gastric juice has eaten a hole right into the artery and let the blood spurt out. Our bodies are always ready to do their work if we give them anything like a fair chance. People who find fault with their livers say, "O, this lazy liver of mine." They don't know how hard that liver is working to perform its necessary task that should not be required of it but we do not appreciate the fact that man is God's masterpiece, that the human body is the most wonderful and beautiful thing God ever created. When we think of these bodies, because we ought to think something of their care, we ought to appreciate the gift of this work of art that is ours to ^{and} care for them in a nice, gentle, ~~and~~ delicate and intelligent way. Even the ^{average} savage has more respect for man than the ~~ordinary~~ civilized man. I was down some years ago among the primitive Barbarians of Arizona and New Mexico. I heard down there the tribes were still in the primitive state, the men wearing little bits of garments about as big as a pocket handkerchief and the women little bark aprons and their bodies otherwise entirely uncovered and those men and women had the finest and most beautiful bodies you ever saw. Their measurements ~~were~~ exactly coincided with the measurements of the Venus of Milo, that famous Grecian work of art. The men were beauties as they stood up there with their well-formed limbs, stalwart bodies and great chests. They were really magnificent creatures. I found some good Catholic sisters there who were trying to hold a school. They had gathered in quite a number of children. They told me they had great difficulty in getting the children to come to school. I said, "What is the reason?" They said, "Their parents won't let them come. Their parents want their children to have an education but they won't let them come to school because the Indians say that it makes them sick to come to school."

Those Indians didn't want their children to go to school because it made them sick and they said the children do get sick when they come to school. I said, "How do they get sick?" The Sisters said, "Well, the children get catarrh and water brash." I said, "What do you think is the reason for that?" She said, "I don't know as I know, but the old Indians say they get catarrh because they wear clothes and get water brash because they eat the Government beef." I said, "What do they eat at home?" "When they are down in camp they live on tortillas, roast pumpkins and things of that sort but when they come here they eat Government beef and get water brash." The water brash is due to the irritation produced by the meat diet and the catarrh is due to the fact that they were clothed in that hot country in shoes and woolen clothes and were dressed up just as though they were up here in a cold country with snow on the ground but the hot sun was pouring down and the temperature was sometimes 100° at mid-day so they perspired in the school room but as soon as they got ~~xxxxxxx~~ out of sight they pulled their clothes all off or sometimes jumped into the river with their clothes on to seek relief from the smothering of these unnatural coverings. Those are unnatural just as much as the smoking of tobacco or the baking of potatoes or the cooking of our foodstuffs. These are artificial habits. The habit of wearing clothes is the dirtiest habit we have. I do not mean to say that we can get along without clothes, of course, but, notwithstanding, it is an awfully dirty habit. I have known people who wear clothes in such a way as to accumulate all the filth coming out of their skins continually. An ignorant woman in Chicago sent her boy to school with his clothes so filthy that the teacher thought it was necessary to give him a bath because he had a very unpleasant boquet. The teacher had to rip off his clothes. He was actually sewed up completely. The teacher got his clothes off, gave him a bath and then sent him home. His mother came

down to see the teacher and was in a perfect rage. She said, "Why, I had gotten that boy all sewed up for the winter and you have taken his clothes off and now I have got to sew him all up again" but the teacher said he had a very unpleasant odor about him. "Well," she said, "of course, Johnny ain't no rose. Learn him, don't smell him." Some of these people actually carry about ~~skin~~ with them unpleasant body odors which means that they have very active skins which are carrying out filth that ought to be gotten out of the body in some other way and ought to be carried off through the bowels and kidneys instead of being carried off through the skin. The reason people have a bad breath is that there is decomposition, putrefaction going on. If you went by a farm house and smelled an awful odor; looking around you would very likely find a dead cow in the fence corner somewhere. When you meet a man with an awfully bad breath, it is a dead cow, or a dead calf or a dead sheep or something ~~stang~~ lying around the corner in the colon. This is no laughing matter. It is not a pleasant thing at all and it is not imaginary or theoretical but ~~it~~ is a real thing. This bad breath comes from something that is rotting. When a man goes around with a bad breath, it is simply the bouquet of the man. It is the man himself that smells bad and the breath is simply a specimen or sample of the man. That horrible odor from the man's breath comes right out of the man's blood. It is brought up here to the lungs in the blood and it simply, a little of it, oozes out but most of it stays in. Down there in the colon is a great rotten mass of material being sucked into the blood all the time and carried up into the lungs and some of it goes out into the skin and the brain is dazed with that horrible poison and it is no wonder the brain is muddled and irritated. It is no wonder a man finds it hard to concentrate his mind, to make up his mind about a proposition, to decide what he ought to do, to control himself. It is no wonder he gets into a fashion and says indiscreet things.

The wonder is the man can live at all. It is no wonder he cannot sleep at night. These poisons are irritating his brain and nerves all the time. The thing we need to learn most of all in this world is how to live biologically, physiologically. We do not stop to think that there is a rule of life for us, that there is a great law of life that absolutely dominates us and if we undertake to ignore it, we simply go to the wall, that is all. That is what you see going on all about us. That is why you see your neighbors dropping off prematurely, see a man failing in business because his health has failed. That is why you see a man suddenly drop on the way to church or to the train or some other place, suddenly drops unexpectedly. There was Paul Morton, for instance, a very notable case. He was the president of a great life insurance company who, with others, devised a new plan of insurance and in order to help the agents to get policy holders, they said to Mr. Morton, the President, "Now then, you take out a policy yourself and you be the first man to take out a policy" so Mr. Morton undertook to take out a nice, large policy of about one hundred thousand dollars or something of that sort and he went to the doctor to be examined in the usual casual way in which people are ordinarily examined by life insurance doctors and the doctor took his blood pressure and found it way up, two hundred and something. He made an examination of the urine and found albumin and casts. Mr. Morton had arteriosclerosis and Bright's disease and was going around with rosy cheeks and a very good feeder, eating big dinners, smoking cigars and drinking champagne and believing himself to be the very paragon of health and yet he was right up on the brink of the grave. He couldn't get life insurance in his own company. He was turned down and in a very few months Mr. Paul Morton was buried in the ground. That was absolutely ridiculous, absurd, for him to destroy his life in that way. Some men find out just in time to save their lives.

There was Chauncy Depew. A lady called on a doctor to consult him about her health and while she was waiting someone else in the room played with her dog. When the doctor came in he said to the lady, "What is the dog's name?" She said, "We call him Chauncy Depew because he has to speak for his dinner." I suppose Mr. Chauncy Depew has spoken for more dinners than any other man in the country. He was for many, many years a great glutton. He ate enormously of beefsteaks and meats of all kinds and drank a great deal of champaign, smoked cigars and that sort of thing. Down in Brooklyn they have a club they call the Montauk Club and they organized with Mr. Depew at the head and for many, many years they had the custom at this club of celebrating Mr. Depew's birthday. For three years in succession when Mr. Depew's birthday arrived, he was not there although they had the dinner. Finally, he reappeared and he explained his absence. He said,

"I got so infirm I could not come. I had rheumatism so bad that I could not walk. I have got the victory over my rheumatism and I am a young man again" and he explained the philosophy of it. He said, "I was over in Paris and I was at a great dinner there given in honor of the great chemist, Cheuvril, who was one of the most noted chemists who lived within a century." Mr. Chauncy Depew ~~sate~~ sat near him at the table on the looth anniversary of his birthday and he was still hard at ~~his~~ work every day in his laboratory at 100 years of age and Mr. Depew said to Prof. Cheuvril, "How have you managed to live to 100 years and still have the possession of all your faculties and still a well man in mind and body?" "Well," he said, "It is simply, I drink no wine, I use no tobacco, I eat no meat. I live the simple life." Now he said "I said to myself, maybe that is what is the matter with me" so I cut out all beefsteaks, all champaign, all cigars and today I am absolutely ~~well~~ well and my rheumatism is gone. I thought you would be interested to know that Chauncy Depew is like me, a vegetarian, although he speaks for his dinner, he does not eat beefsteak.

I had some doubts about the truth of that story so I was very much pleased when I met Colonel S. S. McClure of McClure's Magazine who is also a very strict flesh abstainer who stops off here for a day or two whenever he can. He said, "I met Chauncy Depew the other day on the car and he told me he had not eaten any meat for several years, that he was satisfied that meat made the rheumatism and he had stopped using it," and it has made a new man of him. There isn't any doubt about this thing. I am certain that the use of meat is one of the habitious evils that afflicts our modern civilization. One cannot imagine that those European nations over there, if they were vegetarians, if they were men who had respect for animal life that they would be flying at one another's throats, slaughtering one another by the thousand as they are doing at the present time. The two things are absolutely incompatible. If a man is a non-flesh eater, he thinks of human life as a thing that is valuable, that is sacred. He thinks of life itself as a thing that ought to be considered. I confess that for many, many years, in fact, ever since I became a flesh abstainer I found it impossible to take life unnecessarily in any way. I do not even step on a worm but my magnanimity does not go quite so far as to include mosquitoes or the thypoid fly but it is all right. These creatures are beasts of prey. They are life destroyers and it is perfectly right to eliminate them^{but} as old Pathagras said, "Take not away the life you cannot give for all things have an equal right to live. To kill man killers, man has lawful power but not the extended license to devour."

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Q. Is arteriosclerosis and high blood pressure for a man of 46 years?

A. Yes, indeed. I am a young man of 64 years and my blood pressure is 110. I think a young man of 46 ought not to have any higher blood pressure than I have. Nobody wants his blood pressure to get above 110 except temporarily. If you have occasion to get your blood up a little bit for a few minutes in order to do some tremendous thinking, the blood

may well be up to 120 or 125 or so but it should not stay there. It ought to come right back again and it need never be above 110. Here we have a pump that is pumping water and lifting it up to about 100 feet under a fifty pound pressure. Now suppose we double the altitude to which it has to lift the water and take the tank up 200 feet. Do you think the pump will last as long as if it lifted the water only 100 feet? Suppose the pump is so constructed that it will last for 50 years lifting water 100 feet high. Suppose you double the height to which the pump has to lift the water. You see right away it will wear the pump out in less than half the time. The thing a man dies of when he has high blood pressure, it isn't often that an artery ruptures because the pressure gets so high. It isn't high blood pressure that produces apoplexy. It is because his arteries have gotten rotten. They have become so soft that they could not resist the pressure. A healthy artery will resist 150 times the ordinary pressure. The arteries are wonderfully strong. In a great share of cases of apoplexy it is not high blood pressure. The thing a man dies of is a worn out, tired out, used up heart. His heart has to do so much extra work it finally gets worn out before its six time and the kidneys fail. The failure is of the heart and kidneys rather than of the brain. I met a man the other day with a blood pressure of 160 and I said, "Well, now you must begin to look after yourself to live right. You must fight this thing all the rest of your life." "Well," he said, "My doctor said 160 was about right for a man of my age." "Well, how old are you?" "Well, I am 50 years old and the doctor said it is natural for the blood pressure to be higher in an old man than it is in a young man." Now that is perfectly true. It is usual to find the blood pressure high in the old man but the reason why the blood pressure is high is because the man is old but one can be young still when he is 60. He doesn't have to be old when he is 60 or even 70. I met a young man of 70 the other day who is really a fine young fellow. I could not make myself

believe that he was only 70 years old. I knew a young lady of 74 when I was in San Francisco a few ^{weeks} years ago. She had just come across the continent in her car. She is a wealthy woman who lives near Philadelphia and has nothing to do but take care of herself and enjoy life and she made up her mind that the way to get the most ^{out} of life was to live the simple life and she said when she was 50 years old she found herself an old woman, miserable, rheumatic, wretched and she said, "I got hold of your Battle Creek Ideas and I have been following them, every item I could get hold of and I got all the literature I could get and I posted myself and have been studying that thing ever since and here I am a young woman again. I have traveled all around the world, I came across the continent and stopped over at Yellowstone Park. They wouldn't let me drive my automobile in and I didn't like the looks of their old busses so I started on foot and I ~~walked~~ walked the whole 60 mile trip around the park and I got in ahead of the wagons every time." She walked along all the way through that park. She was about the liveliest young lady I ever met in my life. She said, "You ought to have seen me when I was 60. I was wrinkled, my skin was the color of leather and I was an old woman, almost ready to die, rheumatic. I couldn't do a thing but she said "I have made myself young again." Why not begin to be sensible before Old Father Time gets right at our heels ready to reap ~~up~~ us? Why not have some good sense while we still have some constitution left? The rheumatism scared that old lady and set her to thinking and fortunately she still had enough vigor, vitality and strength left in her heart, liver and other vital organs so that she has been rejuvenated. Think of it. There is not a single person here 90 years of age in this room and nobody has any right to be old before he is 90 or a 100. No one has any right to be old until he is 50 or 60 or 70 years old at least. It is absurd to be old at such a juvenile age as that. The time to get old is when we have had a chance to see something of life and to enjoy life a little. Here is my young friend,

Judge Roberts, who is 90 years old the twelfth day of next month but Judge Roberts is not old yet and he is not going to be old. When you see him walking down the hall, you see is as straight as an Indian. He doesn't know anything about old age yet. I have known the Judge now for thirty-five years. He came here first about thirty-five years ago with his daughter who had been given up to die. In a few weeks you will see Mrs. Stotesbury walking down the hall and you will see a queen. She is certainly a very remarkable person yet she was brought here on a bed thirty-five years ago. She is in splendid health and is going to make us a visit and we are going to have an anniversary for our friend on the twelfth day of December and will invite you all to come to dinner to celebrate the 90th anniversary of our young friend, Judge Roberts of Chicago. I am glad we have the Judge here as an example of the fact that it is possible for people to go on year after year through what we might call extreme old age without getting really old. I was feeling the Judge's arteries the other day and they were still soft. His blood pressure is not away up in the clouds but it is still that of a normal man. I have a brother who is almost 84 years, just twenty years older than I am, and his blood pressure is just the same as mine. I have another brother 82 years old whose blood pressure is 120. These men, like myself, have been living the simple life for the most part about 50 years. I want to tell you my friends it pays to be good. I met a lady today and she said, "Why, Dr. Kellogg, I never saw you looking so well in my life." I hadn't seen her for about twenty years. I said, "That's a fact. I never looked so well and never was so well" and I want to say to you it pays to be good. We are generally brought up to think we must be good to other folks on general principles but, my friends, there isn't anything on earth that pays so well as to be good to yourself and the way to be good to yourself is to obey the laws that are by Nature involved upon us. We are responsible to the great powers of Nature, we may say, the great powers of the universe or

implicit obedience to certain laws and if we do not obey them, we have to take the consequences. There is a great ~~is~~ law in the universe, not simply in holy writ, "The Soul that sinneth, it shall die." You come here suffering from various things and you are simply suffering from the effect of wrong habits. An Eastern doctor stepped in today to see our X-ray Department. Doctors from all over the United States are making pilgrimages to our X-ray Department. I met the doctor in my office and he said, "Well, Doctor, doctors all over the country are looking here to your X-ray Department for information and the beautiful thing about it is the information we get we always find practically correct so we have gotten so that whatever comes from your X-ray Department, we swallow it at once for we know it is all right." He said, "Doctor, I am hearing about this place a great deal and I am glad to look in here." He said, "You know, Dr. Kellogg, I think that anybody who comes here and doesn't get well must be awfully bad off. A man comes here, you take away his beefsteak, you give him a purine free diet and that is good for him. Then you make him stop smoking and that is good for him and you make him stop the use of tea and coffee and, he said, I think that is what does the trick. When a man does all those things and doesn't get well, it must be because he is just about ready for a funeral." Now that is really the truth about it. I said, "Doctor, that is a fact. It is the change of habits that helps our patients. The things we do for them in the treatment rooms here are minor things. They are the things you think you pay for but the real thing you get, my friends, is the things you get up in the dining room. That is where you get well. It is the change of diet and the change of habits, dropping off the things that are doing you harm. I am telling you this secret that might seem to be rather ^apoor business policy because I want you to get the real good out of this thing. You come here 500 or a 1,000 miles and spend a good deal of money. I tell you just what I would do if I could have my way. I should like to have the Sanitarium off in the woods somewhere, have the

cheapest kind of buildings, just little sheds where people could ~~go~~ be protected from the weather but could not get away from the fresh air. We would have a special place warm enough for dressing and undressing and for eating breakfast and dinner and things of that sort and would charge people but fifty cents a day and would make money on it because it wouldn't cost me more than ten cents a day to feed them and I wouldn't have to pay a thing for fresh air and the majority of people would get well faster than they are getting well here because in spite of all the other things we are doing for you, we still hang on to a lot of things that are not good for us. You go to bed and won't open your windows because you are afraid of that fresh air. Some of you are scared to death now for fear of the fresh air coming in here ~~is~~ is not good for you. Now suppose you feel some cold air blowing on the back of your neck. If you were outdoors you would not catch cold. You can get just as much good ^{from it} sitting still in the house. All you have to do is to imagine you are taking a walk. That is all. If you are taking a walk your muscles are going. All right, set your muscles going. If I kept my muscles working just as hard as they are now for three minutes, I would burst right out into perspiration. You know a man ^{got up} ~~could-be~~ in a lecture hall sometime ago who was afraid he was going to get cold and he shouted out, "Is there a Christian Scientist in the audience?" A long haired sort of man got up and said, "Yes, I am a Christian Scientist." "All right, Sir, will you please change seats with me; I am afraid I am going to catch ~~could~~ my death of cold from the draft in the window." That Christian Scientist dropped into his seat as though the foundation had been knocked from under him. Suppose you are in that same position. All you have to do is to set the back of your neck at work. Exercise good and hard. Don't set your muscles to work the wrong way or the preacher will think you are disagreeing with him but set them to work the right way and the preacher will think you agree with him and everybody will be happy and you can't possibly

take cold.

Q. What is the best diet and mode of life for one suffering from either diabetes or Bright's disease?

A. The best mode of life is to come to Battle Creek to learn how to live. A man who has got diabetes has got to be taught a whole lot of things and he has got to have a little training. In the first place, he must be gotten free from sugar, then he must be kept free from sugar and he must be taught how to diet himself, how to measure his food, how to examine the excretions so as to know that he is keeping himself free from sugar and everybody who has diabetes ought to be taught that and ought to have a month's residence in an institution somewhere where there is somebody who knows how to teach them. Bright's disease is very much the same thing. People suffering from Bright's disease often die when they don't need to. A man with Bright's disease can live first rate with one kidney but he must be content to live a one kidney kind of life, you see. A man with two kidneys can set a pace for himself for two/^{good} sound kidneys. He can eat Christmas dinners and Thanksgiving turkeys and gormandize in all sorts of ways and live through it because he has got two kidneys to carry off the rubbish, you see. The kidneys are scavengers and they clean the blood out after the man has defouled it with these horrible disgusting debaucheries. When he has got only one kidney, then you see he hasn't got so good a scavenger system. His scavenger department is broken down, you see, and he has got to be very careful not to introduce so much filth. A man who has two good kidneys can smoke and drink beer or tea or coffee and abuse himself right along and everything will be all right. He wakes up in the morning feeling all right. I met a man the other day who was not just right and he said, "Just look at my tongue." I said, "How does it feel?" He said, "It feels as though I had a rich brown taste in my mouth." I said, "It looks to me as though it needed a city scavenger to clean it off." He was dirty all through. He was a dirty man. There was a filthy state of things all through his body. His brain was dirty. His eyes had lost their natural white glisten-

ing lustre and the whites of his eyes were dingy because of the filth accumulating not only in the eye but behind the eye. You have not only dingy skin but dingy muscles, a dingy brain and everything in the body is dingy when you are in this condition. Your blood is a turgid stream flowing through the lungs and disturbing the highway of the body with filth that never ought to have entered the body at all. The man with two kidneys can stand that but the man with one kidney cannot. He must take care of himself. I remember a Judge from Ohio who came here some years ago and we had to remove a kidney for him because it had a tumor. He had but one kidney. I shall never forget the anxiety and interest in that man's face as he came to my office and said, "Doctor, now I have only one kidney left and I cannot have that removed and I have got to take mighty good care of it. Now tell me exactly how to live." I told him exactly how to live and he lived on for years and years and years with that one kidney and it was a good lesson. I have thought of it a thousand times. Don't you see it would have been far better chance for him to have taken care of the two kidneys than to have waited until he had only one before beginning to take proper care of it. Suppose a man has got a family of five children and he lives along the river bank and doesn't build any wall opposite the river bank so that his children are drowned one ~~at~~ after ~~the~~ another. By and by he has only one child left and then he builds a wall so that the baby won't fall down and drown. Wouldn't it have been better sense to have built the wall and saved the other four children? You do not stop to think of the value of health until most of it is gone. Then we begin to take good care of it. The time to take care of health is when we have got it. There came into my office some weeks ago a splendid man six feet tall, bright eyes, rosy cheeks, a magnificent specimen of a man. I suppose he wanted to see me about a friend. I said, "What can I do for you?" He said, "Doctor, I came to consult you." I said,

"You don't look as though there was anything the matter with you." He said, "There isn't anything. I am in absolutely perfect health. I just heard about this institution a few weeks ago and I have such perfect health and such a perfect body that I just made up my mind I am going to keep it perfect just as long as I can. I am going to live as long as I can." I said, "You ought to live 100 years." "Yes," he said, "I'm going to live 125. I don't intend ever to be sick and I have come up here to get a few pointers on how to live a perfect life." He said, "I used to smoke but I stopped it when I found it was bad and I used to take beer but I have stopped that and I recently heard that tea and coffee was not good and I have stopped drinking tea and coffee." He said, "A man told me the other day that you had not eaten any meat for 50 years so I came to talk with you. If meat isn't good for me, I am going to drop it off too." He had come here to learn how to live right. That is the way to do it. I tell you I have respect for a man who has such respect for his body and his masterpiece; the finest thing in the universe that he takes care of it while it is sound and healthy. You may say that doesn't interest us very much because we have gotten beyond that but you haven't any idea, my friends, how much you can make of yourselves if you try.

Q. Are the treatments here of the most benefit to counteract the climatic influences in the treatment of asthma?

A. I admit that we have a climate that produces asthma but it is only in the summer time ~~that~~ when we have the rag weed and some other things of that kind growing that produce hay asthma or hay fever but we have found out how to master that. We collect the rag weed pollen and make a vaccine out of it and vaccinate the man subject to rag weed to the hay fever so we are able to cure the disease but so far as other seasons are concerned, I think there isn't any healthier climate anywhere than we have here in Michigan. The cold weather is the best season. We cure people a great deal faster ~~in~~ here in cold weather than in warm weather. The real foundation of our

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successful work is wrought out in the winter time in the colder months because of the fine tonic air. This morning I felt as though I could eat a piece of pork if there wasn't anything else and I wouldn't hesitate to eat a pig before I would die but I would have to be awfully hungry. The cold air is a tonic. It is Nature's most splendid tonic. It doesn't do any harm to breathe cold air. Of course, nobody wants to get chilly or cold. It is just a matter of clothes. An extra warm suit of underclothing or an extra pair of stockings, wear two pairs if necessary, will be sufficient to keep warm. Don't let your feet get cold. Don't get chilly. Keep warm and the more cold air you can get, the better. The colder the air, the finer it is. When Perry and other explorers went to the Arctic Region they declared that they were perfectly well as long as they were in the Arctic Region but when they got into civilization again and began to sleep in hotels, they began to have catarrh and colds and coughs.

Q. Is an operation on the nose of any benefit to asthma?

A. ~~Th~~ A little polypus in the nose will keep a man awake night after night wheezing and struggling for breath. It is a very common thing for some little disturbance of the nose to produce asthma. The obstruction ought to be removed.

Q. How may the red corpuscles of the blood be supplied when there is a lack in the system of making them?

A. The body is the factory of red blood cells. ~~It-is-an-~~ This ammunition factory is in the bone. The red marrow of the bones makes blood corpuscles. We used to think of the bones as simply a skeleton, a framework to support the body but we know now that these bones manufacture the blood. That is where the blood is made is in the red marrow of the bones so the bones have a varied and very interesting function. All we need to do is to eat the right kind of food and plenty of it and the bones will make the blood as fast as we need it.

Q. Are hydrotherapy and gelotherapy ~~beneficial~~ beneficial in the

treatment of tuberculosis?

A. There are two things that help more than anything else besides some fresh air; cold water and sunlight. Fresh air is first, sunlight next and cold water next and those three things with a proper diet will cure every case of tuberculosis that is not already almost ready for the cemetery.

Q. What is the sediment in the chocolate of good health candy?

A. The sediment of chocolate is simply chocolate.

Q. Should one whose arches are very high and sometimes feel weak wear high heels?

A. Nobody should wear high heels.

Q. Are health chocolates fattening?

A. Yes.

Q. What is the best means of removing superfluous hair?

A. The X-ray. If you go in and have the X-ray applied to the whole head for half an hour, you won't have any hair in about two weeks. In the course of six months some of it will grow in again. If the dose is big enough the hair will ^{g^o} grow and won't return. Another method is to destroy each individual hair with a little needle with electricity discharging from the point of it. It is not really a very entertaining thing to have the thing done but it is quite effective.

Q. When the hands and limbs are swollen in rheumatism, what treatment should be used?

A. Hot water is the best of all, as hot as you can possibly bear for fifteen minutes three times a day or apply hot applications, hot steam or hot fomentations to the joints. These are the most effective means.

Q. What good is the white of egg whipped up as ordered for invalids by general practitioners?

A. The white of eggs is sometimes soothing food for the stomach for the reason that it is not digested in the stomach and if the stomach is irritated the white of egg will pass down ^{through} ever the stomach into the small intestine where it is digested and so the stomach will be saved the labor.

Q. When will the music in the dining room be resumed?

A. Now you know we have had such a difference of opinion about the importance of music in the dining room. Every little while I would find a question in the Question Box, "Can't you have that music in the dining room stopped? I cannot hear myself think for the music" so I have thought perhaps we made a mistake in disturbing out people so much. People often like to chat at the dinner table and the music sometimes interferes with their chatting. I think I will take a straw vote tonight to see how many miss the music and wish it might be restored. Hands up. Now, how many think we are getting on very well without the music? I am afraid the nays have it. We will have music once in a while. On get acquainted days we will have music. When we have a banquet we will have music. I thoroughly believe in music. It is a good thing to make the gastric juice flow. Pawlow once showed me a very interesting experiment when I was in his laboratory. He had in one part of the laboratory ^{the} a most beautiful dog I ever saw, a greyhound, and this dog was standing on a table waiting for him to come in. As he stood there this dog had had an arrangement made so that the saliva came outside and dropped into a bottle ~~and~~ instead of going down his throat. The bottle was empty and we were waiting quietly. Suddenly a musical note was sounded without anybody making a motion, the note of a fife. Instantly within five seconds the saliva began to pour out of that dog's mouth. The salivary glands responded to the music. Some-time ago we had a lady here who didn't like our diet and said she was going home to get a square meal. She went home but her husband sent her back as she was a neurasthenic. She stayed with us three months, got well and then went home.

I saw her three years afterwards in blooming health with rosy cheeks and a healthy and happy looking woman. I said, "I suppose you were glad to get home and get a square meal." "Oh, Doctor," she said, "Don't say anything about that. When I got home I was amazed to think that I could ever have eaten those horrible things that we had on the table. The first thing I did was to have the mustard pot and the peppersauce bottle and the pepper box carried out and buried in the garden." I said, "Well, what did your husband do." "Oh," she said, "I just brought him to it." We are glad to have you take home, when you go, just as a big a load of Battle Creek ideas as you possibly can.

Q. How may high blood pressure be reduced?

A. You have to live it down, my friends, like a bad reputation.

By right living you can bring it down. I had some statistics the other day of 30,000 blood pressure examinations made in this institution. We found that there were over 6,000 of these 30,000 people that had a blood pressure over 140. There were more than 2,000 of them that had blood pressure over 160 and there were nearly a thousand of them that had blood pressure between 180 and 200. The average blood pressure of the whole 6,000 people when they went away was only 143. In many of them the blood pressure was reduced 40 or 50 points. found
I find the average bloodpressure of the whole multitude of 6,000 people was only and 143 when they left this institution. In some of them ~~had~~ the blood pressure had been up to 200. That shows the effect of diet. The diet had far more to do with reducing the blood pressure than all the other things we did. This is a thing you can do at home and when you go home you must keep right on doing it and the blood pressure will continue to slowly work down. If you take the right diet, a diet that will make the bowels move three times a day, that will exclude all these poison things, take a diet that will not rot in nooks and corners of the king's highway, that will keep clean all the way through, if you will take that sort of diet and stick right to it, the blood pressure will come down. Colonel McClure says, "I never eat anything that rots."

Q. In testing the lungs if a patient has a temperature and a cough, can the doctor tell by the sound the difference between pneumonia, bronchitis and tuberculosis ?

A. Yes

THE DISINFECTING POWER OF FOOD

A lecture at the Sanitarium Parlor, Battle Creek, Michigan, Thursday, Nov. 18, 1915
at 8:00 P. M.

by

J. H. Kellogg, M. D.---

I will talk to you on a new subject this evening, "The Disinfecting Power of Food". When we talk about different disinfectants, you think about chlorid of lime, sulphate of copper, peroxide of hydrogen, permanganate of copperas and things of this sort and these are disinfectants, but nature has so arranged that our foodstuffs while supplying material out of which to build our bodies and supplying material to support the energies of the body for that is what the major part of the food is for, to keep the body engine in operation, food is fuel just as coal is fuel for the locomotive, in addition to these two great objects to repair the waste of the body and to replenish the energies of the body, to keep up the steam in the locomotive, so to speak in the body, in addition to that, food is a disinfectant. Sometimes people fast to clear out the system and get rid of body poisons. Very few persons are aware of the fact that is a very opposite way from the right way in which to disinfect the alimentary canal. When one stops eating, the whole alimentary canal at once becomes a prey to germs, to microbes. It is only the constant taking of food that keeps the alimentary canal in a clean state for food has disinfecting properties in a number of very interesting ways. Some of you have noticed when you get up in the morning, you have a coated tongue but after breakfast the tongue is not so much coated as before. Why is that? It is because when you were asleep, there was very little saliva flowing. When you begun to eat, the chewing of the food caused a profuse outflow of saliva and the food brushed against the teeth, scoured off the teeth and the tongue and so the cleansing influence of the saliva and the de----- effect of the food has served to cleanse the mouth and the teeth to a considerable degree, also the tongue. What is the difference? What is true of the mouth is true of all the rest of the alimentary canal. The food, if you please, ~~was~~

mops out the intestine, scours it and cleans off the whole alimentary canal. The housewife knows sometimes that when the ceiling gets smoky, she can take a loaf of bread, cut it into slices and rub the slices on the ceiling and scrape off the smoke, so food in the alimentary canal gathers up the microbes and carries them off, but when there is no food taken into the intestine, then microbes grow and develop in countless numbers. There are produced in the alimentary canal in twenty-four hours not less than three hundred trillion germs and they grow whether you take food or do not take food. Food of certain kinds may increase ~~growth~~ their growth, but they will grow if you do not take any food at all because the bile which is being secreted and poured out all the time is a wonderfully good food for germs, and the secretions of the intestine is another source of food for germs. Some years ago, we had with us a man who was very anxious to try the fasting cure. He had heard that it was a splendid thing to clear out the system for he suffered greatly from inactivity of the bowels. I did not encourage the idea for I did not think his case was one in which fasting was really required ~~and~~ ^{or} would be of any ~~great~~ ^{great} benefit to him and did not consent to it. Well I lost track of him for a while but after some little time I saw him again in a wheel chair on the lawn and he beckoned to me to come to see him. I stepped up to his chair. "Doctor," he said, "I wish you would do something for me. Look at my tongue." It certainly looked as though it needed attention very much. It ~~looked~~ looked as though the ----- scavenger might be actively employed to good advantage. He had really a horrible looking tongue, a horrible odor and a horrible odor to his breath. I said, "Well, what is the matter with you?" "Doctor", he said, "I have been fasting for three weeks. Today is the twenty-first day and my tongue is actually worse than when I began." I said, "That is to be expected." He said, "I thought fasting would ~~clear it off~~ clear it off. They say that if you do fast long enough it will clear off the tongue and destroy the poisons and if you make a complete fast, the tongue will ~~clear off~~ clear off after a while and ~~you will be free from germs and in fine condition.~~ you will be free from germs and in fine condition. Well what do you think I better do? I am getting worse all the time and I really can't stand this any longer for I feel wretched." I said, "When did your bowels move last?" "Well, my bowels

moved before I began my fast. I took care about that to see that my bowels were thoroughly emptied and I have not eaten anything since, so of course, there is no necessity for my bowels to move." I said, "I guess you had better take a dose of salts right away. That is what you need more than anything else." He said, "Why there is no use in it because I haven't eaten anything." I said, "Did you know that your liver is making bile all the time and discharging it into your intestine? and did you know that the bile is six times as poisonous as urine and that there is two ounces of that bile produced every single day, a pint and a quarter poured into your intestine? and your body is simply absorbing all that poison and germs are rollicking in it having a good time, growing and multiplying at an enormous rate." "No," he said, "I didn't know that. I didn't know germs would grow when you didn't eat anything." "Well you see the germs are eating you, don't you see, and they are thriving in your interior because you have done ~~nothing~~ nothing at all to remove them. Now it is just as necessary for the bile which is being poured into the intestine continually and is six times as poisonous as urine as brown----- the French scientists showed many years ago and discharged at frequent intervals that it should be carried off frequently, and when it is retained day by day, it is reabsorbed into the body and the body is poisoned by it. The wonder is, you are not dead." "Well", he said, "I guess I had better take a dose of salts". And he did. He told me three days afterwards that he didn't do much less for two or three days but get rid of the horrible accumulations in his body, that there were simply gallons of the most loathesome material. He said, "I didn't suppose it was possible for such an enormous quantity to accumulate in a person." He declared that several gallons of the most horrible and loathesome material he had ever encountered in his life resulted from the use of the salts that were given him and the saline laxatives. In a few days his tongue cleared off and he was all right. Now food acts as a laxative and keeps the alimentary canal clean. Each meal moves along by itself. Food remains in the stomach about four hours, then moves down to the ~~stomach~~ colon in a four hours more. At the end of eight hours the food eaten should be in the colon and in four hours more the residue should be dismissed. If it is not dismissed, it putrefies and gives rise to the de-

velopment of great numbers of bacteria, so the alimentary canal of the average adult is in a ~~very insanitary~~ ^{very insanitary} condition to say the least. Nature has provided means to keep the alimentary canal sweet, so that when a baby is born within six hours in summer, and twenty hours in winter, it becomes filled with protective germs. There are friendly germs and pernicious hostile germs; there are what you might call domestic germs that are intended for our benefit and to help us keep sweet and there are wild germs. These wild germs getting into our bodies produce poisons and ptomaines, toxines, horrible smelling substances like skatol, indol,

hydrogen and most virulent poisons that are a kin to the venoms of rattle snakes and of other serpents whereas the domestic germs produce acids, like the acids of sour milk, lactic ~~acid~~ acid which is a harmless acid and nature has provided that this very acid should be produced by germs introduced into the body directly after birth. The first germs that find access to the body are these protective germs which are able to produce acids and so long as these acids are present in the intestine everything is normal and right. The acids themselves stimulate the intestine to normal activity, so the doctor when he comes to see the baby, the first thing he wants to see is the napkin, and if he finds the bowel discharge has no odor or is slightly sour, he knows that the baby is perfectly healthy. It will surprise you, I suspect when I tell you that the bowel passages of a healthy baby if put into a bottle and put away will keep indefinitely, will not putrefy. There is absolutely no putrefaction about it and it will ~~not~~ undergo no ~~putrefaction~~ putrefactive change. It remains perfectly free from poisons from putrefactive organisms. Of course, if this is true outside of the body, it is true inside the body. These putrefactive organisms are introduced as the child begins to take cows' milk and takes in filthy germs from the barnyard, the chicken coop, the pig sty and all the things that contribute to the flora of commercial milk. Some years ago, I got from the ^{Experiment} Connecticut Station samples of all the different kind of milk germs that the doctor in charge had separated from milk. The doctor was endeavoring to make ~~american~~ cheese and he succeeded finally in making a cheese but did not succeed in getting it on the market. He had a Farmers' Convention to show the farmers how successful he had been in making the cheese,

and he had a splendid cheese which he had allowed to get good and ripe and the ~~farm~~ farmers gathered around and began to lick their chops to see it opened and he opened it up. The effluvia that escaped into the air was too much for the farmers and they made for the door at once and it got into the newspapers, got all over the country, so the doctor did not succeed in getting American cheese on the market. cheese as well as other kinds of strong cheeses in fact, all cheese except cream cheeses are the product of putrefaction and it is because of the putrefactive germs in the milk that the cheese is possible. It the milk is sterilized or boiled before putting the in it, it won't make cheese. It has to have germs from the barnyard in order to make cheese grow and develop. Boiled milk will not possibly make cheese without putting some barnyard germs into it. I am telling you about cheese so you will see what is going on ^{the child's} in ~~the~~ alimentary canal. The ^{child} ~~man~~ lives on milk and so long as it takes milk from a pure source these friendly germs keep the child in a perfect condition of health. Its alimentary canal is sweet and clean with nothing but simple harmless acid being produced, but when the child begins to eat other things, to take milk that has barnyard germs in it and meat with all the barnyard germs, it comes in contact with the worst of all varieties of germs you see. By the way, did you notice in the papers to-day that the famous old buffalo in Bronx Park, New York called "Black Diamond" is dead? the biggest buffalo known. Its skin was thirteen feet long and ~~thirteen~~ thirteen ~~feet~~ feet across. The animal was getting old and the keeper suspected he would die ~~suddenly~~ suddenly and would have to be carted off to the potters' field and it was going to cost him twenty-five dollars, so he said, "I will get the start of mother Nature in this thing, of old Father Time". So he sold the old buffalo to the butcher for \$300.00 and so made \$325.00 because it would have cost him \$25.00 to get the buffalo buried. The buffalo weighed 1500 pounds. The butcher expects to get a hundred dollars for ~~the~~ ^{the} skin and a dollar a pound for the meat which is now being converted into steaks and sold to New York City, so the old buffalo is being buried in the society of New York City instead of being buried in the pottersfield. Some ~~xx~~ years ago they had an awful time in Chicago because the alderman would not clean up the city. Certain sections of the city

were so filthy that a lady could hardly go through the streets, so a Woman's Club made the suggestion to the alderman that they would buy two hogs for each alderman his district, for each ward in Chicago and these hogs should act as street cleaners to eat up the garbage, rubbish and decomposing filth in the streets. It went a little further. They offered to buy these hogs, pay for them themselves and when they got nice and fat turn them over to the alderman of the districts so they would finally bury their garbage in the city aldermen. They didn't actually do this in Chicago, but Kansas City actually adopted the suggestion. There was a part of the city where they didn't have the garbage consuming plant in operation so they bought a farm and carted all the filth and garbage down to this farm and fed everything to the hogs, then they would take the hogs back and feed the hogs to the people. I saw a report not long ago that they had actually made \$250.00 clear from the operation. They had made enough to pay for the interest on the money they had invested in the farm and for carrying out the garbage and were \$250.00 ahead. These filthy things that are put into the stomach, decomposing beefsteaks, if you please, for all beefsteaks are decomposing, they all contain an abundance of putrefying material. Go down to the butcher's shop and tell him you want the very freshest nicest steak he has and do it up in a nice package and put it in an inside vest pocket and carry it around for twenty-four hours and you will see if somebody doesn't suggest that you better get some perfumery of some kind or see a dentist about your teeth or that you better take a bath or something else. That beefsteak is already decomposing rapidly and the butcher is only able to keep it by keeping it in cold storage. Just as soon as you put it in a warm place the putrefaction goes on with great rapidity. Inside your vest is a warm place but inside your stomach is a warmer place still and decomposition will go on with much greater rapidity inside the body than outside of the body, so every portion of the beefsteak that does not get digested and quickly absorbed into your body and utilized, that is not consumed, every particle of it lying around in contact with the colon germs will pretty soon be in a state of advanced putrefaction and that is a source of a large part of the colon germs. Perhaps

the baby creeps along the floor, sticks its fingers in its mouth and then puts its hand down on the carpet, gets some nice street germs on it that came in on the father's shoes,--the dried-up pulverized droppings of animals going down the street, and the baby lifts it up and puts its fingers into its mouth and goes out and gets some more and so the baby continues moping the carpet until it gathers up in the course of a day, millions and millions of microbes and so infects itself with these wild and putrefactive disease-producing organisms which are all about us all the time, and which are ready to take possession of us if we give them an invitation, and in this way the alimentary canal by and by becomes the hold of every unclean and hateful germ. Roger of Paris showed that there are 161 different kinds of germs that inhabit the intestine. In the young healthy infant there are only two or three and those are simple acid formers. Of the 161 germs that have been found in the intestine, 61 of them are known to ^{be} ~~be~~ ~~product~~ ~~izers~~ of deadly poisons. Sometimes we get hold of some salmon that is spoiled and you may have an attack of ptomaine poisoning or you may get some game of some kind, turkeys or ducks that have been kept over from last year Thanksgiving or geese or something else that has been hung up in cold storage. The man who owned the cold storage plant in Chicago told me some years ago that to his positive knowledge there were more than two thousand ducks in his cold storage plant that have been there for three years waiting for the market to rise. Just think of it, lying around there waiting to be buried in somebody's stomach! Cold storage eggs, cold storage hens, ducks, turkeys and game of various sorts and cold storage beef! Mr. Armor's manager told me many years ago that Mr. Armor always kept his Christmas beef which is ~~xxxxxxxxxxxx~~ prime beef or rotten beef far advanced in decay, Christmas beef which is one degree higher has a as the French call it, a very high flavor. Mr. Armor's manager told me that they always kept their Christmas beef three months before they offered it for sale at all.

You get the finest beefsteak you can ~~get~~^{find} in the market, the freshest you can get and put it in a fruit jar if you want to for a few days and then open it up. If there is anybody in the neighborhood, they will certainly make for the outdoors as quickly as possible, because the accumulated aroma would be too much for any stomach to stand. These are some of the sources of the poisons with which we inoculate ourselves when we eat food that is not normal, but if we eat natural food in a natural way, the food itself is a disinfectant and keep the whole alimentary canal in a perfectly clean and wholesome state. When the food from the mouth gets into the stomach, the gastric juice is poured out into the stomach to digest certain parts of the food and this gastric juice is such a powerful disinfectant that if you give a dog a most rancid/^{horrible}putrescent meat and let the dog eat it and then kill the dog an hour afterwards, the meat that is undigested in the stomach will be perfectly sweet. You would not dream it, but you would find it not even in the smallest degree putred. Gastric juice will disinfect and ~~deodorize~~^{deodorize} it and most of us all see that fact, the fact that we are alive, for we have all of us eaten things that were poisonous, putrified and would have killed us if it had not been for the disinfecting power of the gastric juice. By and by the stomach gets worn out. It doesn't make gastric juice any more and ~~man~~^{one} wonders why he cannot eat a beefsteak without feeling awfully sick, why he cannot eat fried turkey, roast goose or boiled chicken without having a bilious attack. The reason is his gastric juice is no longer a disinfectant and the food readily rots so he suffers immediately the ill consequences, and these poisons produced by these putrefactive changes are poisons, poisons which when absorbed into the blood raise the blood pressure; they produce headache, they give rise to nervous symptoms of various sorts. There is a poor woman in this house this very minute that has suffered from chronic poisoning which is so very common and is the real foundation of most nervous diseases until when she came here it was very soon found her gait was a little unsteady; and a careful investigation showed that her spinal cord was undergoing degeneration and she had already suffered the loss of one kidney because of the toxic substances which had produced disease of the kidney and now

the other kidney is the subject of Bright's disease, and what can we do for that poor woman. She is paralyzed ~~kkkk~~^{so} she cannot stand upon her feet. One kidney is gone and the other is being rapidly destroyed by this degenerative process, by the result of these horrible poisons that have developed in the intestine, ^{and flood the body.} Well now the gastric juice is the only fluid in the body which is an active disinfectant. There is no other. The saliva keeps the mouth clean by the fresh fluid continually poured out from the blood and it is probable that the saliva contains something ~~kkkk~~ which hinders the development of germs, although it does not destroy germs, but the gastric juice is actually able to destroy germs. The man who can digest mushrooms can digest typhoid fever germs, so you don't need to be afraid of typhoid fever as long as you can make a hearty meal of mushrooms and have no inconvenience from it. Typhoid fever germs are digestible just like other fungi. The bile is a substance which hinders the growth of certain germs but not of all germs. Many putrefactive germs can grow in the bile but some germs cannot grow in the presence of the bile. Intestinal juice does not hinder the growth of germs and down in the lower part of the intestine, germs grow with great rapidity. Germs will grow readily in the mouth because exposed to the air, and especially when food is being taken they are likely to accumulate in the mouth unless the blood is in a state of high vitality. When the blood is in a fine state of activity and its vitality is high, the saliva produced from the blood has the power to inhibit the growth of germs, to prevent germs from growing in the mouth, although it does not destroy germs. The intestinal juice does not hinder the growth of germs; the bile hinders some germs, but down in the colon germs can grow as actively as they want. You see them ^{that} ~~at~~ the taking of food regularly and the moving of food along the intestine is one of the things by which Nature keeps the alimentary canal free from germs so that fasting does not cleanse the alimentary canal but gives an opportunity for the intestine to get filled up with the most horrible active pernicious germs of various sorts. Now there are certain food substances which have definite defensive properties. The acids of fruits are good germicides and prevent the growth of germs. They are good disinfectant agents for the alimentary canal. You know it is very easy to keep tomatoes. All you need to do is to put the

stewed tomatoes in a fruit jar and then put a piece of muslin over the top of it with some cotton batten over the top of the muslin and put it away and it will keep just as well as though you put it in a tight jar. I have had plenty of specimens of that sort because the acid of tomatoes prevent the growth of the ordinary germs. It is only mould that will grow, but if instead of tomatoes it were fish, chicken or meats of some sort you were trying to keep, it would be a very different thing. Ordinary cooking would not keep them at all; ordinary boiling would not be sufficient; it would have to be cooked at a temperature of 240° which is a much higher temperature than you can get in boiling which is only 212° . It requires 240° for two or three hours to make certain that the milk will not spoil, so you see it is not easy to kill these germs to destroy them. There is a great difference in food stuffs. Acid fruits of all kinds keep very easily. It is only necessary to take a little care with lime juice, to add a little sugar to it and it will keep without any difficulty at all. The housewife knows how easily it is to keep jelly by simply putting a little paraffin or wax paper over the top and the jellies will keep ^{for} almost ~~indefinitely~~ ^{an indefinite length} of time, but meats will not keep in this way. Distaso, ^a ~~the~~ French bacteriologist found out many years ago that the juice of lemons will kill typhoid fever germs. He found that if one will put an ounce of lemon juice in a tumblerful of water and let it stand half an hour or so, the lemon juice will kill the typhoid fever germs or any other germs that may be present in the water. That shows you the power there is in fruit acids to destroy dangerous germs. The fruit diet is a very advantageous means of disinfecting the alimentary canal. You have heard about the fruit cure, the grape fruit cure, and the apple cure is just as good, the cherry cure and the peach cure, all these fruit cures act simply from the fact that the fruit acids cleanse the alimentary canal. In order for a person to be benefited by the grape cure, for example, he is expected to take about fourteen pounds of grapes a day, but he excludes the skins and seeds entirely and there is scarcely anything else at all. The large bulk of the grapes and the activity of the intestine induced by this large bulk of material and the acid of the grapes act ^{to} ~~as~~ ~~disinfectant~~ the alimentary canal and wonderful cures have been effected by the so-called grape cure. Almost all sorts of chronic maladies

have been reported as cured by the eating of grapes. Hundreds of people go to Switzerland for the grape cure though it is not so popular now as it formerly was. There is another food element which might not seem to have any relation whatever to the disinfecting of the alimentary canal but which is very effective, indeed, and that is the starchy foods all of which conduce the cleansing of the alimentary canal, not because they are themselves disinfectants, but because when present in large quantities they tend to produce an acid condition of the intestine. Starch ferments, albumin putrefies. Starch in fermenting produces acid while albumin in putrefying produces toxines, ptomaines and horrible poisons. The reason for this is that starch contains only three simple elements, carbon, hydrogen and oxygen. These are all simple things. Carbon, we know in the form of coal. Carbon in the arc light is another form and the diamond is another form of carbon and the lead of our ^{lead} pencils is another form of carbon. When carbon burns, it becomes carbon dioxide, an odorless and tasteless gas and comparatively harmless. Hydrogen and oxygen are the elements of simple water, the most harmless and innocuous of all substances. Hydrogen and oxygen are present in starch in just the proportions to form water, so when starch is burned in a fire or in our bodies ~~it~~ the result is simply carbon dioxide, simply gas and water from the hydrogen and the oxygen. Albumin on the other hand contains carbon, hydrogen and oxygen and then three other substances, phosphorus, sulphur and nitrogen. Phosphorus is one of the most deadly of poisons. You have heard about phosphorus poisoning from matches. If a baby eats a few of the active ends of matches it will die sometimes of phosphorus poisoning. Thousands of people have died as a result of working in connection with match factories. Matches have been improved so that fortunately this no longer happens. Sulphur is another of the poisonous substances. When sulphur burns it makes a very poisonous gas. When eggs undergo decay, they produce a substance known as sulphureted hydrogen which is a very offensive malodorous gas, a very poisonous gas. Nitrogen is one of the most actively poisonous of all elements, although it constitutes about four-fifths of the atmosphere where it is neutral, but when it enters into combination, it becomes a very deadly poison. It also produces specific substances. Over in Germany at the present time you can see what harm nitrogen will do. Practically all of the powerful ex-

plosives that are making such havoc of human life over there on those battlefields are made from nitrogen. This nitrogen is the source of the most deadly poison known. The protein we take into our bodies, every single morsel of it contains deadly poisons. A pound of beefsteak has enough nitrogen in it to blow to atoms all the people in this room if you should ~~xxxx~~ convert it into sulphur and a pound of albumin or beefsteak has enough nitrogen in it to produce poisons sufficient to kill half the people in this city. When the process of decomposition takes place in albumin, these poisons are set free. The germs have the power of setting loose these poisons, liberating them and rendering them active and continually ^{and it is only} because the mucous membrane is a filter and keeps these poisons out that we are able to live at all under the ordinary conditions of our modern civilized life. Now if a serpent strikes at you and doesn't get ~~x~~ its fangs beneath your skin but simply comes in close contact and gets the venom upon your skin, it will do you no harm at all because the skin is a filter that prevents the venom from getting through. The mucous membrane is the same kind of filter and these poisons produced from albumin which are analogous to the venom of serpents are kept out of the blood stream by the mucous membrane which acts as a filter, so long as it is intact but if you happen to have a raw surface on your skin here and some of this should get on there, you might get bad effects from it very soon, or from mustard, pepper, peppersauce or ginger, or if you had a diseased appendix and had some raw surfaces about it and any of these germs come in contact with that raw surface the poisons may rapidly enter in. That is why people have so many symptoms of nervous headaches, ~~xxxx~~ numb sensations, pricking sensations, giddiness and a great variety of other symptoms. It is because of the absorption of these poisons. The 61 different germs that live in the intestine are capable, each one of them, of making a different poison, some of them several kind of poisons and they produce worse poisons after they die than before, because of certain endo-toxines which are shut up after their death and these are the most poisonous of all, so they are more deadly after death than when alive. They are dying in the body in enormous quantity. Of the three hundred billions produced in the body every day, 99 per cent. die in the body, and these

poisons are set free so this becomes a great source of body intoxication. Now starch is an antidote to some degree for this kind of poison because the more starch we take in our food, the less putrefaction there will be and the less ~~more~~ protein we ~~more~~ take, the less putrefaction there will be, so a diet that consists ~~mainly~~ ^{greatly} of starch is of very very great advantage on this account. This is the natural diet of the human animal. There are many people ^{who have the idea} that starch is a high productive food, ~~and~~ ^{principally} ~~that~~ that is very likely to make various troubles, rheumatism, hyperacidity, headaches and all sorts of troubles, anemia, etc. Not a word of this is true. Starch is the most harmless of all food substances. It is one of the most useful and necessary of all food substances. It is one of the most valuable of food substances through its power to cleanse and disinfect and keep clean the alimentary canal. It has been shown in recent years by scientific investigations by various eminent physiologists ~~that~~ that the larger the amount of protein eaten, the larger amount of putrefaction in the body, and the reason for this is that ~~the~~ protein or albumin feeds the germs which cause putrefaction, whereas starch feed the germs that produce fermentation. Fermentation is harmless because it only produces acids and a little gas perhaps, whereas putrefaction is deadly because it produces these powerful poisons with which the ~~indians~~ ^{indians} of South America used to saturate their arrows. They used to dip the tips of their arrows into the decomposing flesh which produces the powerful poisons with which they ~~destroy~~ ^{destroy} game; so starch is a very useful element and one of the ways in which we may keep our alimentary canals in a good clean condition is by making starch a large part of our diet, that is, by eating starchy vegetables. Cereals and fruits, sugars of fruits are also active in the same way. Another element of very great importance in disinfecting the alimentary canal is cellulose. That is the woody part of plants, ^{indigestible} the ~~woody~~ part. It is one of the most useful of all in the form of bran. That is why oatmeal is a wholesome food and why the Germans thrive so much on their "schwartz" bread" or black bread which is made ^{up} of very coarse grain and a great deal of rye and barley so that it is really very coarse, but it is a valuable foodstuff because it furnishes bulk to the intestine which serves to distend the intestine sufficiently to cause it to contract with vigor and so cleanses or sweeps out the intestine.

Under the influence of a diet of this sort, the intestine will be made to move three or four times a day which is the normal rhythm, whereas on the ordinary concentrated diet the discharges ^{will} only move once or twice a day or once in two days or sometimes only once or twice a week, and the consequence, the residues including the bile and other excretory materials are retained in the body and time is given for the absorption of all the products of putrefaction. Such people suffer from bad breaths. They have brown color around the eyes and dingy skin. The white of the eye loses its natural glistening lustre and you see brown spots on the hands. The skin is a very good indicator of the condition of the interior of the body. If you have those brown spots on your hands, you are getting to be an old person and you are old because these poisons are accumulating in your body, spoiling your blood vessels and your heart, your liver and destroying the whole body machinery. So cellulose is very important. Everybody ought to take two ounces a day of cellulose. That would mean two or three heaping tablespoonfuls of bran at every meal or the equivalent of it or Colax or agar-agar is a very excellent thing and there are plenty of people that will pay a dollar a ~~box~~ box for Colax or a dollar a pound for agar-agar and take that with a good deal of difficulty when they could get bran for a few cents a pound and bran would be just exactly as good and may be better. Bran is now to be obtained almost everywhere. About fourteen or fifteen years ago we began having sterilized bran put up in packages and I am very glad to say that various manufacturers of cereals are now taking up the idea and bran is to be found almost everywhere at almost any corner grocery store. Of course it is not always
14691. the nicest kind of bran because they do not always take proper pains. Bran to be used in this way should be properly prepared. The wheat should be thoroughly cleaned and washed before it is ground, and then the bran should be sterilized because dirt and germs of wheat are on the outside, so the bran ought to be sterilized. You can get ordinary bran yourselves if you do not find it convenient to buy sterilized bran, and take care to see that there are no live creatures in it, but if there are a few, they are not so bad as germs, oysters, clams and horrible things of that kind, because they are vegetarian animals, you see, and live on

bran so they are reasonably clean. They are not scavengers. Get some bran and make a very thick mush of it in hot water. Put it in a deep pan, put it in the oven and bake it until it becomes dry. They grind it up with an ordinary coffee mill and you will have good sterilized bran that will be perfectly wholesome. Anybody can prepare that without any difficulty at all. Bran is one of the most useful things I know of. We must encourage its use by discouraging the use of the superfine ~~white~~ ^{white} flour bread and all products of that kind and get back to the ^{ways of} primitive ancestors who ground up the whole grain and ate it and they didn't grind up dirty grain either. Some years ago I spent some time studying the habits of the Pueblo Indians and I saw the grain lying about in dirty places and I said, "Why, these people are terribly filthy in their habits", but one day I happened to get into a position where I could look down upon the village and I found the roof of all the ~~the~~ huts had spread out upon it some great big sheets of white cloth that had been covered with wheat that had been washed and was drying in the sun. Before using the wheat they wash, and wash and wash it thoroughly and then dry it in the sun and then grind it and make the sweetest, nicest cakes you ever saw. ~~That~~ Now there is another food principle of value in disinfecting the alimentary canal. We have mentioned, fruits, acids, starch and cellulose and now we have another and that is raw foods. Rawness is a valuable element. You have heard of the raw food faddists. Some of them have gotten rich in selling raw oatmeal for twenty-five cents a package, simply because it has been blessed by somebody to a party who had put his name upon it. There is a certain value in it, but it is not best to eat raw potatoes or raw oatmeal or things of that ~~sort~~ kind. There are plenty of raw foods which are wholesome and natural for us. There are raw apples for example, the most digestible of all kinds of foodstuffs. They digest quicker and leave the stomach quicker than almost anything else you can eat. ~~All~~ ^{All} kinds of raw fruits and nuts may be taken in the raw state. They are prepared by a process of nature. They are cooked in the sun. The process of cooking does for the fruit largely what the process of digestion does but there is this difference. The process of ripening in the sun does what the process of cooking does ~~xxxxxxx~~ ^{it}, digests the raw bread

or fruit, the starch, but ripening in the sun digests the food completely. The starch of the green apple is by the actinic rays of the sun actually, completely, thoroughly digested. That raw starch in the process of ripening is first converted into dextrine, then into sugar and that is exactly what the body does to it. If you cook a green apple it will digest without any difficulty because the cooking partly digests it, but if you leave it in the sun and let nature deal with it, by and by the apple gets rosy and mellow and ripe and sweet and develops a rich flavor, and then when you eat it, it is already digested, ready to be immediately absorbed. It does not tax the digestive organs at all. That is the reason why one may eat fruit between meals or at any other time. It doesn't do any harm to eat ripe fruit like a ripe juicy apple or watermelon or cantaloupe or anything of that sort. It can be taken at any time because it doesn't tax the digestive organs. The same thing is true of fruit juices but there is something more. Cooking by heat destroys certain very important elements that are present in the food. It kills germs, while cooking in the sunlight leaves all the elements alive and there is a difference between a live food and a dead food. A live food is taken into the body, its individual particles and cells separated out without going through a process of destruction such as takes place in the kettle or in the oven in the process of cooking. Of course, in cooking the vitality of the fruit is destroyed. It is no longer a living thing, but there is no opportunity left, there is no interval between the beginning of the process of digestion and the ending of that process in which the food can undergo putrefactive changes. On the other hand the food is cooked, killed, taken into the body and it may lie about waiting to be digested after a while, and in that time undergoes putrefactive or other changes so there is a difference between live food and dead food in this regard. You may say that seems theoretical, but ten years ago I made this experiment. I had noticed for years that many people could eat raw cabbage who could not eat cooked cabbage. Whenever they ~~ate~~ ^{ate} cooked ~~cabbage~~ cabbage they would have serious trouble. That is a very common observation. I took some of the cabbage, equal quantities of cooked and uncooked cabbage, then I mixed with

each of these quantities, a certain quantity of putrefactive germs from the colon, the same quantity in each. Then I put these away in an incubator where the temperature of the body was maintained for two days, and at the end of that time made an examination. The germs ~~xxxxxxx~~ put into the cooked cabbage had grown and multiplied enormously till it was a putrescent mass, but the germs put into the raw cabbage had almost all disappeared. The raw cabbage had not undergone any putrefactive changes at all. The germs had actually grown less and less and less in number till most of them had disappeared, so we see there is a difference between raw food and cooked food. It is a highly important thing to know this because knowing it, we will add to our food at every meal, some uncooked food, and in fact it is a great advantage for many people to make their diet consist as largely as possible of proper kinds of uncooked food. The same thing is true of cooked milk and uncooked milk. If the baby is fed on uncooked cow's milk, that is, it came from the cows in a proper way, so it is clean and ^{what is} known as certified milk, the baby will not be injured or infected and the bowel passages will be slightly acid and perfectly normal. If the baby is fed on cooked cow's milk, the bowel passages very soon become dark brown, foul smelling and putrescent and the baby is sick, because the cooked cow's milk rots where the uncooked cow's milk ferments. That is the difference. The uncooked cow's milk contains germs which cause fermentation and produce acids, but by cooking these germs are killed while the putrefactive germs are not killed so that they remain in the milk and multiply and the milk undergoes putrefaction. This is a very good illustration of the advantage of raw food, so you see there are several ways in which food serves as a disinfectant. It is a natural laxative that stimulates the activity of the intestine and so cleanses it out and promotes the flow of the digestive juices. The saliva helps to disinfect the mouth and the gastric juice disinfects the food-stuffs in the stomach and so prepares them for entry into the small intestine and fruit acids destroy germs and prevent their growth. In taking starchy substances in ~~the~~ quantity in our diet, this serves to promote fermentative changes and the acid formation in the intestine and to prevent ~~the~~ putrefaction; and cellulose contributes bulk and sweeps away, cleanses away the putrefying materials of the

intestine by promoting frequent bowel action, and raw foods do not readily undergo putrefaction because of their vitality, the fact that they are alive and the germs cannot attack them. You know the difference between live ~~grain~~ ^{grain} for instance and the dead ~~grain.~~ ^{grain.} You see a place where the wheat is large and you find the wheat is mouldy. The grass growing in the field is perfectly healthy and sweet, but cut it down and pile it up and very soon it gets mouldy and heats and changes are taking place in it. An apple tree that is healthy has no parasites growing on it, but let it get a little sickly so that its vitality is lowered and then the parasites ~~attack~~ ^{attack} in various ways. That is true of all kinds of plants as well as animals, so so long as the food is healthy, the germs cannot readily attack it and it is better on that account that it should be raw. There is just one thing more to say and that is that raw starch has this additional advantage as a disinfectant, that it finds its way down ~~into~~ the colon where it is needed. When starch is cooked, it is so readily digested and absorbed that none of it reaches the colon. It is in the colon or the lower part of the intestine where we want the acids to be formed, because if they are formed here in this part of the intestine, putrefaction is prevented. ~~I~~ ^{showed you} ~~showed you~~ ~~some time ago~~ ~~that~~ ~~was~~ ~~a~~ ~~beefsteak~~ that had been in sour milk for seven ^{or eight} ~~years~~. This beefsteak is simply put into the same yogurt buttermilk and it has been there for seven or eight years and it is perfectly sweet now, so if we can produce an acid condition in the intestine, putrefaction is prevented and that is what we aim to do in changing the intestinal flora. When the bowel discharges have ~~an~~ ^a ~~an~~ foul and putred odor, that means intestinal toxemia; it means putrefaction in the body and poison of the body. It is inevitable and cannot be otherwise, and the aim of every person should be to so manage his dietary, to so change his intestinal flora as to get rid of that putred odor, and the more completely this can be accomplished, the more ~~amply~~ ~~amply~~ efficiently we are able to combat disease. The most important thing ^{any of} ~~any of~~ you can do while you are here, my friends, is to change the intestinal flora, to get rid of these poisonous bacteria that are growing in the intestine and get planted there the normal healthy flora. ~~My~~ Mr. Duly said some years ago in his article on

Christian Science, that he called upon his doctor and said that his doctor said to him, "Mr. Duly, the trouble is the weeds are getting into your posy garden". That is the trouble with everybody who has chronic disease. The wild flora has driven out the normal acid-forming flora and the important thing is to change that flora. This problem we have been working ~~sux~~ at very hard for a great many years and at last we have found how to change the flora and it we do it in every case and we do it promptly. I will undertake to change anybody's flora in two weeks if they will do just what I tell them to do. When this is done, the tongue quickly clears off, the breath becomes sweet, the odor disappears from the bowel discharges and the person begins a new era of life and you feel as though you had been translated into another world. Your efficiency increases, youx don't have to sleep so long at night, you feel brimful of energy and a well spring of joy and energy within you because you have gotten rid of the paralyzing fatiguing products of poison. Some of you remember perhaps some years ago when the famous pugilist received his first bad defeat, "battling Nelson". The newspapers said it was the beefsteak that did it. Nelson said the truth of the matter was, "That morning when my trainer was not watching me, I had such a wonderful appetite I couldn't resist the temptation to take an extra beefsteak and that beefsteak made me ~~suxsux~~^{tired.}" It was the beefsteak that did it. That is what is the matter with a whole lot of people. Beefsteak makes them tired. It is not the beefsteak but the beefsteak germs that are left behind and are still rollicking in your intestine and attacking every little bit of protein they can get hold of and making these venomous poisons that unfit the body and pollute the blood stream and poison the brain and nerves and produce all sorts of distressing symptoms.

I thank you for your attention.

End.

Question Box Lecture at the Sanitarium Parlor, Monday, December 13, 1915

at 8:00 P. M.

By

J. H. Kellogg, M. D.,

It is astonishing how many excuses we will make for departing from the path of rectitude. I remember a gentleman who had a very bad stomach and needed to take good care of what he ate. He had been travelling through the South and came here with his stomach all upset. He said, "You know in the South I couldn't get anything to eat but hog and hominy so my stomach is all upset? I didn't eat a thing but hog and hominy." He was simply inclined that way for any intelligent man can get plenty of wholesome food anywhere he goes. It is just so with fresh air. People excuse themselves for breathing bad air which they know is not wholesome. Every man and woman that lives ought to keep outdoors at night. In order to sleep outdoors, it is not necessary to go out of the house. You can sleep outdoors in the house as well as outside of the house because you can bring the out of doors into the house and that is what this bed awning is for. Some people still insist that this idea that we must have so much fresh air is fanatical. Over in England about fifteen years ago when Dr. Hill made some experiments which he claimed proved that fresh air is not necessary at all but that all that is necessary is to have the air in motion. He sealed up hermetically in a cage some medical students and in a short time they were nearly smothered. He put in an electric fan and turned it on and the students remarked that they felt greatly refreshed as soon as the fan was started and were able to endure the foul air for a much longer time and Dr. Hill argued also that the Eskimo shuts himself up in his igloo and creeps into it through a long tunnel, closes

the hole after him so that when he gets in he is shut in tight and he lives there week after week in the stale, impure air and he has a little oil lamp burning for cooking purposes and for light and a little heat and perhaps half a dozen people will live in such close quarters all winter and they survive. Some white men have gone through the same experience and have lived. Stephenthanssen tells about living for weeks in one of these igloos. The argument is that this breathed air is so bad these people should die off very quickly. They tell a story of students shut up in a box and the air got so bad a lamp would not burn and actually went out. This man proposes a method of preventing mine explosion by putting carbonic acid gas into the mine in such quantity that the air will become so charged with it that nothing will burn, hence they could not possibly have an explosion. He assures them that the carbon dioxide is not a dangerous thing, that carbonic acid gas is a perfectly friendly substance, that one could drown him as he would drown in water and that it is only dangerous when taken in enormous excess. He examined the carbon dioxide and said a man could inhale three per cent. of it and it wouldn't do him any harm at all and the air ordinarily contains only one part in one thousand. Air contains only three or four per cent. and one can stand five per cent. of it. Of course, a candle would not burn in air that contained five per cent. of carbon dioxide, but a man can get oxygen enough so that he can live. When Dr. Hill examined the moisture of the air and he said this is not dangerous. He said probably it is the moisture in the air that makes us object to the remaining in a room ~~with~~ full of people with no ventilation and makes us feel oppressed. Then he examined the heat of the air. If the air is cooled off when it is too warm, things are better. Hence, there is no poison at all in the expired breath. That is the argument. It is a good deal like taking an automobile to pieces or a wagon, if you please. You examine the wheel and you say this is not the wagon. You examine the axle and you say this is not the wagon. You look at the tongue and you say this is not the wagon.

You see the wagon box and you know that is not the wagon. Hence, you say there is no such thing as a wagon but put all these things together and you have a wagon so it is possible when you put all the different things in the breath together that you might have something that is poisonous. At any rate, it is a common experience^{of} intelligent men and women that air that has been breathed 100 times is not fit to breathe again. As a matter of fact, air that has been breathed once is not fit to breathe again because it contains something that is poisonous. About twenty-six years ago I happened to be in the laboratory of Professor Brown-Sequard of Paris. I found a very interesting experiment going on. There were five cages each containing a rabbit. The air from the first cage passed over into the next cage. The cages were all kept together and there was a pump that pumped the air out so that the air through ~~these~~ ^{this} whole series of cages but there was a difference. The rabbit in the first cage was thriving because he got fresh air all the time. The rabbit in the second cage had to breathe the air which the first rabbit had breathed and he got sick and died. After two or three weeks he would always get sick. The rabbit in this cage had breathed the air after it had been breathed out here and passed through a bottle of sulphuric acid and then passed up into the cage and this rabbit died as sulphuric acid took the moisture out of the breath. The first was lime water which took the carbonic acid gas out of the breath and the rabbit died just the same. The air that went into the third bottle passed through another bottle of sulphuric acid and then came out and the air from the fourth cage was carried up to the room. This air went through sulphuric acid and this air had been there for six months and was just as healthy apparently as at the other end. The rabbit breathed the air that had been breathed by three rabbits before in three cages and in two of these cages the rabbits died very soon but the rabbit in this cage was perfectly healthy. The difference was that the moisture as well as the carbon dioxide had been taken out of the air. That is the case of the Eskimo.

The moisture condensed upon the wall of that icehouse and as the moisture condenses there is carried along with the moisture a poison that is in the moisture. Quite a number of years ago I put a bottle in a box of broken ice and salt so that it was frozen up. Then I had two men breathing into that bottle and the bottle after while became full of moisture which had been condensed in the breath. Some of the moisture in that bottle was injected into a guinea pig which very promptly died. I saw the guinea pig die with my own eyes. I did not inject the poison but somebody else did it for me and the poor guinea pig was sacrificed to science. Dr. Hill claimed to have repeated these experiments of Professor Brown-Sequard and he claims that the rabbits are all alive and happy. I am sure he is mistaken about it and I am sure that the results reported by Dr. Professor Brown were so because I saw the experiments myself. I was much interested today in reading a paper of the German investigator who confirms the results obtained by myself and by Dr. Brown-Sequard. There is evidently a toxin in the breath so the explanation of Dr. Hill's observation is simply that this poison of the breath is associated with the moisture of the breath and that if we get rid of the moisture we get rid of the poison at the same time so it has escaped observation. Dr. Hill has been claiming that it is only necessary to have the air moderately cool, the proper temperature, and to get the moisture out of it by cooling. According to him, the same air can be breathed over and over again if it is only kept clean. Dr. Hill/^{would}probably sympathize very much with a certain Dr. Hall who formerly published in New York a journal of health and published a good deal of nonsense and one of the things he published was that fresh air was quite unnecessary. He said, "Why, our Grandfathers did not pay any attention to fresh air, why should we?" He said, "It is perfectly absurd that we can have a whole hurricane going through our sleeping room at night all the time!" Why, it is as plain as the nose on your face that there is oxygen enough in the air to last a long, long time. He figured out that one-fifth of the air we breathe is oxygen in a bedroom containing ten feet

square and ten feet high containing a thousand cubic feet of air there are two hundred feet of oxygen and we need at a single breath only one cubic inch of oxygen so a cubic foot of oxygen is good for 1728 breaths, you see. That means that it would be good for one person for one hundred minutes. Then two hundred cubic feet of oxygen would be good for 20,000 minutes that would be, you see, three hundred and thirty-three days. There is air enough in a ten by ten bedroom to last a man a month so Dr. Hall figured that you has plenty of oxygen there and you need not be scared to death about having too little oxygen. He told a story of a couple of men who went to New York and one of them was suffering from asthma. He woke up in the middle of the night after having had supper at Delmonacos and eaten a lot of welch rarebit, broiled lobster, deviled crabs and things of that kind and he had an attack of asthma and he told his friend to open the window. He was sure he was going to die if he didn't get some fresh air so his friend got up and hunted about the room for some outlet. Finally he found some glass of some sort but he couldn't get the window up. His friend was just about expiring and begged him to break out a large glass so he broke it out and the man felt better right away. He begged his friend, however, to break out another glass and he broke out a second one and then the man felt entirely relieved. He went to sleep and slept sound the balance of the night. When he got up in the morning they found they had broken into a bookcase yet the man was perfectly relieved. That stale air shut up in the bookcase completely relieved him when he was smothering to death from asthma. Dr. Hall gave these very persuading figures to show that we do not need so much fresh air rushing through our houses all the time but the doctor overlooked one very essential thing and that is the reason why we need fresh air is not to give us oxygen to breathe, it is not to get rid of the carbon dioxide taken in our breath, but it is to get clean air and to wash away the poisons with which we have contaminated the air. A study of vacant houses, school houses, factories, etc., by Dr. Parks of England many years ago showed that whenever the contamination of air by human beings

was sufficient to increase the amount of carbon dioxide from four parts in ten thousand to six parts in ten thousand, the air becomes productive of disease. At that rate every breath we breathe out spoils three cubic feet of air and makes it unfit to breathe again. That is three-fourths of a barrel full of air. The purpose of ventilation is not to get oxygen but it is to wash away and carry off the foul air that we have contaminated with our breath. We breathe out only about two-thirds of a pint of air but that contaminates and renders unfit to breathe three cubic feet of air in our immediate vicinity and the purpose of ventilation is to dilute or wash away this air so that it will no longer be harmful. When we ventilate our rooms in this way the air is really more wholesome and we are less likely to suffer from tuberculosis and various house diseases but we must go further if we want to get curative effects. Dr. Trudeau who recently died at his home in the Adirondacks about thirty years ago found himself suffering from tuberculosis and the doctors said he must die but he went up into the mountains in the Adirondacks and he found he could live up there and he didn't feel as he did down in New York but felt better. He stayed there a year or two and got so well that he enjoyed very comfortable health. While he never got entirely rid of the tuberculosis--I think he might have gotten well. The fact is he never got rid of cigars. He smoked, kept right on smoking. He never realized that the cigar was an extra burden that he had not the power to carry safely so he continued to smoke his cigar and that is why he lost a few years of his useful life. I am satisfied he might have lived ten years more and might have conquered the germs entirely if he had given himself a fair change but he continued to smoke and so he died prematurely. He had a wonderful constitution to live on for thirty years but he found he had to live out of doors. He had to spend almost the entire time outdoors, lived indoors only just long enough to eat his meals. Some years ago I visited the state hospital for

treatment of tuberculosis patients in Massachusetts on a very cold winter day and I was all bundled up very warm and I was afraid I was going to freeze my nose in getting to this place for it was away out in the country and the bleakest place you can imagine. As I approached the institution there was a long piazza without any roof over it and a whole row of people on it. There were one hundred or more of them. There were several long buildings and I went into some of them and I saw a few of the people. I went in one place occupied by ladies as a dormitory; there was a great room several times as large as this; and beds all along the wall and every bed right close by a window and the windows wide open. There was one woman perched up on a high chair all done up with woolen blankets and with mittens on her hands writing a letter home. There wasn't a particle of heat in the house. I said, "At what temperature do you keep ~~it~~ the place in here?" "Well," the answer was, "The same temperature as outdoors. If it gets too cold in really cold weather, the patients have to go outdoors to get warm. We have the heat on in the morning about half an hour and about half an hour at night so as to warm the place up a little for the patients to dress in the morning and to undress at night. All the rest of the time, that is, for twenty-three hours out of the twenty-four, those patients were exposed to any temperature that the coldest winters bring and without any fire whatever night or day, just simply living in a natural atmosphere. Of course, they are not cold because they are dressed so warm that they keep warm. A polar bear isn't cold. He is perfectly comfortable for he has a suit that is complete protection against the cold. It is the cold air these people find beneficial. 60% of all the people who came there suffering from tuberculosis got well. Since that time observations have been made upon a larger number in other parts of Massachusetts. In Boston Dr. Pratt told me that according to his observations 90% of the people had been restored to their health sufficiently so that they resumed their occupations and were enjoying excellent health and 95% had been

made practically well and I know some people today who are robust, healthy, vigorous people, who twelve or fifteen years ago were given up to die with tuberculosis. Our good friend, Professor Irving Fisher, has stood upon this platform here and told a larger audience than this all about his experience with tuberculosis. He went to Colorado to get well and he found when he was fifteen hours every day out of doors he didn't get any better. He found that he made no improvement at all and so he spent at least eighteen hours out of doors under the open sky out of every twenty-four. Then he began to improve. He finally recovered such splendid health that today examination in our X-ray Department and by our lung expert here, Dr. Pritchard, fails to find the smallest trace of any active disease in his lungs. There is a scar there where there has been a diseased spot. That is healed but it is completely healed and there is not the smallest trace of disease there. Consumption is going to get us and carry us off one of these days needlessly. If all of the people in this room were examined we would probably find that at least 9 people out of 10 would show evidence of pretty serious mischief in the lungs; they have had it some time. In one hundred adult people there are not more than four or five whose lungs do not show evidence of serious disease. The proportion is very much larger than this. We examine fluoroscopically the lungs of every person who comes here. I said to Dr. Case the other day, "What proportion of the persons you examine in your department do you find with perfectly sound lungs?" He said, "I have been for six months trying to find a single case of thoroughly healthy lungs for a good specimen for an example and have not yet found a pair of lungs that did not show some little trace of something wrong" and that is of adult lungs. Of people who die between the ages of 20 and 30, one-third die of that one disease, consumption. School teachers, clerks, stenographers and persons who live indoors, sedentary people in general, are simply being carried off by multitudes. Onetenth of all the people who die in the country die of tuberculosis. A large proportion of

this one-tenth who die, probably nearly half of them die between those ages, twenty and thirty, the most active, the most productive period of our lives, so we have carried off every year, in this county, seventy-five thousand people in the most productive and useful period of their lives by this disease and needlessly. What a shame it is that we allow this awful thing and it is simply due to ~~us~~ that the fact that we shut ourselves up and live indoors instead of living outdoors. We find it very inconvenient to live outdoors, especially in winter time. The bed gets too cold if we attempt to sleep outdoors. I, myself, when a school teacher boarding around, had an attack of what was supposed to be typhoid fever. Now I know it was an attack of tuberculosis. Fortunately, I survived and I hope established a sort of immunity. When one has typhoid fever and gets thoroughly over it, he doesn't have it again so when one gets entirely over tuberculosis, absolutely, he is liable to establish an immunity just as he does for smallpox, so I flatter myself it did me good on the whole and I take some consolation in that but it lessened my lung capacity somewhat. I wondered for a long time why my lung capacity was less than it ought to be for a person of my height and in spite of all my efforts I could not increase it until the X-ray showed a portion of my left lung had been the seat of tuberculosis and had grown fast to the chest wall so that it could not expand. I have had to fight against that handicap ever since and I was sixteen or seventeen. Notwithstanding the fact that I have not eaten any beefsteak which is supposed to ~~be~~ be so very necessary for people who want to fight tuberculosis and I am still alive. We have got to fight this thing by cultivating outdoor life. This is the only thing that will eradicate tuberculosis. We cannot eradicate it by laws or by anti-spitting ordinances. We cannot get rid of it by laws which make it a ^{crime} ~~fine~~ ^a for persons to infect anybody Many states now days are putting tuberculosis right along in the list with smallpox, scarlet fever and other infectious diseases but that won't stop it. The

only thing in the world is to render the whole population proof ? against tuberculosis just as we render them proof against smallpox by vaccination. Many years ago Dr. Trudeau inoculated six rabbits with tuberculosis germs. Three he put into a pen, the other three outdoors. The three he put outdoors got perfectly well in a short time and the three that went into the pen all died in a short time. Tuberculosis is a disease that thrives in a cage. It is a house disease and we must cultivate the constitutional vigor, resistance and vitality by living out of doors. You may not be able to stay out of doors all day but you can stay out of doors at night. You do not have to stay indoors at night, at least you can put your head out of the window. I am talking to you not so much for your sake as for my own sake. I know these things and I have got to tell them or else it is a burden on my soul and I want to see that every man and woman who comes here to this institution is informed of this thing so if you die it won't be my fault. (Applause) If you die prematurely I am not the blame for it. It is uncomfortable to sleep on the porch because the bed is so cold and you have to warm it up. If you open the windows wide and let the hurricane in and blow through the room it makes the room cold and the floors and the walls and everything in the room stone cold. As a matter of fact, under those circumstances, you are getting more cold air than you need. You do not need cold air in the corner of the room but only right where your nose is.

If one had a pipe two inches in diameter and it came straight down to his nose and was fastened to his face, he could get all the fresh air he could possibly make any use of all night along. So it is an easy problem if we undertake to solve it in that way. The bed can be warm and dry when you go to bed at night, then by means of this tube and canopy you will have a stream of cold air blowing in upon you all night, but not enough to produce the effects of a hurricane of cold air blowing in, so in the morning you simply pull the string and close up trap and in a short time the room is warm and everything is convenient and comfortable to get up. This is a convenient method of solving the problem because it is not always possible to fix the bed in relation to the window so that you can have a window tent. All that is necessary is to get the cold pure air to breathe. That is what does the good. We tried these tubes a number of years ago but they were a disappointment because we put the window board at the bottom of the window and sometimes the air would not come in in sufficient quantity. It never occurred to me to put that window board at the top of the window because cold air is heavier than warm air and putting it at the top of the window, the cold air is certain to flow down just as water does. We have been trying it already and find it works very well and in a short time any of you would like this arrangement for your windows can have it installed. We propose to give everyone of you a chance to get all the fresh air you want. We are going to do our duty. The winter is the best time of the year for getting well, if we improve our particular opportunity. Unfortunately the majority of people shut themselves up indoors and hover around the stove and furnace or toast their feet over the register so they come more and more and more susceptible. Some years ago a man sent for me and said it was so cold he couldn't stand it. I looked at the thermometer and found it 86. This man had been getting his room hotter and hotter and hotter from the time he shut himself up in the winter time. A lady told me she had catarrh this morning and she is going home for a change of climate on account of her catarrh.

She said, "I have been suffering a few days and I have taken great care to keep away from the cold." The best way in the world to get rid of the cold is to go right out doors and stay there. Commodore Peary stated that when he and his companions were up North in the Arctic regions not one of them had a sore throat or catarrh, but when they came down to civilization and began to sleep in infected hotels they began to suffer from catarrhs and colds. Cold air is just as good for a duodenal ulcer as for tuberculosis. Duodenal ulcer is due to lowered vital resistance just as much as tuberculosis. Half the people who have tuberculosis get it because they first get constipated; their blood gets filled with poisons; their vitality is reduced to a low level because their bodies are contaminated with these poisons and they have lost the power to reduce the tuberculosis germs. The same thing is true of people who have duodenal ulcer. The body has lost the power to resist the germs which attack the body at that particular spot, so they get duodenal ulcer. A lady came to my office the other night ~~and~~ who was very much ~~fix~~ frightened. She said, "Doctor, I'm afraid I have got an ulcer of the didodinium." She was really very much scared. She didn't have any symptoms of didodinium or anything of that sort. Cold air is just as good for indigestion as it is for tuberculosis. It is good for neurasthenia. There isn't anything better for neurasthenia than cold air. The man who has neurasthenia, if you can just turn him out of doors and make him stay there he will get over his neurasthenia in a hurry. I think there are very few neurasthenics who would survive three or four weeks out of doors. The healing power is in the body. It is not in the bath you take or the diet you take, the healing power is in the body itself and the reason why your body has not cured you before, did not cure you at the start, was because there were so many handicaps and obstacles in the way. All that we can possibly do for you here in this institution is simply to take the obstacles out of the way. We cannot supply you with healing power. Healing power, my friends, is Almighty power; healing power is creating power. The power that heals us when we are sick is the very same power that made us. There is nothing

short of infinite power that can heal the man or woman who is sick and ^{is} because we are fighting against this power. We do not stop to think always in how many ways we are in rebellion against our maker. We are rather likely to think that if we are living upright lives morally we are all right, all safe, and we are going to perdition as fast as we can at the same time. We do not steal or rob or lie or commit any crime and we think we are really very very good, when we are going straight down to perdition all the time, physical perdition ~~skkxk~~ I mean. A man who has got a really monumental dyspepsia is in purgatory already and there is something worse awaiting him if he keeps going down that road. We do not recognize as we should the fact that there is a greater decalogue, there is a decalogue that pertains to our physical bodies as well as to our moral nature and we forget all about our obligations to this greater decalogue which ~~skkxk~~ ^{says} to us, "Thou shalt not eat fried oysters and bedeviled crabs and things of that kind". We forget all about the "Shalt Not" in relation to diet, ^{and} Thou shalt not eat things that no human ~~beings~~ has any right to eat. I met today a gentlemen ~~a~~ who has recently come from ^{the} great surgical center of Rochester, Minnesota. We had the honor a few days ago to have a call from Dr. Wm. Mayo, the senior surgeon there and I had a letter also from Dr. Mayo. He was good enough to say that he enjoyed every minute of his stay here and is coming again, so we feel very highly gratified that Dr. Mayo approved of what he saw here. This friend of mine said he was at the Mayo Clinic three days ago and Dr. Charles Mayo, the brother of Dr. Mayo, said he gave ^{regular} a vegetarian sermon. He said, "No man alive has any business to eat beefsteak except the ditch digger and he cannot afford to pay for it so he ought not to eat it either" so you will know something about how he feels about it. Dr. ~~Wm~~ William Mayo said, "I eat less meat ~~kxxx~~ all the time. I only eat a little once a day anyway and I am sure it is not very good for us and we ought to eat less." So we are not very far apart in our ideas upon this subject, but there are a great ~~gask~~ many other "thou shalt notes" that we neglect. For instance, there is a law

that says, "Thou shalt not smoke cigars." Some of these gentlemen never thought about that, I am sure. You say, "How do you know there is such a law as that?" When I was a small boy I saw some people smoking and I thought that it must be awfully nice so I fixed up a pipe myself and I took four whiffs from that pipe and about that time I began to think that I had better pause a little while and think this thing over. The more I thought the more I concluded I didn't want to smoke. In five minutes I was vomiting and felt dreadfully sick and I thought my heart was going to stop and I really felt as though I was going to die. That is what happens to the majority of boys. Once in a while a boy actually inherits a predisposition to smoke from his smoking father but the majority of normal human beings, the first time they take tobacco are made deathly sick by it and that sickness that the boy experiences is the voice of Almighty God speaking to that boy and saying to him, "Thou shalt not smoke." This thing is a poison. It is a thing that never was intended for human consumption but was intended only for tobacco worms, to kill vermin on sheep and things of that kind and was never intended for human consumption. There are a great many other "Thou shalt nots". When we find ourselves suffering pain, that pain is the voice of God talking to us and saying, "Thou shalt not do something." It is our duty to look around and see what it is. It is the physical conscience, if you please, appealing to us to stop doing this thing. "Don't do this, don't do that, don't do something else you have been doing that is wrong." It is a voice that has been put into us for the purpose of warning us. We ought not to blame anything because we suffer pain. It is one of the greatest blessings bestowed upon humanity. Suppose you could put your hand into the fire without suffering pain. We would be so careless we would burn our fingers off and the first thing we know we would not have any hands left so pain is the monitor to continually prompt us to keep ourselves in the way of physical rectitude. The body has somehow during the dark ages got into a sort of discredit. A religious teacher said that the purest souls are to be found in the dirtiest bodies.

People were actually forbidden to go to the public

baths and the body claimed to be looked upon as something of no account. The body was only a little shell of clay to be shaken off, shed, as soon as convenient and it is reported that out in Kansas there is actually to be found this epitaph upon a man's tomb stone: "Under this sod and under these trees lieth the body of Solomon Pease. He is not in this hole but only his pod. He shelled out his soul, it went up to God." That I think really expresses the sentiment of a great number of people, that the body is simply the pod to be gotten rid of when you shell the peas out and that it is of no account. If the pod perishes, so much the better for the peas. Practical intelligent people do not believe in that philosophy. We believe in keeping the body and soul together just as long as we can and it is our duty to do it by obeying the great laws of Nature and the healing power that is taking care of us that makes it possible for us to live under the adverse conditions to which we subject ourselves is the same power that made us, the great beneficent power that created us and keeps our hearts beating while we sleep and it is not only our duty but privilege to co-operate. It is common sense and reasonable for us to co-operate with this power and ~~axaxaxaxax~~ ^{the principal} thing, my friends, that you can get at this institution is to learn how to do that, how to live in harmony with God, if you please. I almost dislike to use that word because sometimes people immediately think it is irreverent and because there are so many wrong conceptions of God, such a lot of theological conceptions which vary almost with every individual but what I mean by the term "God" is a great beneficent power to whom we all owe our existence and that keeps us and sustains us in our life and I cannot conceive of this power as being anything other than a most infinite, beneficent and kind as well as an infinite powerful energy and intelligence. But you say if God is healing us why don't he do it right away quick? Why does he let us suffer? The answer is because he can't. You say you limit the power of the Almighty. I answer certainly. God is perfect and because He is perfect He is limited by His perfection. You and I can do things that God

cannot do. God cannot lie. Any of us can lie if we choose to. God cannot lie. God cannot be unjust. We can be unjust. We can be careless and forgetful and neglectful to do our duty. God absolutely cannot. I met sometime ago a clergyman and he said, "You are sacrilegious. You are irreverent to say that there is anything God cannot do." I said, "I will give you a very simple problem." Here is a three year old calf. This calf was born three years ago and he has tramped over certain green pastures and has sipped water out of certain cool brooks and has ⁿskipped the grass off from certain shady banks and has been petted and scolded, chased by dogs and has had a whole lot of experience, hasn't he? "Yes, you are right but what of that?" I said, "God cannot make a three year old calf in a minute. He could make a calf that would look like a three year old calf but He would not have had the experience of a three year old calf." The man had never thought about that. God is a power limited, you see, by his own protection. These limitations make it absolutely impossible for God to cure a tobacco smoker of a tobacco heart unless he stops smoking. While he goes right on smoking he cannot do it. Why? Because God has already done all He could for him while he smoked. If He is going to do anything more for him, he has got to stop smoking because there is a definite law that says, "Thou shalt not smoke" and the great law that says, "The soul that sinneth, it shall die;" there is no escaping from. The only way we can escape from it even in part is obeying the injunction of the old prophet who said, "Cease to do evil and learn to do well" and the learning to do well is really as essential as the ceasing to do evil.

Q. Can anything be done to relieve sudden nervous pains of the left side of the face and the back of the neck ?

A. A person suffering from neurasthenia can have pains anywhere in his head or even in a toothache in his heel. I remember a man who said, " Doctor, it seems as though I have a headache here in my back!" It was the same kind of a pain you may have in the head you may also have in the back. Most of these pains are reflex pains. When a man has headache he doesn't want an operation

performed on his head to take the ache out but if he has a pain down in his back, "Well, I wonder if I have appendicitis and have got to have an operation." These pains are almost all of them, ninety-nine out of every hundred, reflex pains of just the same nature as the pains in your head. These pains in the head are generally toxic pains, sometimes due to a congested liver. If a man has pains between the shoulders that doesn't mean he has any special trouble but probably means he has gallstones in the gall-bladder or infection in the gall-bladder or mischief around underneath the liver here. Some years ago a poor girl came here suffering from so-called spinal irritation. She was like the woman of old who suffered much from many physicians. Her back was covered with scars. I said, "It looks as though you had some blisters on your back." She said, "I should think I had. The doctor tried mustard plasters till they wouldn't draw any more. Then he put on pure mustard till it wouldn't draw any more. Then he used Spanish fly blister so they wouldn't draw any more. Then he applied a little croton oil and rubbed on pure croton oil and that wouldn't have any more effect. Then he applied a hot iron. That poor girl's back was covered with scars from one end to the other where the doctor had been putting on red hot iron with the idea that she was suffering from spinal irritation. There was nothing the matter with her spine. Another lady said she had spinal irritation and she had an awful pain in her back. I said, "Let me examine your back but not the back side of your back. I want to examine the front side of your back, not the back side" so I pressed my finger down here just at the lower end of the sternum and she just doubled right up. The real trouble was with the ~~right~~ front side of her back instead of the back side of her back. The back, you see, has two sides. Her trouble was simply a reflex pain. We have got to get at the cause of these troubles. These neurasthenic pains are all either toxic or neurasthenic. Get it settled in your mind that your nerves are all right and all right all the time unless you are paralyzed or have inflammation of the nerves, neuritis or rheumatism of the nerves which sometimes happens but the nerves usually are all right. They are only telephone

wires. Suppose you got a telephone message that your house is on fire. You wouldn't throw the telephone down and say, "I am going to have this taken out. There must be something wrong with this telephone making such a disturbance as this" but you are glad and thankful that you have got a telephone to tell you that your house is on fire and you set to work at once to put out the fire. That is what neurasthenic pains are. It is simply the telephone warning you that you are not eating right, that your bowels are not moving properly, that you are not getting enough fresh air, that you are not living in accordance with the laws of life and health so you see it is important for us to co-operate with these wonderful powers that are within us and that is what these symptoms are for, to call our attention to things we need to do.

Q. Is milk with bananas and sweet apples a bad combination?

A. No, they are a good combination and milk and all fruits are a good combinations. Milk combines with acid fruits as well ^{as} with sweet fruits. The first thing that happens to milk when it gets into the stomach is it curdles. The baby's stomach is always sour if it is healthy. The hydrochloric acid or gastric juice of the stomach is intensely acid and coagulates the milk the first thing it does.

Q. Should cremation become a general method of exposing of the dead?

A. I do not think of that subject any more than I can help. Of course, that is a sanitary and scientific method.

Q. Why is fresh fish not a desirable food?

A. It is desirable food for whales because a whale has a stomach intended for the digestion of fish. The whale has from seven to eleven stomachs to digest fish with. All animals that live upon fish have complicated stomachs and the whale that is a fish eating animal altogether has seven stomachs and some of them have as many as eleven stomachs yet man undertakes to dispose of fish with just one little stomach and it is not ~~xxx~~ ~~xxx~~ fish ~~stomach~~ either but a fruit stomach. How about saw fish?

They are half rotten. Did you ever smell a Finnan Haddie? Dr. Nelson our bacteriologist some years ago went down to Baltimore to study with one of the professors down there ~~and~~ who makes a specialty of microscopy and bacteriology and he spent several weeks with him. When he came back he said, "The Professor told me something I thought you would be interested in. He said he did not dare publish what he knew about fish. He said that all kinds of preserved fish, salt fish, common salt mackerel, codfish, halibut and herring are just filled with bacteria. Fish undergo decomposition so quickly when taken out of the water you cannot preserve them by any means whatever without getting their getting contaminated and abounding with bacteria. The bacteria are extremely numerous. A recent investigation made showed that these fish contain anywhere from ^{million} ten to one hundred million germs in every small muscle. A ^{bit} body as big as a small teaspoonful contains from ten million to one hundred million germs. They are not the nice kind of germs either. They are not sour milk or buttermilk germs by any means. Take a fish out of the water, lay it away in a warm place behind the stove and what would be the situation of that fish in the course of twenty-four or forty-eight hours? The fish decays just as fast in the body as it does out of the body.

Q. Can a patient drink quantities of hot water between meals safely?

A. It is a good practice if you do not overdo it. The majority of people do not drink enough. I knew one man who drank 26 glasses of water before breakfast and, of course, that was too much.

Q. If bran causes a great deal of irritation and gas do you consider it advisable to continue the use of it?

A. By all means. By all means because these disturbances indicate that the change of flora is going on. That is the process by which the weeds are being pulled up and gotten rid of. After two or three weeks things will settle down to a quiet and normal state. Everybody suffering from

chronic disease needs to change his flora and the most important thing that can happen to you here is to get your flora changed. Change your flora and it will change your countenance, too, you know. The melancholy look will go along with the melancholy germs and that awful leathery complexion will fade out and in place of it will come a creamy, rosy complexion that you will be very proud to show your friends when you get home. I had a good illustration the other day in Grand Rapids. I met a doctor at the hotel and he stepped up to me and I really must say he was one of the handsomest men I ever saw in my life. His skin was as clear as a four year old boys and his cheeks were as delightful as the roses on a beautiful peach. His eye was sparkling and with his red lips he was a very handsome man. The doctor said, "You would hardly know me, would you?" He said, "I am another man entirely. When I came to Battle Creek a year and a half ago everybody thought I was going to die. I had Bright's disease and my colleagues knew it and they said it is all day with the doctor" but he said, "I don't know that I am sick. I am absolutely well. All the symptoms of Bright's disease have disappeared and here I am!" When that doctor came here his skin was the color of leather and the only thing we did for him of any consequence was to change his flora and show him how to eat, how to live wholesomely and to make his bowels move three times a day and now for a year and a half he has been climbing steadily up until he has gotten away from Bright's disease and he is the happiest man that can be.

Q. Is there any change of tissue of the mucous membrane in the case of colitis where the descending colon is involved?

A. Yes, the mucous membrane becomes diseased. Now this disease of the inside of the colon is entirely analogous to salt rheum or ~~eczema~~ eczema, you see, on the outside of the body. That is ~~the same~~ catarrh of the skin and colitis is a similar condition of the inside of the colon.

That is catarrh of the stomach and colitis is a similar condition of the inside of the colon. The difference is simply because of the difference in the amount of fluid present. There is a large amount of water in the mucus and you have a cast instead of a scab? and it looks like a membrane that falls away and comes off the bowel. If you kept the skin continually moist when you took off the dressing you would pull off, after while, some whitish looking scales that look very much like what comes away from the colon in colitis. The two diseases are practically identical so when we find a person with eczema, we almost universally find colitis in the colon.

Q. Why not let the folks know about the delightful things you are doing on the fourth floor?

A. If you have not visited the fourth floor parlor, I suggest that you do so. Go up there and knit a hood for your wife on a rake. There is a lady up there who will show you how take a common garden rake and a ball of yarn and do the most beautiful knitting you ever saw. It is so easy that even men can do it.

Q. Do prunes have the same effect as other fruits in keeping the blood alkaline?

A. I am very sorry to say that the prune is not useful for this purpose. The prune contains a certain amount of benzoic acid so that it is not available as a basic food. Fruits generally contain an excess of alkalies over acid but experiments made in our laboratory by the assistants of Dr. Mendel, Director of the Sheffield Scientific Laboratory at Yale, who spent the summer with us here because he said this was the best place for experimenting in the world along dietetic lines, found that the tomato, a fresh fruit that is known would alkalinize the blood with the one exception of the prune. That led to a new investigation of the composition of prunes and the result was to show that prunes contain benzoic acid in quite notable amount. We feel rather proud that this

discovery was made in our laboratory. While prunes are a useful fruit, we know now that they cannot be depended upon as the chief diet when we want to alkalinize the blood and that is what every chronic invalid needs to do. The use of meats, tea, coffee and the large use of cereals has a tendency to render the tissues acid. That is why we recommend everybody who comes here to take more fresh vegetables and fruits and to eat less cereals and cut out meats entirely because they are acid formers. By eliminating those acids, and in place of them taking food which contain bases, we balance up the reaction of the tissues.

Q. Is it possible for me to take a proper diet while traveling?

A. Most certainly. You can take it right along in your bag. That is the advantage of the simple diet. You can take it in your pocket. A person can take along in a little handbag enough to last him a month without any difficulty at all. Some years ago I was traveling on the train dictating letters to my stenographer and at the same time eating my lunch. Pretty soon somebody spoke to me. I saw it was a doctor, a prominent professor in a medical school. He said, "Well, I have caught you at last. For more than a dozen years I have been waiting to see what you eat and now I have caught you." I said, "Yes, here it is." "Well," he said, "Is that all you have got? I don't see anything there but some apples, some nuts and some zweibach." I said, "That is enough, isn't it?" He said, "It doesn't look to me as though you had anything at all to eat." I said, "What more can I want. Here is bread. That is the staff of life. Here are nuts. That is beefsteak and butter combined in one. They are 50% fat and in every pound of these nuts there is a pound and a half of beefsteak and two-thirds of a pound of butter and a whole lot of other good things besides in every pound of nuts." "Well", he said, "Is that so? I didn't know that." Then here are the apples. They are the dessert, the pie and the cake, ^{that} if you like so we get everything we could possibly want. I said, "You don't know how sweet that zweibach is." "Oh," he said, "It is sweet, is it?" "Yes," I said, "Indeed it is, if you chew it well" so he bit off a piece, chewed it a while. "Why", he said, "I can't taste anything at all."

"No", I said, "You have been over in the dining room blistering your mouth with mustard, pepper, peppersauce and things of that kind." "Well", he said, "How did you know that?" "I said, "I know it by your nose." "Well", he said, "I confess I do like things that give my palate a twist." I said, " That is just it and you have forget that they keep right on twisting after they get by your palate. They twist your stomach, your liver, your heart, your brain, your nerves. They are all twisted up into knots." He said, "I believe you are right, doctor. I am going to turn over a new leaf" and I think he tried to do it but it was too late.

Q. If there are adhesions and a weak condition of the bowels, is bran irritating?

A. ^{No.} Bran is not irritating. It looks irritating just as paper does but suppose it is wet in water. It is an entirely different thing so ^{wet} wheat bran is entirely different from dry bran. Wet bran is just as harmless and unirritating as wet paper. Bran is wood and paper is wood.

Q. What causes hyperacidity and a high acid condition in the urine?

A. Just the things I was telling you about, an excessively acid state of the tissues from the use of meats and from ~~the~~ excessive use of cereals. The worse sort of diet imaginable is bread and meat which used to be looked upon as really the staples of life. Meat and potatoes is a more rational combination because the meat contains an excess of acid and the potatoes contain an excess of bases or alkalies so the potato ~~xxxx~~ helps to antidote the beefsteak but cereals also contain an excess of acid, all the to the same extent that meat does. The best combination is that of fruits and vegetables with cereals taken in moderation and no meats at all because there is always an abundance in the body to produce acids. Acids are one of the products of ~~the~~ body work so we need an excess of bases always in our diet. If you once get your blood in the best possible condition, stick to a basic diet.

Q. When the Battle Creek idea is adopted by the whole civilized world where shall we get our leather for our shoes?

A. I am glad to see our friend has faith in that good plan coming

some time. Now then there are in the United States, at the present time, I believe, something like twenty-four million cattle. Suppose we should not kill any of those cattle. Would they live forever, hunt and hunt and grow old and die after while? If you allow the ox to live just as long as it can until it finally dies of old age, wouldn't its leather be tougher than if you kill him when he is young? The truth of the matter is, vegetable leather is being made already. More than ten years ago I saw in London shoes made of vegetable leather. These shoes were wonderfully tapped. The process of making and the demand being small made them a little more costly than leather. At the present time Germany is hard at work finding substitutes for all kinds of animal needs and I understand that vegetable leather is being made in Germany on a large scale at the present time and, when the great European war is over, we may find as one of the indirect blessings to follow us upon this horrible carnage that the world is well supplied with vegetable leather so that we shall not have to slaughter animals any more for that reason.

Q. What amount of protein is contained in chicken and turkey?

A. The amount of protein in beefsteak is about 19%, in chicken it is about 16 or 17% and in different fishes it is about 12, or 13 or 14 or 15% but it is not the amount but the kind of albumin and the fact that this albumin is not suited to our bodily needs. It may interest you to know that last week I had a letter from a doctor in Chicago who said, "My wife has been sensitized to all animal proteins. She is suffering from tuberculosis and has been vaccinated for tuberculosis and that has sensitized her to animal proteins so that she cannot take any kind of animal protein and I have consulted one of the greatest authorities on this matter in the United States and he told me my wife would have to live on Battle Creek foods so we have got a supply of Battle Creek foods but some of them taste so much like meat, we think

there must be some meat in them and we want to know for sure that there isn't any because my wife is sensitized to all animal proteins and cannot eat even Battle Creek foods if there is any meat in them. Of course, I took great pleasure in telling him there was no meat in any of our foods. The Doctor finally came up here for a couple of days to learn more about the Battle Creek diet which he had had no faith in before till he found it recommended by one of the highest authorities in the United States on subjects of that kind, one of our great professors of physiologic chemistry who himself has, within the last few months, adopted the Battle Creek diet and with very great profit so he has recommended it to other people. The Doctor came up here and spent a couple of days to get further information and when he went away he took with him one of our very efficient dietitians to instruct his wife and his whole household how to prepare the Battle Creek diet and how to live the Battle Creek way. I do not want any of you to imagine at what we call the Battle Creek diet or Battle Creek ideas ever originated in Battle Creek. We have not discovered any new thing here at all. There is not a single thing I know of in all our teaching of dietetics that is new. What we are trying to do is to find the old, old ways that our ancestors followed. We are seeking to restore the old paths as the prophet said, to find the old ways in which our primitive ancestors used to walk and to live that way because that must be the right way.

It is wonderful that the human race that has been developing through all the centuries has acquired its marvelous abilities and endurance not in the last few centuries but during the remote ages that history tells us nothing at all about. The thing is to find out what our great ancestors away back there ate. We have lost our natural instincts so we have to depend upon the instincts of other creatures. If you look around to see if you can find an animal in the forests anything like man to see what he eats, you will find the orangutan and chimpanzee and the gorilla, the man-like apes that are so

wonderfully intelligent and like to human beings that you take any portion of their skeleton, almost any single part of it, and you would say that it belongs to a man. They have fingers and hands and all the bones that we have in their skeleton like ours. We are degenerating faster than the monkey is. We used to have thirteen ribs like the monkey. Once in a while we find a person who has the thirteenth rib. We are losing our toes too. Did you notice that your little toe has but two joints instead of three? The monkey's little toe has three joints instead of two. One person out of four in this room now only has two joints in their fourth toe. The degeneration is traveling up and we have lost the use of our toes. You see a Japanese working on the roof of a house and you see ^{him} ~~them~~ hanging to the roof with his big toes. The Filipino hangs on ^{to} the mountainside with his big toe and sometimes seizes things with it just as the monkey does. We have no longer the prehensile big toe that our ancestors had and we are losing our teeth. I suppose twenty-five per cent. of the people in this room never had any wisdom teeth. The jaw is getting so short there isn't room for the wisdom teeth. We have lost our sense of smell very largely and we are losing our eyesight largely and our eyes change very rapidly. The Moons of Jupiter many years ago were actually ~~chang~~ seen by the men who lived in the forest. He saw them with his naked eye and I suppose there was a time when our ancestors could all of them count at least four of Jupiter's moons with the naked eye but now our eyes are degenerating and we are going down hill very, very fast because we are violating the laws of health and doing violence to normal instinct that God put into us to leave us in the right ~~way~~ but there they are. A little boy eight years old when at the neighbors at Thanksgiving time was invited to stop for dinner. He saw on the table for the first time something he had seen hung up in the butchershop and he exclaimed, "Why! That looks like a dead turkey." "Yes", said the lady, "We have roast turkey for dinner today. Won't you have some?" "Ch, no", he said, "I never eat dead turkeys" so the lady thought he ought to have something

so she proceeded to rake out of the interior of the turkey some of the stuffing and put it on his plate and offered it to him. He looked up with great astonishment. "What", said he, "Would you have me eat what the turkey ate?"

I thank you for your attention.

END.

V-M

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

Monday, December 27, 1915 at 8:00 P. M.

By

J. H. Kellogg, M. D.

Q. If the hearing is destroyed by the use of quinine, can it be restored?

A. I think cases must be rare, indeed, in which hearing is actually destroyed by quinine. Sometimes quinine in large doses impairs the hearing, but at the present time physicians, I think, are sufficiently acquainted with the possible evil effects of a large doses of quinine and with the fact that heroic doses are never necessary so that it is very rarely used in such doses as cause deafness. Probably the deafness referred to is really due to something else. Quinine is not a remedy to be trifled with for it does produce, in large doses, some very untoward effects. The way in which quinine is beneficial in malarial fever is that it kills or damages the malarial parasites more than it does the body. It does harm to both. Quinine paralyzes the parasites so that it cannot do its work or mischief and makes it possible for the white corpuscles of the blood to destroy the parasites. If the parasites survive the effect of the quinine and the attack of the white cells after while they seem to become accustomed to it, when it is used regularly, so that they are able to resist the toxic influence of the quinine and then maybe the quinine does more harm than good when it is used systematically and regularly. I have met cases in which whenever one took a dose of quinine he would immediately have a malarial chill and examination of the blood would show the malarial parasites there. that showed that the quinine weakened the white cells more than it did the parasites so that the parasites were able to grow and develop and a chill and paroxysm would occur.

Q. What is the remedy if you do not use quinine.

A. The remedy is a mosquito net. I suppose for a missionary in a foreign land that the mosquito is one of the hardships that has to be encountered and it really is a difficult question. We cannot always control the condition. I do not know of any remedy that is better than quinine though it is a fact that anything that builds up the body resistance will help one to resist the attacks of these parasites. I recall an interesting circumstance at the Centennial Exhibition in 1876. I came in contact with a superintendent of a mission in Liberia who had a mission school. He got hold of the idea of living the simple life and cutting out meat, eating wholesome and natural foods and a few years afterwards he wrote me that his mission had greatly profited by what he had learned. He said that formerly it had been impossible for the teachers to go out on missionary tours into the interior without getting attacks of African fever but, since learning about hygienic living and cutting meat out of their dietary entirely, they found they were able to go into the interior as much as they liked and were immune against the African fever that they formerly suffered from. I was at Kokomo, Indiana, some years ago and a gentleman told me he had been three years in that town and during that three years every single family in the town had suffered from malarial fever with the exception of his family who were vegetarians. They had been exposed to the same conditions. About twenty-five years ago we had a visit from a very remarkable man, Captain Sanderson of the British Army. Some of you may have read a book entitled, "Fifteen Years Among the Wild Beasts of India" written by Captain Sanderson. This book is very interesting. The Captain arrived here and it seems he had been three weeks trying to find the Battle Creek Sanitarium but finally he got here. He got into two or three other Sanitariums by mistake first

but he finally arrived and spent three months with us. I said to him, "How did you happen to come all the way from Calcutta here?" He said, "I am at the head of the Elephant Service of the British Army of India and it is my duty to capture a lot of wild elephants every year. I take several hundred men with me and we form a ring two or three hundred miles in diameter and we have a great stockade made and drive the elephants into that." Not long before coming here he had captured 124 elephants at one time in one trap. That was the biggest bag of game I ever heard of. It was their duty after capturing these elephants to team and train them, to make them useful in connection with the military service of the country for at that time there were very few railroads in the interior. He said, "After several years I found that, whenever I went into the jungle, I got jungle fever." His spleen was very large and his liver was enlarged so he evidently had suffered very much from this horrible malignant tropical fever and he said, "finally it got so bad I would come down with fever as soon as I got into the jungles and I had to direct my men from a stretcher on which I was carried. I nearly died several times. I tried all sorts of things without results. Finally I met in Calcutta a sea captain, a friend of mine, who had come from Liverpool and he said, "I have a book here I believe it would be a good thing for you to read" so he loaned me a book he had bought of another sea captain at Liverpool who was an old retired captain who had been here to America and visited the Sanitarium and gotten hold of a little book we call "The Home Hand Book". He opened the book and read something about the vegetarian diet and one of the things that impressed him was the fact that the diet of man was naturally the same as that of the monkey, that man belonged to the same great class of animals, the primates, that the ape belonged to and that the natural diet of the ape was also the natural diet of man. He said that looked very reasonable. I noticed in the jungles the monkeys did not have malarial fever so it occurred to me that if I

would eat as the monkeys ate, maybe I could live where the monkeys could. After a few weeks' trial he returned to the jungles and he said, "I found that when I eat as the monkey ate I could go anywhere the monkey could go. When I followed the monkey in diet I could follow him everywhere else." At the time he came here he had been a vegetarian for several years. His health was apparently excellent and he could travel in the jungles with impunity although in those days the relation of mosquitoes to these diseases had not been discovered. He escaped malarial fever without making any change whatever in his habits except cutting out meats from his bill of fare and becoming a vegetarian. The reason why he was that he had a higher resistance. I am not saying at all that a vegetarian diet will make one immune against malarial fever but from these several instances which I believe it to be true that it does have some bearing on this question. Another thing of very great value is the sweating bath and the cold bath properly employed. When I was a boy I had malarial fever very bad for several months. I had a great prejudice against quinine and would not take it. I had heard that if we wore the malarial fever out we would not have it again so I undertook to wear it out. I thought the medicine might be just as bad as the disease. I had a chill every other day first, then every day, then twice a day. Somebody would come in most every day and bring in some new medicine and I would put it on the mantle piece until I had a long shelf full of medicine. An old gentleman finally recommended a remedy which he was sure was a certain cure. He said it ~~was~~ his sister-in-law and he was sure it would cure me. The cure was to go to the top of the stairs and creep down stairs head foremost and to do this three times in succession and then skip three days, then do it again and do that three times and it would certainly cure the disease. The difficulty with me at that time was I was not able to get to the top of the stairs. An old lady came in one day and told my mother what to do for me. She said she must give me a corn sweat. She said "As the boy

is going into the chill, then very quickly surround him with ears of corn that have been boiled and wrapped up in flannels so I was wrapped up with about twenty ears of hot corn and the consequence was that, at the time when the chill was expected to come, a sweat came instead and the chill did not arrive. The same thing was repeated the next day and in a week I was well. I didn't have any further occasion to experiment with this method of treatment which was an old fashioned one that had been used by the early pioneers of this country until after I had studied medicine and came to this institution to take charge of the place, just thirty-nine years ago the ^{first day of} last ~~of~~ October. The very first thing I encountered after coming here was an outbreak of malarial fever. I had thirty-five or forty cases of malarial fever on my hands. I cured every single one of them without a grain of quinine or a single dose of medicine. I adopted a method similar to that that cured me. I found by the use of a thermometer I could tell exactly when a chill was coming on because the temperature begins to rise about half an hour before the chill comes, so by taking the patient's temperature every half hour beginning early in the morning, then every fifteen minutes when the temperature begins to rise I would have the patient immediately surrounded with a lot of bricks that had been heated in an oven or a stove then, dipped in boiling water, and wrapped up in flannel. We would place these about the patient and he would soon be in a sweat and this method ^{would} ~~was~~ very rarely fail to break up a chill. We had to do the same thing the next time the chill was due but in the majority of cases if it did come, it would be very light and easily broken up but we had to be on guard for the next chill. I saw no ill effect at all except in one case in which we came pretty near burning a man up. The bricks were not dipped long enough so they set the flannels and the bed on fire and the poor fellow came near getting burned up but he escaped without any serious effects. I have since elaborated this method

somewhat and devised a very effective plan. We have had a number of cases from tropical countries who had worn out the effects of quinine. I remember one lady who said, "I cannot take quinine because it gives me quinine chills." In this case we are able to prevent the chill and cure the disease by this simple method. The patient would be gotten into the bath-room perhaps and given first a warm shower, then a sudden application of cold, a very, very cold application for just a few seconds, then the patient was wrapped up in blankets and gotten into a vigorous sweat. About twenty years ago I was in Mexico and got very badly bitten one night in a little country town where the mosquitoes nearly ate me up. A few days afterwards I had a vigorous malarial chill. The next day at the same time I found my nails getting blue and other evidences of a chill coming on and I gave myself a hot shower for a few moments, then immediately afterwards was deluged with ice water, two or three pailfuls, then I was wrapped up in Turkish sheets and woolen blankets and in a few moments I was sweating profusely and had only a very, very slight chill and a slight rise of temperature and the next day the ~~xxxxxxxxxxxx~~ repeated the same thing and that was the end of it. I remember several cases who came into the mission. I went to see a very malignant type of the disease. They had been using quinine in large doses without effect. I applied the same methods and with the exception of one case succeeded in curing every single case. In one case it was necessary to give two or three small doses of quinine so I am confident that the dietetic regimen I have suggested, the simple life regimen, the vegetarian diet, and a proper application of hydrotherapy, will serve as a preventive of the disease to a considerable degree and will go a long way toward effecting a cure. If I were going into a tropical country where there was a great deal of malarial fever, I should certainly take a supply of quinine along also for it is certainly a useful remedy. It has the disadvantage that when used in large doses it weakens the white blood cells which defend the body against

malaria. The red blood cells travel in the middle of the blood vessels and the white blood cells sort of loaf along the edges. The malarial parasites get into the red cells because the white cells eat them up and destroy them so they hide in the red cells and grow and develop and by and by get so large that they fill the whole cell and then they break up and produce toxins and that makes the fever. The quinine has the effect to weaken these parasites so when they are out in the blood they are unable to flee and get away from the white cells which are then able to capture them but the difficulty is quinine also weakens the white cells and sometimes the white cells of the blood are more susceptible to quinine than the parasites are. In that case, quinine would not do any good at all. When it has been used a long time it has a very damaging effect upon the white cells while the parasites apparently get used to it and it doesn't have much effect. By the combination of the cold bath and the proper diet with quinine the resistance of the body is raised to such a degree that the white cells are strong enough and numerous enough to capture and eat up the parasites so that the disease is cured.

Q. Give a general method for treating nasal catarrh.

A. Nasal catarrh is an infectious disease. One catches a cold, not from the weather or from an open window, but from getting his feet wet or from somebody who had a cold just as you catch smallpox, not from the water or the wind, but from somebody who has smallpox. It is a good thing to keep away from people who have colds. If you find anybody coughing, sneezing, and wearing the white flag, you better keep away from that white flag because it is all covered with germs of an infectious character that are shaken out into the air with the shaking of the handkerchief. If a person sitting next to you is sneezing and coughing and blowing the nose, get away from that vicinity because the person is infectious. There is no doubt about it.

Parents often give their children bad colds by fondling or kissing them. The whole family may get it from one person. By and by we will be vaccinated for colds and then we won't have them any more for we will get immune. A doctor in Scotland has discovered three or four particular germs that are the cause of colds and he claims quite a considerable degree of success in vaccinating for colds. The unfortunate thing about this method is that the immunity is brief. When one is vaccinated against smallpox the immunity will last for several years or perhaps for a lifetime but vaccination against a cold does not last usually more than six weeks to three months so it may not prove to be a very useful method. The best way is to keep the body in such a fine state of high resistance that it has the power to fight off the cold. We are all the time surrounded by enemies that are certain to do us harm if we are defenseless. We must keep our bodies in such fine fighting trim that if we have a slight attack of cold we will very soon be able to throw it off. If a man who has low resistance gets pneumonia there is a funeral. If a man with high resistance gets pneumonia he has a chill and a fever and in two or three days he is back at his work again. His resistance is high. That is the difference. We may not be able to fight disease altogether by living ever so carefully but we can keep our resistance so high that if we do get disease, a cold or pneumonia or some infectious malady, it will be a trifling affair. We will be quickly over it and won't suffer any serious injury from it. Catarrh is a chronic cold. You get it by taking cold. When one has had catarrh a long time the mucous membrane of the nose becomes thickened and sometimes the bones themselves become changed and cartilages grow into an obstruction which perpetuates the disease because it is necessary for the nasal cavity to be well ventilated to maintain the state of health. When the openings are closed up secretions adhere to the surfaces and the mucous will decompose and the germs will multiply, become virulent, and then ulcers will form and still greater mischief occur. Infection will travel along the little narrow ducts and get into the sinuses. You know we have all of us

rooms to let in our heads. There are a number of vacant spaces in the head that give resonance to the voice. When infection gets into these places, many people suffer from chronic headaches, neuralgia, and a dreadful face aches because of the infection in these sinuses. These troubles require special expert attention. They cannot be cured by snuffing a little lotion up the nose ^{or} applying the spray. Persons with chronic catarrh almost invariably have some of these serious things. If it were not any of these complications the person would get well very quickly but it is because of the infection in some of these little adjacent to the nasal cavity that the disease is perpetuated so the important thing is to see the specialist and have the particular treatment which your case requires. There is no panacea for catarrh and there is no simple remedy.

Q. Why are so many Battle Creek people suffering from the grippe?

A. I suppose that same question might be asked with perfect propriety with reference to New York people, Boston, Chicago, or Cincinnati people and all of the people of the country just now. I notice by the Chicago papers that there are 85,000 Chicago school children out of school because of the grippe. A lady mentioned this evening that in the town in which she lived in Pennsylvania, I believe Harrisburg, there are over 2,000 people suffering from grippe in that city alone so we are fortunate that we have not more of it. Really not very many people here at Battle Creek have the grippe and not many people about the Sanitarium. There is one here or there or somewhere else, a few people scattered about, who have a little cold and are over it the next day but you are very lucky to be here where you can be taken care of and get over it quickly and not have any bad after effects.

Q. What should be done to get rid of it?

A. The best thing to do when you find the grippe coming on is to get into a tub of water at a temperature of about 100°, let in some hot water and stay in there for five or ten or fifteen or twenty or even thirty

minutes till you just sweat profusely. You may take a hot bath if you like, say ten minutes, then be wrapped up in blankets and drink a gallon of water in the course of twenty-four hours anyway, and just keep sweating and sweating and sweating as much of the time as possible, sweat for half an hour and keep that up comfortably, stay in a warm room and keep drinking water and sweating and eat nothing but fruit and bran and lettuce and celery. You may take some Paraffin oil but do not eat any roast beef, fried chicken, stewed oysters or things of that sort. I learned a new thing about the oyster the other day. The oyster is a filter. A man who has been studying the oyster finds that the oyster passes through its mouth more than ten gallons of water every day. That is the way they strain the water and get the sewage out of it, you see. They spread out a fringe that catches everything that goes through and it is claimed that in some of these large rivers they have so many oysters growing on the bottom that probably all that water gets strained before it ever gets to the ocean. I do not say that ~~from~~ my own authority but I ran across a man who claimed to be quite a scientist and now I am giving it to you for what it is worth. Do not eat any of that sort of rubbish but eat clean wholesome things. Celery, lettuce and things of that kind are full of vitamins and you need vitamins very badly when you have grippe. You need fruit juices and carbohydrates but you do not need proteins or fats because they raise the temperature and are difficult to digest but fruits and things of that sort require no effort on the part of the stomach and they will give the body a supply of these vitalizing juices which are of so great value and will keep the stomach comfortable too. Drink water, eat fruit, celery, lettuce, cucumbers, any sort of fruit you want to, avoid bread, breakfast foods and meats and other hearty foods and fats and things of that sort.

cure

Another way to ~~correct~~ it is to go out doors and stay there without taking hot baths at all. Stay out doors all day in the coldest kind of weather and at night bundled up good and warm and sleep with the wind blowing on

you all night long. Really that is the quickest cure. It is not the most convenient but it is the quickest cure. The cold air cure effects a cure by raising your vital resistance so high that you are able to fight the disease off successfully. It used to be thought dangerous for one to come in contact with cold air when he had a cold or pneumonia or anything of that sort. I remember once meeting a doctor who thought it was just as wicked for me to recommend a cold compress to the chest as to shoot the patient through the head with a bullet, said it was down right murder and opposed it very much, very strongly. That was thirty years ago. He was very much stirred up about it notwithstanding the patient got well. Now days every doctor does that. Down in New York at the Children's Hospital they take the babies right out on the roof in the very coldest winter weather, even babies only six weeks old. They are well bundled up and protected but they breathe the cold air ~~after-while-~~ and get well whereas they would die if they stayed indoors. For myself if I get an attack of the grippe, I am going outdoors and am going to stay there.

Q. What causes acute Bright's disease?

A. Bright's disease is due to poisons. I don't know of any cause of Bright's disease except poisons. The kidneys have to eliminate at least some of the worst poisons of the body. Bouchard showed that bile is the most poisonous fluid produced in the body. according to his experiment of injecting bile into the urine into the bodies of rabbits he found it did not require very much, generally less than an ounce of bile. He found that bile was six times as poisonous as urine. Through the liver and through the kidneys the poisons are eliminated. The purpose of these organs is to destroy and eliminate poisons. The liver both destroys and eliminates poisons. The kidneys eliminate poisons. The bile carries off the alkaline metallic poisons while the kidneys carry off the acid poisons absorbed from the intestines. When a child has scarlet fever there is produced in the body

a large quantity of very deadly poisons. Some think it is produced from colin and the scarlet fever germ takes this poison and manufactures out of it a still more deadly poison. This scarlet fever poison the kidneys and the skin eliminate. That is why we have a peculiar eruption of scarlet fever because the skin is one of the places through which this poison is eliminated and being eliminated and concentrated in the skin, it produces the effects which we see. The skin may be so completely attacked that it peels off. Sometimes I have seen the cast of the whole hand that looked like a glove that had just slipped off the hand. The same poisons which are being eliminated through the kidneys have a similar affect upon the kidneys. If the poison is sufficiently intense or if the child is sufficiently susceptible to the poison or if the disease is virulent for a considerable length of time and the resistance of the child is low, the child is very likely to have an acute inflammation of the kidneys because they have so much work to do they are not able to do it without being damaged. The concentration of the poison upon the kidneys finally produces inflammation of the kidneys. The same thing happens in typhoid fever, measles, smallpox and with every single infectious disease. Every infectious disease is accompanied by the production of poisons which are ^{largely} ~~gradually~~ carried off through the kidneys so there is the danger of this complication of Bright's disease or acute inflammation of the kidneys and every form of infectious disease, ~~and~~ pneumonia as well as others. It also accompanies tuberculosis. Persons who have tuberculosis and visit a Sanitarium sometimes get well over tuberculosis and then go home and die of Bright's disease two or three years afterwards and examinations made by the Phipps Institute of Philadelphia show that 86% of all people who die of tuberculosis have serious disease of the kidneys. That is a good reason why persons who have tuberculosis should not eat meat. Whenever a man has Bright's disease his doctor says to him, "Cut out meat." A person who has tuberculosis is going to have Bright's disease if he hasn't got it already so the time for him to cut out the meat is when it will do him the most good, before

he has got the disease so bad that it will carry him off. About 94 or 95%
of all cases were found to show evidence of diseased kidneys ^{or} ~~and~~ liver
and this comes about through the influence of tuberculin, a poison produced
by the tubercle germ which injures the kidneys. The kidneys were not found
suffering from tubercular disease in most cases but it was simply a condition
found present when the kidney or liver had been long exposed to the influence
of any very chronic poisoning. Nicotine has the same effect. One of the most
common causes of Bright's disease in this country without doubt is the use of
tobacco. A man cannot use tobacco for any length of time without seriously
injuring his kidneys. A man who has used tobacco for a year has probably
taken several years off his life by the damage that has been done to his
kidneys. Tea and coffee operate in the same way but probably the most common
of all causes of Bright's disease is to be found in the poisons produced by
putrefaction in the colon. Material leaves the stomach normally in four hours.
It gets to the colon in four to six hours but if they are left here rotting and
decomposing for hours and hours, the poisons that are produced and absorbed into
the body, may just flood the body to such an extent that the poison-destroying
organs, the liver and the kidneys, are not able to deal with them. We are
constantly meeting people who are completely saturated with these poisons.
When you meet a person with a bad breath, I mean, of course, a person who does
not smoke or chew tobacco, a person with brown spots on his hands, with a
dingy complexion, with a badly coated tongue, you may just know that that
person is suffering from colon intoxication. The worst forms of intoxication
that human beings are ever exposed to is colon intoxication, and it is the
most common. Today I had to deal with a case in which the colon was enormous-
ly enlarged and part of it had become obstructed so that the material lay around
for days and days rotting and decomposing and the poor patient was in such a
sad way we simply had to take that part of the colon out entirely and make a
connection with the small intestine. The colon had lost its power to empty
itself. Thousands of people are going about with their colons loaded with

putrefying material, not many of them as bad as this, for in most cases the colon can be reformed by proper treatment. That is why so much benefit is being derived at the present time by thousands of people from the use of bran. The most important thing is to increase the bulk of food and bran is the most simple thing and is so cheap that nobody need be deprived of it. You can buy bran very cheaply at wholesale or you may pay ten to twenty-five cents a pound and pay for pictures, boxes and advertising. If people acquire the habit of eating plenty of bulk from childhood we would not have constipation. Many people have suffered so much from colitis that the mucous membrane has become dry and such persons have to take a lubricant. Fortunately, science in modern times has provided a lubricant. I do not know what the world would do without Paraffin. We have really got to the point where it has become one of the necessities of life. I do not know how we could do business in this institution without this very valuable remedy. I know there are patients who really appreciate it and who need it and get started toward health at least three or four weeks sooner and make more progress in that length of time than was formerly made in as many months. The thing to do is to get rid of the cause. The first thing that nearly every chronic invalid who comes to this institution needs more than anything else is to reform his colon, change his flora, or the germs that grow in the colon. They are not so desperately bad in most cases that they cannot be reformed. They can be reformed and will be reformed with a proper diet. Dr. Kendall of Harvard, some years ago, showed that even these malignant colon germs if we feed them sugar instead of poison, oysters and beefsteak and things of that sort, if we feed them starch and sugar they cease to make these poisons and ~~become~~ ^{become} friendly germs instead of unfriendly germs so the responsibility is upon us, you see, to see in the first place that the right sort of food is sent along down into the colon that will reform the germs and keep them at work, working for us instead of working against us and the next thing is to see that the cesspool of the colon is emptied three or four times a day. ^{If} ~~for~~ your bowels should move thoroughly five or six times a

day for a while it would not do you any harm at all. The idea is to get the material moving so rapidly through the colon that there is no time for putrefaction. When conditions ~~xxxx~~ are favorable, putrefaction is there and the infection is there. Then the more thoroughly you empty the colon, the better. If you had a great ugly sore on your arm you would want to keep it clean so if you have colitis in the colon you cannot expect it will ever heal unless it is kept free from the filth which has produced it in the first place. If it is kept clean it will get well quickly whereas if it is crowded full of putrescent material, it will be a very slow process of healing.

Q. Is lemon juice a good thing to drink in water just before breakfast?

A. Of course, water is the one drink that quenches thirst. Lemon juice is wholesome to one whose stomach is not sensitive. Too much of it will irritate the stomach of persons who have hyperacidity. People who have no hyperacidity can take lemons freely. Oranges perhaps are quite as good or better because they contain more sugar and are more nourishing.

Q. Is life a permanent resident of the body? Does life emanate from the body?

A. Life is a force. It is an energy. Life cannot die. There is no such thing as destruction of energy. You cannot destroy energy. The life that animates the body is a life that manifests itself in different ways. We may say we have three lives. There is the somatic or conscious life, the individual life that we recognize when we say a person is very much alive. We also recognize it when a man has died. This somatic life depends upon the co-operation of all the vital machinery. When the heart stops beating the life of the body in general dies but the life of the individual tissues of the body has not departed. Some years ago I visited the turtle market in old Key West and I saw on a counter there with all kinds of meat upon it and I noticed the man behind the counter was all the time going around pushing the meat back. They were all crawling off. A big steak had nearly reached the edge of the

table and the man discovered it and pushed it back. He was actually herding his chops and beefsteak. Among other things there was a big heart beating there. I was really startled. I said, "What does this mean? Everything seems alive here." "Why", he said, "This is the turde market." Outside I saw a dozen great Tortugas turtles on their backs. He said a turtle doesn't die until after it is cooked so I bought the heart and took it along with me, put it in a little basket, and took it to Cuba and the next morning that heart was beating still without having had any care at all and whenever it was touched with a feather it would beat. A turtle's heart can be kept beating in this way for a month. In fact, Dr. Carrell has in the Rockefeller Institute, right now, a piece of a chicken heart that he planted in a little tissue with some lymph three years ago and it has been growing there ever since and beating right along all the time. It stops beating perhaps for a day or two and he has to put it in a cold place and let it rest. It rests for twenty-four hours in a cold place and when he warms it up it goes to beating again. For three years that little heart has been separated from the chicken yet it is alive and a beating. That is what we call a tissue life. Cut a snake's head off and you will still find it alive. If you take the snake's heart you can put it away in cold storage and keep it for six weeks. Then warm it up and it will still beat. Dr. Carrell actually took out a cat's kidney, put it in cold storage, kept it for three months, then grafted it into another cat from which he removed a kidney and afterwards grafted in the second kidney so the cat had two kidneys which belonged to two other cats and the cat actually got along perfectly well so you see there is the conscious life of the body which the scientist calls the somatic life that stops when the heart stops beating. Then we have another life which resides in the tissues. Some enthusiastic people believe that the time will come when we can graft an organ from one person onto another. Already the dentists are grafting teeth. A man the other day was paid one hundred dollars for a very nice front tooth which he allowed to be pulled out of his jaw and put into the jaw of another man. It

grew fast all right. Now it is known that we can graft skin. Experiments have been made in grafting the cornea of the eye from one animal to another. I believe a man who had lost the cornea of his eye had the cornea of a rabbit's eye grafted onto his eye. It grew but lost its transparency after while. Bones are grafted from one part of the body into another and from one person to another and bones bear grafting very well and it is believed by some that the time will come when the man who has lost his leg can buy a leg and graft it on if he is willing to pay the price. There is life in the tissues that is independent of the somatic life. The kidney that was kept in cold storage and put into another cat was still alive although it had been all that time removed from the body. Now there is another life in the body. The somatic life may perish and the tissue life may perish. Dr. Carrell finds if he lets germs get into his culture where he is cultivating the chicken's heart, which, by the way grew into two weeks to forty times the original size, he planted so the little bit of chicken heart he planted has grown to a mass of hard tissue several times as big as the original heart he has grown heart enough to furnish a dozen chickens from that little particle which he planted, but if he allows a few germs to get in, then the tissue dies right away. The poisons of the germs will kill the tissue life, but there is another life and this life is the most wonderful of all. This is the life that keeps the heart beating while we sleep that presides over the functions of our bodies, that makes it possible for us to live. It is the life that takes the little germ of life from which we all begin, a little single cell and unfolds and develops that little cell into a perfect human being, a thinking, rational creature grown up from that one little bit of speck not so big as the head of a pin. This creative life is the real life. The somatic life and the tissue life are simply the results of the operation of ~~that~~ this great creative life which is back of all. That is the real life. These others are simply the results and the consequences. We use the word "life" in a great many different senses. We may say a man lived a good life, a long life, a healthy life. We use the word in a great many ways but the

real life is this power that is back of all, this power that created us, that presides over the functions of our bodies and that life can never die. That is the real life that cannot perish. It is just as impossible for that life to perish as it is for God himself to perish for this life is God.

Q. If a person's ileocecal valve has been in bad condition for several years, can anything lasting be done for it?

A. Yes, I fixed one this afternoon that will be just as good as ever.

Q. Why do so many persons complain of gas in the intestine after they have stopped eating meat for several months?

A. Gas in the intestine is due to the fermentation of starch, sugar or of cellulose. Persons who take a great deal of cellulose till after they get their flora changed are likely to suffer from gas because these germs that produce putrefaction, some of them also have the power of decomposing wood and they attack the cellulose and produce gas but this is a process which is incident to the change of flora. When you get the bad germs driven out and the normal set of germs established, then this symptom disappears. It is incident to the change. It generally takes three or four weeks to get rid of these gas-forming germs unless the person is thoroughgoing in his efforts to get rid of the putrefactive germs and to accomplish the change of flora. If one is really thoroughgoing, the thing can be accomplished in three or four weeks. Sometimes if the colon is badly crippled it may take a little longer.

Q. What causes the toe joints to grow large?

A. That looks something like gout, doesn't it. Beefsteak, uric acid, mutton chops, oysters and that sort of thing are pretty likely to produce enlargement of the toe joints.

Q. If the artery of the heart is enlarged does it follow that an increased throbbing is caused at that point after taking food?

A. When food is taken into stomach the solar plexus is more or less excited, of course, because of its immediate relation to the stomach.

The solar plexus controls the heart as well as the stomach. So many persons who are sensitive suffer from throbbing and palpitation after eating. That simply disappears after the stomach is gotten into better condition.

Q. Is diabetes curable?

A. Some cases are. All cases can be controlled. Many persons who are suffering from diabetes are like the person who has lost a finger or a hand. They have suffered a permanent injury but the disease can be arrested where it is and the person can be taught how to tolerate the disease so that he may live on for many, many years. The difficulty with a person suffering from diabetes is that there is an accumulation of sugar in the urine and also a tendency to an undue accumulation of certain acids in the body because the assimilative processes of the individual have been crippled. If this condition is not corrected it is going to get worse and worse because if there is a large quantity of sugar circulating in the blood and the tissues thus create conditions which make more sugar and tend to the production of a condition of acidosis and this may lead by and by to diabetic coma. A person with a large amount of sugar in the urine and in the blood is very subject to various disease, is likely to have boils or to die of tuberculosis. A great number of persons who have diabetes die of consumption and pneumonia or some other trouble because of the lowered vital resistance. Now it is possible in practically every single case to get the urine free from sugar and this can generally be accomplished in three or four days when the patient is put under the right regimen. In the majority of cases the sugar is gotten entirely free from sugar by the third day and the patient can be taught how to keep the urine free from sugar and then the disease makes no further progress. The person is more or less crippled. He cannot expect to have all the energy or engage in all the activities he might have done if he had not this disease but he can live nevertheless a useful if somewhat limited life.

Q. Is it well to take hydrochloric acid in liquid form for hypochlorhydria?

A. Yes, it would be well to take it but the difficulty is to get it down in sufficient quantity. It takes half an ounce of muriatic acid for a day's digestive work. If you put a drop of it on a piece of zinc it will burn a hole right through it. The healthy stomach makes half an ounce of just that sort of stuff every twenty-four hours for the digestion of food. Sometime ago a doctor washed a man's stomach out because it made too much acid and the report is the doctor put ten gallons of water through the stomach, then he examined it and found a whole ounce of hydrochloric acid in it, two tablespoonfuls of pure hydrochloric acid. Three or four drops of hydrochloric acid would not help the stomach to amount to anything. It might do the least bit of good but it would not be sufficient. It is necessary to take about a teaspoonful of hydrochloric acid for every meal. How in the world can you get it into your stomach. If you dilute it so that you can get it down you would have to take about a gallon of water. That would make such an enormous quantity it would be impractical. I asked that very question to Dr. Kuttner the associate of the famous Professor Ewald of Berlin a dozen years ago. He said he didn't give it ^{at} all except with a stomach tube once in a while when a person has cancer of the stomach in order to sweeten the stomach up a little but he said, "We cannot give enough to do any good so we do not give it at all" but it is possible to do it by combining the hydrochloric acid with protein. The hydrochloric acid enters into ~~the~~ a loose combination. In this way it can be swallowed without any difficulty. We have such a preparation which your doctor will prescribe for you if you need it.

Q. Are potatoes a laxative food?

A. No. The potato is almost entirely starch and water. The cellulose in the potato is so small in amount that the potato must be looked upon very much like rice. It is not laxative. If one takes potatoes very freely he must be sure to mix bran along with them. One who has inactive

bowels must begin ~~as~~ a regular campaign to help the colon. He must think about it for every single meal without one single exception. It is like getting off at a station and then buying a ticket for the next station and getting on again. Every single meal has to have a through ticket provided for it. If it is not, there is going to be stoppage along the road somewhere, in the cecum or some other place. We need to take somewhere from one to two ounces of cellulose every day. The equivalent of a couple of tablespoonfuls of bran at every meal is not too much for the average person suffering from chronic constipation. It may be necessary to add a lubricant in addition in the shape of paraffin in some form.

I thank you for your attention.

END.

Conn. Suet. p. 5.

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

Monday, December 27, 1915 at 8:00 P. M.

by

J. H. Kellogg, M. D.

Q. If the hearing be destroyed by the use of quinine, can it be restored?

A. I think cases must be rare, indeed, in which hearing is actually destroyed by quinine. Sometimes quinine in large doses impairs the hearing, but at the present time physicians, I think, are sufficiently acquainted with the possible evil effects of large doses of quinine and with the fact that heroic doses are never necessary so that it is very rarely used in such doses as cause deafness. Probably the deafness referred to is really due to something else. Quinine is not a remedy to be trifled with for it does produce, in large doses, some very untoward effects. The way in which quinine is beneficial in malarial fever is that it kills or damages the malarial parasite more than it does the body. It does harm to both. Quinine paralyzes the parasite so that it cannot do its work or mischief and makes it possible for the white corpuscles of the blood to destroy the parasite. If the parasites survive the effect of the quinine and the attack of the white cells after while they seem to become accustomed to it, when it is used regularly, so that they are able to resist the toxic influence of the quinine and then maybe the quinine does more harm than good when it is used systematically and regularly. I have met cases in which whenever one took a dose of quinine he would immediately have a malarial chill and examination of the blood would show the malarial parasites there. That showed that the quinine weakened the white cells

more than it did the parasites so that the parasites were able to grow and develop and a chill and paroxysm would occur.

Q. What is the remedy if you do not use quinine?

A. The remedy is a mosquito net. I suppose for a missionary in a foreign land that the mosquito is one of the hardships that has to be encountered and it really is a difficult question. We cannot always control the condition. I do not know of any remedy that is better than quinine though it is a fact that anything that builds up the bodily resistance will help one to resist the attacks of these parasites. I recall an interesting circumstance at the Centennial Exhibition in 1876. I came in contact with a superintendent of a mission in Liberia who had a mission school. He got hold of the idea of living the simple life and cutting out meat, eating wholesome and natural foods and a few years afterwards he wrote me that his mission had greatly profited by what he had learned. He said that formerly it had been impossible for the teachers to go out ~~and~~ on missionary tours into the interior without getting attacks of African fever but, since learning about hygienic living and cutting meat out of their dietary entirely, they found they were able to go into the interior as much as they liked and were immune against the African fever that they formerly suffered from. I was at Kokomo, Indiana, some years ago and a gentleman told me he had been three years in the town and during that three years every single family in that town had suffered from malarial fever with the exception of his family who were vegetarians. They had been exposed to the same conditions. About twenty-five years ago we had a visit from a very remarkable man, Capt. Sanderson of the British Army. Some of you may have read a book entitled, "Fifteen Years Among the Wild Beasts of India" written by Capt. Sanderson. This book is very interesting. The Captain arrived here and it seems he had been three weeks trying to find the Battle Creek Sanitarium but finally he got here. He got into two or three other Sanitariums ^{by} ~~but~~ mistake first

but he finally arrived and spent three months with us. I said to him, "How did you happen to come all the way from Calcutta here?" He said, "I am at the head of the Elephant Service of the British Army of India and it is my duty to capture a lot of wild elephants every year. I take several hundred men with me and we form a ring two or three hundred miles in diameter and we have a great stockade made and drive the elephants into that." Not long before coming here he had captured 124 elephants at one time in one trap. That was the biggest bag of game I ever heard of. It was their duty after capturing these elephants to team and train them, to make them useful in connection with the military service of the country for at that time there were very few railroads in the interior. He said, "After several years I found that, whenever I went into the jungle, I got jungle fever." His spleen was very large and his liver was enlarged so he evidently had suffered very much from this horrible malignant tropical fever and he said, "finally it got so bad I would come down with fever as soon as I got into the jungles and I had to direct my men from a stretcher on which I was carried. I nearly died several times. I tried all sorts of things without results. Finally I met in Calcutta a sea captain, a friend of mine, who had come from Liverpool and he said, "I have a book here I believe it would be a good thing for you to read" so he loaned me a book he had bought of another sea captain at Liverpool who was an old retired captain who had been here to America and visited the Sanitarium and gotten hold of a little book we call "The Home Hand Book". He opened the book and read something about the vegetarian diet and one of the things that impressed him was the fact that the diet of man was naturally the same as that of the monkey, that man belonged to the same great class of animals, the primates, that the ape belonged to and that the natural diet of the ape was also the natural diet of man. He said that looked very reasonable. I noticed in the jungles the monkeys did not have malarial fever so it occurred to me that if I

would eat as the monkeys ate, maybe I could live where the monkeys could. After a few weeks trial he returned to the jungles and he said, "I found that when I eat as the monkey ate I could go anywhere the monkey could go. When I followed the monkey in diet I could follow him everywhere else." At the time he came here he had been a vegetarian for several years. His health was apparently excellent and he could travel in the jungles with impunity although in those days the relation of mosquitoes to these diseases had not been discovered. He escaped malarial fever without making any change whatever in his habits except cutting out meats from his bill of fare and becoming a vegetarian. The reason why he was that he had a higher resistance. I am not saying at all that a vegetarian diet will make one immune against malarial fever but from these several instances which I believe it to be true that it does have some bearing on this question. Another thing of very great value is the sweating bath and the cold bath properly employed. When I was a boy I had malarial fever very bad for several months. I had a great prejudice against quinine and would not take it. I had heard that if we wore the malarial fever out we would not have it again so I undertook to wear it out. I thought the medicine might be just as bad as the disease. I had a chill every other day first, then every day, then twice a day. Somebody would come in most every day and bring in some new medicine and I would put it on the mantle piece until I had a long shelf full of medicine. An old gentleman finally recommended a remedy which he was sure was a certain cure. He said it ~~gave~~ ^{cured} his sister-in-law and he was sure it would cure me. The cure was to go to the top of the stairs and creep down stairs head foremost and to do this three times in succession and then skip three days, then do it again and do that three times and it would certainly cure the disease. The difficulty with me at that time was I was not able to get to the top of the stairs. An old lady came in one day and told my mother what to do for me. She said she must give me a corn sweat. She said "As the boy

is going into the chill, then very quickly surround him with ears of corn that have been boiled and wrapped up in flannels so I was wrapped up with about twenty ears of hot corn and the consequence was that, at the time when the chill was expected to come, a sweat came instead and the chill did not arrive. The same thing was repeated the next day and in a week I was well. I didn't have any further occasion to experiment with this method of treatment which was an old fashioned one that had been used by the early pioneers of this country until after I had studied medicine and came to this institution to take charge of the place, just thirty-nine years ago the ^{first day of} last of October. The very first thing I encountered after coming here was an outbreak of malarial fever. I had thirty-five or forty cases of malarial fever on my hands. I cured every single one of them without a grain of quinine or a single dose of medicine. I adopted a method similar to that that cured me. I found by the use of a thermometer I could tell exactly when a chill was coming on because the temperature begins to rise about half an hour before the chill comes, so by taking the patient's temperature every half hour beginning early in the morning, then every fifteen minutes when the temperature begins to rise I would have the patient immediately surrounded with a lot of bricks that had been heated in an oven or a stove then, dipped in boiling water, and wrapped up in flannel. We would place these about the patient and he would soon be in a sweat and this method ~~was~~^{would} very rarely fail to break up a chill. We had to do the same thing the next time the chill was due but in the majority of cases if it did come, it would be very light and easily broken up but we had to be on guard for the next chill. I saw no ill effect at all except in one case in which we came pretty near burning a man up. The bricks were not dipped long enough so they set the flannels and the bed on fire and the poor fellow came near getting burned up but he escaped without any serious effects. I have since elaborated this method

somewhat and devised a very effective plan. We have had a number of cases from tropical countries who had worn out the effects of quinine. I remember one lady who said, "I cannot take quinine because it gives me quinine chills." In this case we are able to prevent the chill and cure the disease by this simple method. The patient would be gotten into the bathroom perhaps and given first a warm shower, then a sudden application of cold, a very, very cold application for just a few seconds, then the patient was wrapped up in blankets and gotten into a vigorous sweat. About twenty years ago I was in Mexico and got very badly bitten one night in a little country town where the mosquitoes nearly ate me up. A few days afterwards I had a vigorous malarial chill. The next day at the same time I found my nails getting blue and other evidences of a chill coming on and I gave myself a hot shower for a few moments, then immediately afterwards was deluged with ice water, two or three pailfuls, then I was wrapped up in Turkish sheets and woolen blankets and in a few moments I was sweating profusely and had only a very, very slight chill and a slight rise of temperature and the next day the ~~fever~~ repeated the same thing and that was the end of it. I remember several cases who came into the mission. I went to see a very malignant type of the disease. They had been using quinine in large doses without effect. I applied the same methods and with the exception of one case succeeded in curing every single case. In one case it was necessary to give two or three small doses of quinine so I am confident that the dietetic regimen I have suggested, the simple life regimen, the vegetarian diet, and a proper application of hydrotherapy, will serve as a preventive of the disease to a considerable degree and will go a long ways toward effecting a cure. If I were going into a tropical country where there was a great deal of malarial fever, I should certainly take a supply of quinine along also for it is certainly a useful remedy. It has the disadvantage that when used in large doses it weakens the white blood cells which defend the body against

malaria. The red blood cells travel in the middle of the blood vessels and the white blood cells sort of loaf along the edges. The malarial parasites get into the red cells because the white cells eat them up and destroy them so they hide in the red cells and grow and develop and by and by get so large that they fill the whole cell and then they break up and produce toxins and that makes the fever. The quinine has the effect to weaken these parasites so when they are out in the blood they are unable to flee and get away from the white cells which are then able to capture them but the difficulty is quinine also weakens the white cells and sometimes the white cells of the blood are more susceptible to quinine than the parasites are. In that case, quinine would not do any good at all. When it has been used a long time it has a very damaging effect upon the white cells while the parasites apparently get used to it and it doesn't have much effect. By the combination of the cold bath and the proper diet with quinine the resistance of the body is raised to such a degree that the white cells are strong enough and numerous enough to capture and eat up the parasites so that the disease is cured.

Q. Give a general method for treating nasal catarrh.

A. Nasal catarrh is an infectious disease. One catches a cold, not from the weather or from an open window, but from getting his feet wet or from somebody who had a cold just as you catch smallpox, not from the water or the wind, but from somebody who has smallpox. It is a good thing to keep away from people who have colds. If you find anybody coughing, sneezing, and wearing the white flag, you better keep away from that white flag because it is all covered with germs of an infectious character that are shaken out into the air with the shaking of the handkerchief. If a person sitting next to you is sneezing and coughing and blowing the nose, get away from that vicinity because the person is infectious. There is no doubt about it.

Parents often give their children bad colds by fondling or kissing them. The whole family may get it from one person. By and by we will be vaccinated for colds and then we won't have them any more for we will get immune. A doctor in Scotland has discovered three or four particular germs that are the cause of colds and he claims quite a considerable degree of success in vaccinating for colds. The unfortunate thing about this method is that the immunity is brief. When one is vaccinated against smallpox the immunity will last for several years or perhaps for a lifetime but vaccination against a cold does not last usually more than six weeks to three months so it may not prove to be a very useful method. The best way is to keep the body in such a fine state of high resistance that it has the power to fight off the cold. We are all the time surrounded by enemies that are certain to do us harm if we are defenseless. We must keep our bodies in such fine fighting trim that if we have a slight attack of cold we will very soon be able to throw it off. If a man who has low resistance gets pneumonia there is a funeral. If a man with high resistance gets pneumonia he has a chill and a fever and in two or three days he is back at his work again. His resistance is high. That is the difference. We may not be able to fight disease altogether by living ever so carefully but we can keep our resistance so high that if we do get disease, a cold or pneumonia or some infectious malady, it will be a trifling affair. We will be quickly over it and won't suffer any serious injury from it. Catarrh is a chronic cold. You get it by taking cold. When one has had catarrh a long time the mucous membrane of the nose become thickened and sometimes the bones themselves become changed and cartilages grow into an obstruction which perpetuates the disease because it is necessary for the nasal cavity to be well ventilated to maintain the state of health. When the openings are closed up secretions adhere to the surfaces and the mucous will decompose and the germs will multiply, become virulent, and then ulcers will form and still greater mischief occur. Infection will travel along the little narrow ducts and get into the sinuses. You know we have all of us

rooms to let in our heads. There are a number of vacant spaces in the head that give resonance to the voice. When infection gets into these places, many people suffer from chronic headaches, neuralgia, and a dreadful face aches because of the infection in these sinuses. These troubles require special expert attention. They cannot be cured by snuffing a little lotion up the nose ^{or} applying the spray. Persons with chronic catarrh almost invariably have some of these serious things. If it were not any of these complications the person would get well very quickly but it is because of the infection in some of these little _____ adjacent to the nasal cavity that the disease is perpetuated so the important thing is to see the specialist and have the particular treatment which your case requires. There is no panacea for catarrh and there is no simple remedy.

Q. Why are so many Battle Creek people suffering from the grippe?

A. I suppose that same question might be asked with perfect propriety with reference to New York people, Boston, Chicago, or Cincinnati people and all of the people of the country just now. I notice by the Chicago papers that there are 85,000 Chicago school children out of school because of the grippe. A lady mentioned this evening that in the town in which she lived in Pennsylvania, I believe Harrishurg, there are over 2,000 people suffering from grippe in that city alone so we are fortunate that we have not more of it. Really not very many people here at Battle Creek have the grippe and not many people about the Sanitarium. There is one here or there or somewhere else, a few people scattered about, who have a little cold and are over it the next day but you are very lucky to be here where you can be taken care of and get over it quickly and not have any bad after effects.

Q. What should be done to get rid of it?

A. The best thing to do when you find the grippe coming on is to get into a tub of water at a temperature of about 100°, let in some hot water and stay in there for five or ten or fifteen or twenty or even thirty

minutes till you just sweat profusely. You may take a hot bath if you like, say ten minutes, then he wrapped up in blankets and drink a gallon of water in the course of twenty-four hours anyway, and just keep sweating and sweating and sweating as much of the time as possible, sweat for half an hour and keep that up comfortably, stay in a warm room and keep drinking water and sweating and eat nothing but fruit and bran and lettuce and celery. You may take some Paraffin oil but do not eat any roast beef, fried chicken, stewed oysters or things of that sort. I learned a new thing about the oyster the other day. The oyster is a filter. A man who has been studying the oyster finds that the oyster passes through its mouth more than ten gallons of water every day. That is the way they strain the water and get the sewage out of it, you see. They spread out a fringe that catches everything that goes through and it is claimed that in some of these large rivers they have so many oysters growing on the bottom that probably all that water gets strained before it ever gets to the ocean. I do not say that ~~xron~~ my own authority but I ran across a man who claimed to be quite a scientist and now I am giving it to you for what it is worth. Do not eat any of that sort of rubbish but eat clean wholesomethings. Celery, lettuce and things of that kind are full of ~~vitamines~~ and you need vitamins very badly when you have grippe. You need fruit juices and carbohydrates but you do not need proteins or fats because they raise the temperature and are difficult to digest but fruits and things of that sort require no effort on the part of the stomach and they will give the body a supply of these vitalizing juices which are of so great value and will keep the stomach comfortable too. Drink water, eat fruit, celery, lettuce, cucumbers, any sort of fruit you want to, avoid bread, breakfast foods and meats and other hearty foods and fats and things of that sort.

cure

Another way to ~~correct~~ it is to go out doors and stay there without taking hot baths at all. Stay out doors all day in the coldest kind of weather and at night bundled up good and warm and sleep with the wind blowing on

you all night long. Really that is the quickest cure. It is not the most convenient but it is the quickest cure. The cold air cure effects a cure by raising your vital resistance so high that you are able to fight the disease off successfully. It used to be thought dangerous for one to come in contact with cold air when he had a cold or pneumonia or anything of that sort. I remember once meeting a doctor who thought it was just as wicked for me to recommend a cold compress to the chest as to shoot the patient through the head with a bullet, said it was down right murder and opposed it very much, very strongly. That was thirty years ago. He was very much stirred up about it notwithstanding the patient got well. Now days every doctor does that. Down in New York at the Children's Hospital they take the babies right out on the roof in the very coldest winter weather, even babies only six weeks old. They are well bundled up and protected but they breathe the cold air ~~after-while-~~ and get well whereas they would die if they stayed indoors. For myself if I get an attack of the grippe, I am going outdoors and am going to stay there.

Q. What causes acute Bright's disease?

A. Bright's disease is due to poisons. I don't know of any cause of Bright's disease except poisons. The kidneys have to eliminate at least some of the worst poisons of the body. Bouchard showed that bile is the most poisonous fluid produced in the body. According to his experiment of injecting bile into the urine into the bodies of rabbits he found it did not require very much, generally less than an ounce of bile. He found that bile was six times as poisonous as urine. Through the liver and through the kidneys the poisons are eliminated. The purpose of these organs is to destroy and eliminate poisons. The liver both destroys and eliminates poisons. The kidneys eliminate poisons. The bile carries off the alkaline metallic poisons while the kidneys carry off the acid poisons absorbed from the intestines. When a child has scarlet fever there is produced in the body

a large quantity of very deadly poisons. Some think it is produced from colin and the scarlet fever germ takes this poison and manufactures out of it a still more deadly poison. This scarlet fever poison the kidneys and the skin eliminate. That is why we have a peculiar eruption of scarlet fever because the skin is one of the places through which this poison is eliminated and being eliminated and concentrated in the skin, it produces the effects which we see. The skin may be so completely attacked that it peels off. Sometimes I have seen the cast of the whole hand that looked like a glove that had just slipped off the hand. The same poisons which are being eliminated through the kidneys have a similar affect upon the kidneys. If the poison is sufficiently intense or if the child is sufficiently susceptible to the poison or if the disease is virulent for a considerable length of time and the resistance of the child is low, the child is very likely to have an acute inflammation of the kidneys because they have so much work to do they are not able to do it without being damaged. The concentration of the poison upon the kidneys finally produces inflammation of the kidneys. The same thing happens in typhoid fever, measles, smallpox and with every single infectious disease. Every infectious disease is accompanied by the production of poisons which are ^{largely} gradually carried off through the kidneys so there is the danger of this complication of Bright's disease or acute inflammation of the kidneys and every form of infectious disease, ~~and~~ pneumonia as well as others. It also accompanies tuberculosis. Persons who have tuberculosis and visit a Sanitarium sometimes get well over tuberculosis and then go home and die of Bright's disease two or three years afterwards and examinations made by the Phipps Institute of Philadelphia show that 86% of all people who die of tuberculosis have serious disease of the kidneys. That is a good reason why persons who have tuberculosis should not eat meat. Whenever a man has Bright's disease his doctor says to him, "Cut out meat." A person who has tuberculosis is going to have Bright's disease if he hasn't got it already so the time for him to cut out the meat is when it will do him the most good, before

he has got the disease so bad that it will carry him off. About 94 or 95%
 of all cases were found to show evidence of diseased kidneys ^{or} ~~and~~ liver
 and this comes about through the influence of tuberculin, a poison produced
 by the tubercle germ which injures the kidneys. The kidneys were not found
 suffering from tubercular disease in most cases but it was simply a condition
 found present when the kidney or liver had been long exposed to the influence
 of any very chronic poisoning. Nicotine has the same effect. One of the most
 common causes of Bright's disease in this country without doubt is the use of
 tobacco. A man cannot use tobacco for any length of time without seriously
 injuring his kidneys. A man who has used tobacco for a year has probably
 taken several years off his life by the damage that has been done to his
 kidneys. Tea and coffee operate in the same way but probably the most common
 of all causes of Bright's disease is to be found in the poisons produced by
 putrefaction in the colon. Material leaves the stomach normally in four hours.
 It gets to the colon in four to six hours but if they are left here rotting and
 decomposing for hours and hours, the poisons that are produced and absorbed into
 the body, may just flood the body to such an extent that the poison-destroying
 organs, the liver and the kidneys, are not able to deal with them. We are
 constantly meeting people who are completely saturated with these poisons.
 When you meet a person with a bad breath, I mean, of course, a person who does
 not smoke or chew tobacco, a person with brown spots on his hands, with a
 dingy complexion, with a badly coated tongue, you may just know that that
 person is suffering from colon intoxication, The worst form of intoxication
 that human beings are ever exposed to is colon intoxication, and it is the
 most common. Today I had to deal with a case in which the colon was enormous-
 ly enlarged and part of it had become obstructed so that the material lay around
 for days and days rotting and decomposing and the poor patient was in such a
 sad way we simply had to take that part of the colon out entirely and make a
 connection with the small intestine. The colon had lost its power to empty
 itself. Thousands of people are going about with their colons loaded with

cuts
 into colon

putrefying material, not many of them as bad as this, for in most cases the colon can be reformed by proper treatment. That is why so much benefit is being derived at the present time by thousands of people from the use of bran. The most important thing is to increase the bulk of food and bran is the most simple thing and is so cheap that nobody need be deprived of it. You can buy bran very cheaply at wholesale or you may pay ten to twenty-five cents a pound and pay for pictures, boxes and advertising. If people acquire the habit of eating plenty of bulk from childhood we would not have constipation. Many people have suffered so much from colitis that the mucous membrane has become dry and such persons have to take a lubricant. Fortunately, science in modern times has provided a lubricant. I do not know what the world would do without Paraffin. We have really got to the point where it has become one of the necessities of life. I do not know how we could do business in this institution without this very valuable remedy. I know there are patients who really appreciate it and who need it and get started toward health at least three or four weeks sooner and make more progress in that length of time than was formerly made in as many months. The thing to do is to get rid of the cause. The first thing that nearly every chronic invalid who comes to this institution needs more than anything else is to reform his colon, change his flora, or the germs that grow in the colon. They are not so desperately bad in most cases that they cannot be reformed. They can be reformed and will be reformed with a proper diet. Dr. Kendall of Harvard, some years ago, showed that even these malignant colon germs if we feed them sugar instead of poison, oysters and beefsteak and things of that sort, if we feed them starch and sugar, they cease to make these poisons and ~~become~~ ^{become} friendly germs instead of unfriendly germs so the responsibility is upon us, you see, to see in the first place that the right sort of food is sent along down into the colon that will reform the germs and keep them at work, working for us instead of working against us and the next thing is to see that the cesspool of the colon is emptied three or four times a day. ^{If} for your bowels should move thoroughly five or six times a

day for a while it would not do you any harm at all. The idea is to get the material moving so rapidly through the colon that there is no time for putrefaction. When conditions ~~xxx~~ are favorable, putrefaction is there and the infection is there. Then the more thoroughly you empty the colon, the better. If you had a great ugly sore on your arm you would want to keep it clean so if you have colitis in the colon you cannot expect it will ever heal unless it is kept free from the filth which has produced it in the first place. If it is kept clean it will get well quickly whereas if it is crowded full of putrescent material, it will be a very slow process of healing.

Q. Is lemon juice a good thing to drink in water just before breakfast?

A. Of course, water is the one drink that quenches thirst. Lemon juice is wholesome to one whose stomach is not sensitive. Too much of it will irritate the stomach of persons who have hyperacidity. People who have no hyperacidity can take lemons freely. Oranges perhaps are quite as good or better because they contain more sugar and are more nourishing.

Q. Is life a permanent resident of the body? Does life emanate from the body?

A. Life is a force. It is an energy. Life cannot die. There is no such thing as destruction of energy. You cannot destroy energy. The life that animates the body is a life that manifests itself in different ways. We may say we have three lives. There is the somatic or conscious life, the individual life that we recognize when we say a person is very much alive. We also recognize it when a man has died. This somatic life depends upon the co-operation of all the vital machinery. When the heart stops beating the life of the body in general dies but the life of the individual tissues of the body has not departed. Some years ago I visited the turtle market in old Key West and I saw on a counter there with all kinds of meat upon it and I noticed the man behind the counter was all the time going around pushing the meat back. They were all crawling off. A big steak had nearly reached the edge of the

table and the man discovered it and pushed it back. He was actually herding his chops and beefsteak. Among other things there was a big heart beating there. I was really startled. I said, "What does this mean? Everything seems alive here." "Why", he said, "This is the turtle market." Outside I saw a dozen great Tortugas turtles on their backs. He said a turtle doesn't die until after it is cooked so I bought the heart and took it along with me, put it in a little basket, and took it to Cuba and the next morning that heart was beating still without having had any care at all and whenever it was touched with a feather it would beat. A turtle's heart can be kept beating in this way for a month. In fact, Dr. Carrell has in the Rockefeller Institute, right now, a piece of a chicken heart that he planted in a little tissue with some lymph three years ago and it has been growing there ever since and beating right along all the time. It stops beating perhaps for a day or two and he has to put it in a cold place and let it rest. It rests for twenty-four hours in a cold place and when he warms it up it goes to beating again. For three years that little heart has been separated from the chicken yet it is alive and a beating. That is what we call a tissue life. Cut a snake's head off and you will still find it alive. If you take the snake's heart you can put it away in cold storage and keep it for six weeks. Then warm it up and it will still beat. Dr. Carrell actually took out a cat's kidney, put it in cold storage, kept it for three months, then grafted it into another cat from which he removed a kidney and afterwards grafted in the second kidney so the cat had two kidneys which belonged to two other cats and the cat actually got along perfectly well so you see there is the conscious life of the body which the scientist calls the somatic life that stops when the heart stops beating. Then we have another life which resides in the tissues. Some enthusiastic people believe that the time will come when we can graft an organ from one person onto another. Already the dentists are grafting teeth. A man the other day was paid one hundred dollars for a very nice front tooth which he allowed to be pulled out of his jaw and put into the jaw of another man. It

grew fast all right. Now it is known that we can graft skin. Experiments have been made in grafting the cornea of the eye from one animal to another. I believe a man who had lost the cornea of his eye had the cornea of a rabbit's eye grafted onto his eye. It grew but lost its transparency after while. Bones are grafted from one part of the body into another and from one person to another and bones bear grafting very well and it is believed by some that the time will come when the man who has lost his leg can buy a leg and graft it on if he is willing to pay the price. There is life in the tissues that is independent of the somatic life. The kidney that was kept in cold storage and put into another cat was still alive although it had been all that time removed from the body. Now there is another life in the body. The somatic life may perish and the tissue life may perish. Dr. Carrell finds if he lets germs get into his culture where he is cultivating the chicken's heart, which, by the way grew in two weeks to forty times the original size, he planted so the little bit of chicken heart he planted has grown to a mass of hard tissue several times as big as the original heart he has grown heart enough to furnish a dozen chickens from that little particle which he planted, but if he allows a few germs to get in, then the tissue dies right away. The poisons of the germs will kill the tissue life, but there is another life and this life is the most wonderful of all. This is the life that keeps the heart beating while we sleep that presides over the functions of our bodies, that makes it possible for us to live. It is the life that takes the little germ of life from which we all begin, a little single cell and unfolds and develops that little cell into a perfect human being, a thinking, rational creature grown up from that one little bit of speck not so big as the head of a pin. This creative life is the real life. The somatic life and the tissue life are simply the results of the operation of ~~this~~ this great creative life which is back of all. That is the real life. These others are simply the results and the consequences. We use the word "life" in a great many different senses. We may say a man lived a good life, a long life, a healthy life. We use the word in a great many ways but the

real life is this power that is back of all, this power that created us, that presides over the functions of our bodies and that life can never die. That is the real life that cannot perish. It is just as impossible for that life to perish as it is for God himself to perish for this life is God.

Q. If a person's ileocecal valve has been in bad condition for several years, can anything lasting be done for it?

A. Yes, I fixed one this afternoon that will be just as good as ever.

Q. Why do so many persons complain of gas in the intestine after they have stopped eating meat for several months?

A. Gas in the intestine is due to the fermentation of starch, sugar or of cellulose. Persons who take a great deal of cellulose till after they get their flora changed are likely to suffer from gas because these germs that produce putrefaction, some of them also have the power of decomposing wood and they attack the cellulose and produce gas but this is a process which is incident to the change of flora. When you get the bad germs driven out and the normal set of germs established, then this symptom disappears. It is incident to the change. It generally takes three or four weeks to get rid of these gas-forming germs unless the person is thoroughgoing in his efforts to get rid of the putrefactive germs and to accomplish the change of flora. If one is really thoroughgoing, the thing can be accomplished in three or four weeks. Sometimes if the colon is badly crippled it may take a little longer.

Q. What causes the toe joints to grow large?

A. That looks something like gout, doesn't it. Beefsteak, uric acid, mutton chops, oysters and that sort of thing are pretty likely to produce enlargement of the toe joints.

Q. If the artery of the heart is enlarged does it follow that an increased throbbing is caused at that point after taking food?

A. When food is taken into stomach the solar plexus is more or less excited, of course, because of its immediate relation to the stomach.

The solar plexus controls the heart as well as the stomach. So many persons who are sensitive suffer from throbbing and palpitation after eating. That simply disappears after the stomach is gotten into better condition.

Q. Is diabetes curable?

A. Some cases are. All cases can be controlled. Many persons who are suffering from diabetes are like the person who has lost a finger or a hand. They have suffered a permanent injury but the disease can be arrested where it is and the person can be taught how to tolerate the disease so that he may live on for many, many years. The difficulty with a person suffering from diabetes is that there is an accumulation of sugar in the urine and also a tendency to an undue accumulation of certain acids in the body because the assimilative processes of the individual have been crippled. If this condition is not corrected it is going to get worse and worse because if there is a large quantity of sugar circulating in the blood and the tissues thus create conditions which make more sugar and tend to the production of a condition of acidosis and this may lead by and by to diabetic coma. A person with a large amount of sugar in the urine and in the blood is very subject to various disease, is likely to have boils or to die of tuberculosis. A great number of persons who have diabetes die of consumption and pneumonia or some other trouble because of the lowered vital resistance. Now it is possible in practically every single case to get the urine free from sugar and this can generally be accomplished in three or four days when the patient is put under the right regimen. In the majority of cases the sugar is gotten entirely free from sugar by the third day and the patient can be taught how to keep the urine free from sugar and then the disease makes no further progress. The person is more or less crippled. He cannot expect to have all the energy or engage in all the activities he might have done if he had not this disease but he can live nevertheless a useful if somewhat limited life.

Q. Is it well to take hydrochloric acid in liquid form for hypochlohydria?

A. Yes, it would be well to take it but the difficulty is to get it down in sufficient quantity. It takes half an ounce of muriatic acid for a day's digestive work. If you put a drop of it on a piece of zinc it will burn a hole right through it. The healthy stomach makes half an ounce of just that sort of stuff every twenty-four hours for the digestion of food. Sometime ago a doctor washed a man's stomach out because it made too much acid and the report is the doctor put ten gallons of water through the stomach, then he examined it and found a whole ounce of hydrochloric acid in it, two tablespoonfuls of pure hydrochloric acid. Three or four drops of hydrochloric acid would not help the stomach to amount to anything. It might do the least bit of good but it would not be sufficient. It is necessary to take about a teaspoonful of hydrochloric acid for every meal. How in the world can you get it into your stomach. If you dilute it so that you can get it down you would have to take about a gallon of water. That would make such an enormous quantity it would be impractical. I asked that very question to Dr. Kuttner the associate of the famous Professor at Ewald of Berlin a dozen years ago. He said he didn't give it/all except with a stomach tube once in a while when a person has cancer of the stomach in order to sweeten the stomach up a little but he said, We cannot give enough to do any good so we do not give it at all"but it is possible to do it by combining the hydrochloric acid with protein. The hydrochloric acid enters into ~~the~~ a loose combination. In this way it can be swallowed without any difficulty. We have such a preparation which your doctor will prescribe for you if you need it.

Q. Are potatoes a laxative food?

A. No. The potato is almost entirely starch and water. The cellulose in the potato is so small in amount that the potato must be looked upon very much like rice. It is not laxative. If one takes potatoes very freely he must be sure to mix bran along with them. One who has inactive

bowels must begin ~~as~~ a regular campaign to help the colon. He must think about it for every single meal without one single exception. It is like getting off at a station and then buying a ticket for the next station and getting on again. Every single meal has to have a through ticket provided for it. If it is not, there is going to be stoppage along the road somewhere, in the cecum or some other place. We need to take somewhere from one to two ounces of cellulose every day. The equivalent of a couple of tablespoonfuls of bran at every meal is not too much for the average person suffering from chronic constipation. It may be necessary to add a lubricant in addition in the shape of paraffin in some form.

I thank you for your attention.

END.