

HUMAN HEALTH AS A NATIONAL ASSET

Lecture Given at the Sanitarium Parlor,

Battle Creek, Michigan,

Thursday, July 31, 1913, at 8 P.M.

by

Prof. Irving Fisher

Dr. J. H. Kellogg:

I am sure you have all heard of the Committee of One Hundred. The sanction of the Committee of One Hundred was to study the question of health and what could be done to improve the condition of the health of the American people. Some people have been getting their eyes opened to the fact that the civilized portion of the human race, at least, is deteriorating, and it is necessary that something should be done to save further deterioration and degeneracy of the race. Prof. Fisher organized the Committee of One Hundred and a great work was done, which finally resulted in the effort to secure a national department of health, which is in process of being created, and, within a few years, will be fully established. Prof. Fisher has rendered the country a great service in what he has done as

chairman of the Committee of One Hundred and chairman of the Committee on National Vitality, a committee appointed by ex-President Roosevelt; and, in the efforts that have been made for the establishment of this new department of health, which is coming by and by, Prof. Fisher has not hesitated to invest thousands of dollars as well as many months and even years of arduous effort in this work, and, as he is a layman and not a member of the medical profession, it seems to me to be a most unusual and a most remarkable thing. As an economist of international reputation, he has been able to look at the subject from standpoints which have not been fully considered before. We are very fortunate in having him here with us tonight to give us the result of some of his researches in reference to this question of so great importance. I take pleasure in introducing Prof. Irving Fisher.

(Applause)

Prof. Irving Fisher:

Ladies and gentlemen. Doctor Kellogg, I am afraid, has given you rather a false idea unwittingly, of the services I have tried to render in the domain of health, and I want to say at the outset, that anything that I have done has been very largely due to Doctor Kellogg himself and the Battle Creek Sanitarium. (Applause)

It is always a pleasure to come back to the Battle Creek Sanitarium and a double pleasure to come back a well man instead of a semi-invalid as I was when I first visited this place, nearly a decade ago. I came here with the usual prejudice which I do not doubt many of you have had before you came here, and more to study the institution than to get any personal benefit from it. I passed as a fairly well man at that time. I had had, some years before, tuberculosis, and had been cured. I had had no relapse. I had had nothing else that was specifically a disease and yet I realized at the time when I came here, that I was only half a man, that I could only do half a man's work and I feared that my working power was crippled for the rest of my life. Incidentally, in studying this institution, I gained back the greatest impulse toward

health that I had received in all my life, including the few years that I was abroad that I was particularly studying health, being an invalid from tuberculosis. And from that day to this, there has scarcely a month gone by but that I have received an addition to my working power, of which I could be definitely conscious, and which in most cases, is due to the application of new knowledge largely received from the Battle Creek Sanitarium. (Applause)

About five years ago I reached the stage where I had 100 % of working power again. That is, as measured from my old standard; what I had had before, before I had come down with tuberculosis. But I was not satisfied with that and since then I have been climbing up the ladder still further until, instead of being a healthy man as I was when I came here, so far as acting power is concerned, I am more than 100 % efficient today. (Applause)

Now most people get their interest in health as I did, after they have lost it, and they require some ten years to get back their working power, and many times they do not succeed in getting it all back. It always occurs to a man who has gone through my experience,

what an awful waste. Why cannot we prevent in advance; why cannot we interest people in health, before they lose their health? And when I saw the self-sacrificing efforts that were made by men who contributed to save my life like Doctor Trudeau and men who helped to increase my working power like Doctor Kellogg, I made up my mind that I would always dedicate a part of my working power toward the public health movement, so that those who had not yet lost their health might in many cases, be prevented from so doing. Now, it seems to me this is a great national problem, and I appeal to you, as men and women who, to a lesser extent have been through the same psychological trend of thought that I have mentioned, lose a little of their own vitality, regaining it and becoming thankful and resolving to do something for others, -- it seems to me that we all who are indebted to the Sanitarium, or to any other institution that is doing such work, as a mere matter of justice to society to say nothing of the pleasure it gives to yourself, to utilize the waste spots in your life, to prevent at least, corresponding waste spots in other peoples lives. Now, in this country, there is not very much interest in public health and it is due to the fact that

there is too much interested in public wealth and the ordinary conditions. In fact, I found when I was ill, out in Colorado Springs among all those consumptives there and in California, the ordinary way of it is for a man to lose his health in pursuit of wealth, not appreciating the fundamental importance of health, and then extending all his wealth in, often, a vain pursuit of health again. Consequently it seemed to me that the appeal in this country would largely be based on the relation of health to wealth and on the folly of losing health to gain wealth. And I have therefor, as an economist, tried to estimate in various relations, what health means in relation to wealth. In the first place, health is wealth. As Emerson said, "Health is the best wealth," and that is not only metaphorically true, it is in a sense, literally true. The capital of a country consists not only of the land, the buildings upon it, the stock within those buildings, the railways, the rolling stock, and the other tangible accumulations of dead wealth, but it included the live <sup>s</sup> stock on the farms and it includes the human beings; and many economists are realizing today that that is profoundly true. Not only is that true but the total assets of a country are always chiefly in the men, women and children in that country and you can reckon it out in dollars

and cents to a certain extent what men, women and children are worth in their earning power as earning machines. What is it worth to this country to have efficient workers in our mills, to have efficient brain workers in our banks and counting houses, to have efficient men in public life, to have an efficient president of the United States who does not get <sup>sick</sup> sock. What is it worth to a country? Why, it is worth untold millions, untold billions of dollars, and any estimate of the worth must be minimum estimate. We cannot give maximum estimate, but you can work out the entailment of working power and you can work out what it costs this country from tuberculosis, for instance; and it costs this country from tuberculosis every year, over a billion of dollars in cold cash. That is wealth, loss of earnings, loss of working power, the premature cutting off of the breadwinner; and those things added together annually amount to billions of dollars any year. By counting the loss to the man himself as a sort of sentimental way of counting, leaving that out, there is still a loss of over \$600,000 a year to others than consumptives and tuberculosis, because tuberculosis comes in the middle of life when the working power is at the maximum and, even when the consumptives recover, or whether he

recovers or not, there is a long period, at least three years and probably on the average over four years, when he is largely incapacitated. During the first half of that period he is half a man in working power, and during the last half of it, he is no man at all. He earns on the average, half wages for a year and a half, then earns nothing for a year and a half before he dies. That is the usual course of those who die of tuberculosis. And of those who get well, they simply have a still longer period during which they are invalided. I have taken individual cases, the case of a broker who came out to Colorado Springs. He was not what you would call a rich man, but he said that tuberculosis from the time that he discovered it, had been costing him in the loss of earnings, in medical fees, in traveling expenses, and in other ways, at least fifteen hundred dollars a year and would continue to cost him at least half of that for the rest of his life, so far as he could see, because he was an invalid of the kind that he did not believe that he would be able to go back to resume his work and to do it at full tilt. He has therefore stayed in Colorado and has simply sacrificed this earning power because he had to. Now, tuberculosis is only one of some one hundred different maladies which are costing this country a



great deal. And it was only yesterday that I was reading an account of the cost from typhoid fever. Doctor Gould has tried to estimate what typhoid fever costs. Doctor Cober has also tried to estimate it and Prof. Glover of this state, at Ann Arbor, has tried to estimate it; and on the basis of these estimates, it is safe to say that typhoid fever costs this country annually at least one hundred millions of dollars. Now, of course, that is a small figure compared with tuberculosis, and yet it is quite a tidy sum to say the least. And typhoid fever is only one of a number of diseases. And when you add together the losses from the hundred causes of death, which can be worked out, taking the death rate, taking the period of sickness, where that is available, and taking the capitalized earnings in the support of the families that are cut off by premature deaths, we find that the loss in this country from unnecessary illness, is at least one billion, five hundred millions of dollars a year. And as this means unnecessary deaths to the <sup>homes</sup> tombs of over six hundred thousand people, and sick beds which are unnecessary to the extent of at least five hundred thousand all the time. There are at least five hundred thousand people unnecessarily ill, lying on their sick beds now and yesterday and tomorrow and all the time.

Now, these figures are large, and yet they are conservative. I cannot go into the proof of that but when I was writing the report to which Dr. Kellogg alluded, for the conservation of the national vitality, I got together all the estimates from the best experts in this country that were then available. That was about five years ago. As to the unnecessary illness and the causes, etc., these figures that I am giving you are the best result. They have very seldom been challenged and when they have been, they have been by people who have not really made a study of the subject and so far as subsequent investigation has shown, they have always proved the figures were conservative. For instance, in Boston recently, figures have been shown as an unnecessary death rate of infants to one year of age. In actual fact, simply by purifying the milk supply, nearly 50% of the death of infants under one year of age in a certain district which was experimentally tried three years ago, was saved. Now, in my report the unnecessary deaths of infants were placed at about 40%, and that was inside the figure, that was actually saved simply by the application of one preventive measure. And, if other preventive measures had been applied, a still larger percentage could be saved. And so with other things that I might mention. I say there is very little interest in the subject in this

country and it is found that the interest of well people can largely be stimulated by showing the cost in dollars and cents. I am secretary of a tuberculosis association in New Haven. The New Haven County Anti-Tuberculosis Association, it is called, which has a sanatorium near New Haven. And this sanatorium has now been running nearly ten years. It is found that the savings of earnings of the young men and young women who go through this sanatorium is far greater already than the cost of the institution and of their maintenance. That is, by actual count of the earnings that these young women and young men have made since they left the institution, it is found that those earnings exceed all the cost of saving their lives. In fact, to put it briefly, we estimate there that for every dollar that the State of Connecticut puts into that institution, the State of Connecticut gets back ten dollars. It was on that basis largely, that the legislature of the State of Connecticut has given us generous appropriations. So, hook-worm disease in the South. Think what the Rockefeller foundation is doing down there in saving lives, and yet they had such tremendous prejudice to overcome when they first went there, that the people were almost ready to lynch them for coming down there to try to save

their lives. It costs to cure a person of hook-worm disease; I suppose you have all heard a little of hook-work disease, a few years ago nobody had; somebody has called hook-worm the germ of laziness because it is the reason for the existence of the poor white in the South. Here is a capital instance of the relation between wealth and health. You have heard of the poor white, the "white trash" as it is sometimes called in the South; the cracker is is sometimes called, sometimes clay-eaters. The negroes even look down upon these "white trash" I am told in the South. Now, it is not their fault. They ought not to be nick-named, they are lazy, but they are lazy because they cannot help it. They are lazy because they only have 50% of red blood corpuscles in the blood that belong there and you know you are lazy when you get a blood count like that, and I am and anybody is,--anybody who gets 50% of the ordinary normal red blood count cannot do very much work. Why this anemia? Because they have the hook-worm disease. Not a germ really, but a worm which gets into the feet through the sole of the foot walking on unpromenaded ground barefoot. And the way to prevent it is ~~is~~ not to contaminate the ground or not to walk barefoot, or both, and it is so easy a thing you would think just simply an announcement of it would eradicate the hook-worm disease in this country at

once, but it has taken a long time, and not only is it preventive in a certain way, but it is curable and it is curable at about seventy cents a head; just a little epsom salts and one or two other simple remedies applied in the course, I think of something like two or three weeks, will eradicate it from the system in most cases. Now that cost of seventy cents, less than a day's wages, will enable the recovered victim to earn at least that money every working day of his life thereafter. Now what per cent. of a return, that is, on your money, is rather hard to reckon. But it is several million per cent. I think, a year. So you see that even from a standpoint of cold cash, health is worth a great deal to this country, and we are suffering untold, unnecessary economic loss every year because people do not apply this knowledge. Now of course, this is not looking at it from the highest point of view. I realize that. I always feel a little ashamed when I emphasize merely the economic aspect of the subject. You will say, "Don't be sentimental," and yet there is nothing that is really worth while in this world until it has risen to the plane of sentiment. And we want to save human life in this country, not simply to make bread-winners, not simply because human beings are like other machines, capable of earning a return on the investment, but because we love men, women and children, and because it is a noble sentiment to prolong and maintain human life.

Now in this country, we have achieved a good deal in spite of our lack of interest in the way of hygiene, but it has almost all been along the line of public hygiene. You know, and probably Doctor Kellogg has told you many a time, there are two great branches of hygiene. There is public hygiene and there is private or personal hygiene, which corresponds very roughly to the two great kinds of human ills, mainly in treacherous diseases like typhoid fever, smallpox, scarlet fever, diphtheria, pneumonia, and pneumonia is most important unless you include tuberculosis. Tuberculosis is rather difficult to classify in these two classes. Those on the one side and chronic diseases on the other side. The chronic diseases are the diseases which are not so specifically due to germs as they are to bad habits, which are due to overstrain of the liver, the heart, the nerves, the kidneys,—Bright's disease, arteriosclerosis and all the diseases of which you have heard so much from Doctor Kellogg here, and of which he is a master student. Now, those two kinds of diseases require two different kinds of treatment and two different kinds of lines are set, and in this country we have only gone on one of those two lines, either two. You take the health officers of this country. What do you find they know about? They know about vaccination for smallpox, they

know about disinfection, about inoculation, about pollution of water supply, about pollution of milk supply, about clean streets, about a correct sewer system, etc., but they know and care very little about eating and drinking and smoking and breathing, and they do not think of that as a part of their business. Most of the physicians in this country are violating most of the rules of personal hygiene, and they are doing it very largely through ignorance, perhaps more often through indifference. But it is because this country has not yet waked up to this one half of the problem. And that is true in most countries. The people are boasting of the decline of the death-rate all over the world. It is true the death-rate is declining all over the world, but why is it declining? Because we are fighting so successfully infectious diseases. We are getting rid of them very fast, but while we are getting rid of those diseases, the chronic diseases, the degenerative diseases, the personal diseases, are, for the most part, increasing. And it is just because we are decreasing the infectious diseases a little faster than we are increasing the chronic diseases, that there is a much decline in the death-rate, and when you analyze it you find that the decline in the death-rate is confined to those ages at which the infectious diseases have their most maximum incidence, namely, to the younger ages. And therefore, if you work out the death-rate in

terms of what is called the expectation of life, you will find that while the average duration of life is increasing, the expectation of life, as it is called, is not increasing at all ages. The expectation of life at the age of birth, age 0, is increasing, that is, an infant today may expect to live longer than an infant of 10 years ago, or 20 years ago, or 30 years ago, and that length of life has been increasing right along. A child ten years old today may be expected to live longer than a child could expect to live a generation ago. A youth 20 years old can expect to live longer than a youth 20 years old, of last generation. And so, as a man or woman 30 years old, the expectation of life is a little greater today. Of 40, it is about the same. Of 50, it is a little less; of 60, it is considerably less; of 70, it is still less, and so on. Now, that relationship by which the mortality late in life is found to be greater, while the mortality in early life is less than it used to be, that relation exists all over the world, save in two countries, England and Sweden.



In England there is this improvement in the early age and no degeneration in later ages. In Sweden there is this improvement in the early ages but also an improvement in later ages and Sweden is the only country of which I know this to be true. In fact, I can assert with considerable confidence that it is the only country of which it is true for which we have statistics. I visited the International Exhibition of Hygiene in Dresden two years ago, the most wonderful exhibit, a real world's fair on health that the world has ever seen in which every civilized nation was represented by a special building and special exhibit except one and that one is the United States which illustrates my point, that this country does not have the same interest in hygiene that other countries do. In that exhibition I studied for three weeks the statistical department and I was particularly struck with this fact, that Sweden was ahead of the rest of the world. Sweden showed improvement in the duration of life, in the expectation of life everywhere and improvement at all ages, in mortality. The mortality of centenarians is less there now than it was and not only that but Sweden was ahead of the rest of the world in mortality, had the greatest duration of life, the smallest death rate what is called the corrected death rate, the true death rate and I became interested to know why this ~~what~~ was true. Well it is very simple. It is simply this that in Sweden instead of attending to only one half

the problem in infectious diseases, they have been attending to both halves of the problem. They have been attending to personal hygiene. They have been watching very closely for years the death rate from the chronic diseases as well as from the infectious diseases and they have been trying to find out ways of preventing both kinds of diseases so I say you will find the greatest stride in <sup>the</sup> warfare against alcohol, in the warfare against tobacco, in improvement in dietetics, in increase in exercise. Taking alcohol, you know the Duttonburg System which Norway and Sweden have tried and adopted and the decline in the use of alcohol is more striking in Sweden than in any other country in the world. They are seriously thinking in Sweden of something that would make people laugh in this country of having prohibition not simply in alcohol but in tobacco. (Applause) In Sweden people live on coarser and by that I mean better food. They use this coarse, hard Swedish bread. Do you know that most of the ills from lack of personal hygiene start in the first three inches of the alimentary canal. They start with bad use of the teeth. In Sweden they have to exercise their teeth to eat this bread and that is what Nature intended. In this country we shirk that. We ask our flour mills in Minneapolis to do all our chewing for us and then we swallow the soft parts, the soft bread that is produced out of that fine flour which we ought to have ground up with our own grinding mill and so we mash our potatoes and we make puddings of every-

thing we can. We have soft liquid food and it pours right down into the stomach without due mastication and without the use of the teeth. Therefore, we are subject to decayed teeth most of all more than any other country except England where the people do the same thing we do. In Sweden they do not have that. Take the Swedish servant girls who come over here, they come generally with good teeth. The only man I know in this country with a perfect set of teeth is a Swedish dentist in New Haven. I doubt if in this room there is a perfect set of teeth. I do not mean personal aspersions either. Certainly I could not throw stones because I have got a pretty imperfect set of teeth myself. Now these Swedish girls after they have been here five years having left their hard bread and taken up our soft foods have to go to the dentist. In Sweden they use this hard bread. In Sweden they are studying dietetics carefully. In Sweden they are taking up these problems which you are studying here at the Battle Creek Sanitarium on a larger scale, that is, with more diffuse understanding through the country than in any other country in the world and they are getting their dividends. That is what decreased death rate in the higher ages of life means. They are taking<sup>it</sup> up in the schools. They are studying defective posture of school children to see if the shape of the back of the feet is right to

prevent the lateral or other curvature of the spine and the lighting is right. They are seeing that their pupils take corrective exercises when anything is wrong. If they are getting round shouldered or with a defect of any kind due to wrong posture, they put them through corrective exercises and all the pupils are put through gymnastic exercises and they are taught the value of exercise, of deep breathing, of the outdoor life and of having it always systematically and they learn it as they learn anything else in the school as something to be applied the rest of their lives. Now, if we are going to make progress in this country and keep up with Sweden, and by the way, if we live another generation we will see that Sweden is getting dividends from this in other ways than merely a lengthened life. We will see it in wealth. We will see it in politics. We will see it in international respect and in numerous ways. No country can keep up in the international competition today unless it pays due regard to the vitality of its men and women. Sweden has great natural resources in iron. They have great water falls and in the next generation, the next century when coal gradually gives out, the country will be ahead that applies its horsepower through electrical connection or with waterfalls and you will find Sweden will use her increased vitality in increased enterprise, inventiveness and there will be another of the relations between economics and health in the economic importance of Sweden. If, in this country you

we are going to keep up with Sweden and for instance, Japan which is not so very behind Sweden and other countries which might be mentioned, if we are going to keep up in this international competition in any of its various phases, we have got to do it by personal hygiene, we have got to take up personal hygiene as well as the study and prevent<sup>ion</sup> of infectious diseases and that is exactly what this institution here stands for, the study of personal hygiene. Now, how are we ever going to introduce personal hygiene. Only this afternoon I was talking with a gentleman here who has had a lot of experience in many of these lines and he said, "You know that if we should try to tell the general public on a large scale the truths that are preached to you here and which rest on a substantial scientific basis that the world would simply laugh. They would say, Oh, that is the talk of a crank, that is fanaticism. They wouldn't even stop to see whether there is a scientific basis or not". What did that man mean? He meant to call attention to the a very important fact, the great obstacle to the introduction of personal hygiene is the customs of the people. When it comes to personal hygiene that seems to be a reflection on personal habits and personal habits are determined by imitation. If everybody uses soft foods the individual follows the crowd. He gets bad teeth

because the general custom around him sets the example which he takes up foolishly and would find it very hard to avoid following. How then are we going to overcome this inertia of custom? I want to call your attention to the fact that custom is not an active opponent. It is not a force operating in the opposite direction in an active way. It is more like a piece of putty than like a coiled spring. If you hit a coiled spring it hits you back but if you press putty it stays where you put it. You may find it very hard to press it. It won't go very far or very fast but when it does go it stays where it is put and that is the nature of the resistance of custom. Mere inertia, there is nothing active in it and very little pressure counts and the good that can be accomplished by the people in this room in their own community if they do it in a tactful, systematic and persistent fashion is simply incalculable. I could give you many many examples of what I mean.

One of the most important, perhaps, is in relation to tuberculosis. I remember when I was in Colorado Springs taking the treatment there, I asked my physician why physicians did not preach fresh air. I said, "You are curing the patients here by making them sleep out of doors and live out of doors twenty-four hours out of twenty-four, or as near that as you can. Why don't you preach that to well people? Why don't you tell people when you go into their houses to treat them for some other disease, who know nothing about this, why don't you say, 'Open your windows. I do. Sleep with your windows open,' etc." "Why," he said, "they would run me out of the house. I could not talk that. I can't talk to my patients that way, I have tried it. It doesn't make any difference, they don't change their habits, and they don't want to be preached to about their personal habits. If I talk to them about how they sleep, about how they live and the rooms they live in, having foul or fresh air, and tell them they don't eat right, etc., they would say, 'That is all my business.' They will say, 'I will hire you when I am sick and let you come and cure me, but don't you talk to me about my personal habits.'" He didn't say, of course, that they absolutely talked to him in such a brutal way, but he gave me to understand that they had settlement to that effect. "And so," he said, "I have given it up, I am not going to bother my head about this." That was about twelve years ago. Think of the wonderful change that

has occurred in that time. I am rather an optimist, but the aerial farm has grown a great deal faster than I ever expected. Why, in New Haven only a few days ago, an architect came to me to consult with me in regard to an outdoor school, and I said to him, "Has this fresh air movement affected architecture?" He said, "Yes, it has, very much. We have wider windows, different kinds of windows today, and we have sleeping balconies. We have to build those often on houses today." Well, do you know, surely it was not more than eleven years ago when, in New England, the first attempt was made to sleep outdoors. When I was in Colorado Springs, only a few were trying it. I was one of the first. I got it from somebody else, it was not original with me. They had been trying it, though, for some time; it spread so that now, practically everyone sleeps out of doors, who have tuberculosis, and many well people, simply because they want the added vitality they get from it. I went from Colorado to California, and I found out there a few who slept out of doors and it was coming into fashion. But in each of those places, they said, "You can't do it anywhere except here, you can't do it in the East, it is too damp, too windy or something else." They always had a dozen different reasons why you could not sleep out of doors in New England. I happened to hear of a Doctor Millet in Boston, who was treating tuberculosis by the outdoor method because his patients were so busy they could not be out of doors in the day time. They had to work. A shoemaker had tuberculosis and the doctor told



him, "You have got to stop work, you have got to stay out of doors all day."

"Not on your life," he said. "Then you will die," the doctor told him. He said,

"I know that, but I will support my family instead of having them support me."

The doctor said, "Then, if that is the way you feel about it, I want you to try

to sleep out of doors on your roof." The man did and he got well. In about

six months, he got over his symptoms, and, so far as I know, he is living today.

Doctor Millet took that hint, established an outdoor sanatorium where patients

could sleep out doors, and he has cured a great many patients. From that one case,

the thing has spread in the last eleven years, so that several hundred people in

New Haven sleep out of doors all the time winter and summer. It has spread to

other things. It was found by accident in the Presbyterian hospital of New York

City, that pneumonia could be treated in that way. A boy who had pneumonia, was

going to die, and he said, "I want to get outdoors, I want to get outdoors." And

the doctor said, "Well, he is going to die anyway, put him out on the roof."

They put him out on the roof and he got well. That gave the doctor a hint and he

put other patients out doors and found the fresh air was not only good for

tuberculosis but for some other things. Somebody has said, "Man is a slow-think-

ing animal." And the doctor said, "Then fresh air might be good for everybody,

whether they have tuberculosis or pneumonia or what. Well, it might not be good

for neuralgia and a few other cases, nevertheless, fresh air is an adjunct, some-

thing that aids in curing pretty much everything, and so people who are not sick at all but simply want to work a little harder to accomplish a little more, to feel a little more of the zest of life, have taken up sleeping out of doors. And now, in New Haven, there is scarcely a street but that if you look carefully behind the houses, you will see some sleeping balconies, just in that one little town, I know, and it is the same all over. I know a girls' boarding school in Pennsylvania where all the pupils sleep out of doors if they want to and I know a hotel in central New York where each room is provided with a sleeping balcony. So this fresh air movement has spread with great rapidity in twelve years. The part I am trying to emphasize is this, that there was a prejudice so great that this physician in Colorado Springs did not dare, for fear he would lose his practice, tell his patients the truth when they lived in rooms that were not fit for human habitation, and yet, in the course of simply a decade, very substantial progress has been made in breaking this prejudice. I can remember encountering it myself, even in California where you would think everybody would want to sleep outdoors. I told a gentleman out there about it, and he said, "Oh, well, I know that is a fad. He had a sick wife who really needed this treatment. And I remarked that perhaps this would be a good thing for her. "Well," he said, "she is not a crank and neither am I." He wanted to do what everybody else did.

Now, a similar case today would want to sleep outdoors to keep in the fashion. There is the difference, and the time will come when it will be just as unfashionable to do the unhygienic thing as it is now fashionable to do what is hygienic. Now, one of the virtues of this institution, it seems to me, is the fearlessness in regard to custom. The object is to find out what is really hygienically the best, irrespective of what people actually do. There is no attempt to compromise the custom. I do not know that everything that is new on the code of hygiene in this institution is correct. It would be very wonderful if that were true. It is not likely that it is true, in fact, the code is constantly changing and that is another thing I admire in this institution, that it is open-minded and that Doctor Kellogg and his associates, when they find evidence that they are wrong, acknowledge it and change and try to do what they think is right. And yet we do not know very much about personal hygiene because so little study has been put upon it, but I venture to say that the code of rules that are inculcated in this institution are nearer correct, far nearer correct than the habitual code, the code of habit in the community in general. Don't ever confuse the average with the normal. They are two entirely distinct things. I know an insurance company that has waked up to this fact. They used to take the average weight of people of whatever ages and say that is the normal weight. Why is it

the normal weight? Because it is the average. That begs the question. That assumes that the average is exactly right. It assumes we all ought to imitate the average and try to approximate to that. They now discover that the average weight of a person of 20, the average weight of a person of 50, is abnormally great. Most people are abnormally heavy late in life. What would you think of confusing the average with the normal in teeth for instance? You would find it out by taking the average normal state of the teeth. If that is so, it is normal to have one tooth in two abnormal and to have it filled with gold or something of that sort, and it would not be right to have a full set of teeth, as there would be something abnormal about that. Evidently the normal and the average are two distinct things. This institution is trying to find out what is <sup>the</sup> normal ~~and~~ diet. Is meat a part of the normal diet? I am not an expert in this and I do not know, but I do feel sure of this, from a long study of the subject, it is very complex and difficult subject. That the average diet is abnormal in regard to the use of meat. That whether the meat ought to be entirely eliminated or not, certainly, a great bulk of it ought to be eliminated, and in this country people are abnormally eating because they eat too much meat and perhaps it is true that they ought not to eat any at all. I am rather inclined to think that a very good case can be made on that score. Of course, Doctor Kellogg knows ten times as much about this subject as I do. Now, why do you know that people in the use of meat are abnormal in

this country, in various ways. Compare them with countries where they do not eat any meat or very much meat, as in China for instance. Compare the working efficiency. You will find that those countries that use no meat or almost no meat at all, have very much greater physical endurance than those countries that use a very large amount of meat. A book has been written on this subject by an Englishman named Russell, that shows that out very clearly. And I took great pains, some years ago, to collect all the evidence I could on that ground. And I became convinced that that is true, and I had had no sentimental grounds at all. Why does that come about? One abnormal thing leads to another abnormal<sup>m</sup> thing, and I believe that this series of eating I referred to a moment ago, the fact that we have our food ground up for us in the mill or the kitchen, and try to swallow it without doing the work to earn the right to swallow it, as nature intended we should do, then we suffer and that unhygienic habit, that dietetic sin, ~~it~~ leads to another, leads to decay of the teeth, but it leads to too much meat.

Do you know meat is one of the foods you can eat fast with <sup>impunity</sup> ~~ingenuity~~. You cannot eat grains fast with <sup>impunity</sup> ~~ingenuity~~. You cannot eat nuts fast with <sup>impunity</sup> ~~ingenuity~~, and people who eat fast naturally gravitate toward foods they find they can eat fast ~~with~~ impunity, and avoid the foods they cannot eat fast without doing themselves some harm. I sometimes put it this way, when you eat as fast as a dog you gradually

crave the food of a dog; when you eat as slowly as a horse, you gradually crave oats and grain foods that the horse uses. Why do we eat fast in this country?

It is a part of our American hurry. We have a quick lunch counter, with so many minutes for refreshments. We have to work by the clock, we have engagements and do not allow sufficient time between engagements for proper eating. We take the paper even to the table so then we are constantly in a nervous hurried spirit. Even if we did have an abundance of time, we could not but eat fast because we have that awful awful hurry in the back of our head all the time. That is where it comes from. It comes from the use of these artificial stimulæ, the railway, the bustle around us, the clock, the making of engagements. It is an abnormal life that civilization has built up. We cannot altogether get away from it, but we see it leads to all kinds of abnormalities. That the abnormality of hurry leads to wrong eating, to eating <sup>(fast)</sup> flesh food which you can eat rapidly, to the use of meat which you can eat rapidly without so much harm as other things. Slow eating will reform meat eating to a large extent. I tried that out with an experiment at Yale some years ago. Some students offered themselves for experiment and they tried the eating club. We got them away from the rest of the students where they ate in the great dining hall and gobbled as fast as they could. These students were determined to try what is called fletcherism or very thorough mastication, and these nine students offered to follow Mr. Fletcher's rules. They were

instructed not simply to count the chews or to make a mechanical thing of it,  
~~not~~ not to make a bore of eating, because it has been found that people who do  
that do not get any benefit from slow eating but sometimes injury. As Doctor  
Kellogg told you, gastric juice won't flow unless you enjoy your food, and when  
food does not remain in your ~~mouth~~ mouth long enough before you unconsciously  
swallow it, you get harm from it, so the students were told not to try to hold  
the food in their mouths longer than it naturally wants to stay there. Don't try  
to force it down but let it alone and enjoy it as long as it wants to stay in the  
mouth. Let your swallowing be involuntary. You know we have about three kinds of  
muscles, the biceps here is a voluntary muscle, it never works involuntarily  
except when something is the matter with it. The heart muscle is an involuntary  
muscle. It acts whether you want it to or not, and if you want to stop it you  
can't. Breathing is a semi-voluntary, it is either one or the other, the muscles  
of breathing. Most of us breathe involuntarily all the time. That was a voluntary  
breath. (illustrating) I can breathe voluntarily. Now the muscle is the  
same kind. It is not a voluntary muscle like the biceps and is not an involuntary  
muscle like the heart, but it is like the breathing muscles.

HUMAN HEALTH AS A NATIONAL ASSET

Lecture Given at the Sanitarium Parlor,

Battle Creek, Michigan,

Thursday, July 31, 1913, at 8 P.M.

by

Prof. Irving Fisher

Dr. J. H. Kellogg:

I am sure you have all heard of the Committee of One Hundred. The sanction of the Committee of One Hundred was to study the question of health and what could be done to improve the condition of the health of the American people. Some people have been getting their eyes opened to the fact that the civilized portion of the human race, at least, is deteriorating, and it is necessary that something should be done to save further deterioration and degeneracy of the race. Prof. Fisher organized the Committee of One Hundred and a great work was done, which finally resulted in the effort to secure a national department of health, which is in process of being created, and, within a few years, will be fully established. Prof. Fisher has rendered the country a great service in what he has done as



chairman of the Committee of One Hundred and chairman of the Committee on National Vitality, a committee appointed by ex-President Roosevelt; and, in the efforts that have been made for the establishment of this new department of health, which is coming by and by, Prof. Fisher has not hesitated to invest thousands of dollars as well as many months and even years of arduous effort in this work, and, as he is a layman and not a member of the medical profession, it seems to me to be a most unusual and a most remarkable thing. As an economist of international reputation, he has been able to look at the subject from standpoints which have not been fully considered before. We are very fortunate in having him here with us tonight to give us the result of some of his researches in reference to this question of so great importance. I take pleasure in introducing Prof. Irving Fisher.

(Applause)

Prof. Irving Fisher:

Ladies and gentlemen. Doctor Kellogg, I am afraid, has given you rather a false idea unwittingly, of the services I have tried to render in the domain of health, and I want to say at the outset, that anything that I have done has been very largely due to Doctor Kellogg himself and the Battle Creek Sanitarium. (Applause)

It is always a pleasure to come back to the Battle Creek Sanitarium and a double pleasure to come back a well man instead of a semi-invalid as I was when I first visited this place, nearly a decade ago. I came here with the usual prejudice which I do not doubt many of you have had before you came here, and more to study the institution than to get any personal benefit from it. I passed as a fairly well man at that time. I had had, some years before, tuberculosis, and had been cured. I had had no relapse. I had had nothing else that was specifically a disease and yet I realized at the time when I came here, that I was only half a man, that I could only do half a man's work and I feared that my working power was crippled for the rest of my life. Incidentally, in studying this institution, I gained back the greatest impulse toward

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health that I had received in all my life, including the few years that I was abroad that I was particularly studying health, being an invalid from tuberculosis. And from that day to this, there has scarcely a month gone by but that I have received an addition to my working power, of which I could be definitely conscious, and which in most cases, is due to the application of new knowledge largely received from the Battle Creek Sanitarium. (Applause)

About five years ago I reached the stage where I had 100 % of working power again. That is, as measured from my old standard; what I had had before, before I had come down with tuberculosis. But I was not satisfied with that and since then I have been climbing up the ladder still further until, instead of being a healthy man as I was when I came here, so far as acting power is concerned, I am more than 100 % efficient today. (Applause)

Now most people get their interest in health as I did, after they have lost it, and they require some ten years to get back their working power, and many times they do not succeed in getting it all back. It always occurs to a man who has gone through my experience,

what an awful waste. Why cannot we prevent in advance; why cannot we interest people in health, before they lose their health? And when I saw the self-sacrificing efforts that were made by men who contributed to save my life like Doctor Trudeau and men who helped to increase my working power like Doctor Kellogg, I made up my mind that I would always dedicate a part of my working power toward the public health movement, so that those who had not yet lost their health might in many cases, be prevented from so doing. Now, it seems to me this is a great national problem, and I appeal to you, as men and women who, to a lesser extent have been through the same psychological trend of thought that I have mentioned, lose a little of their own vitality, regaining it and becoming thankful and resolving to do something for others, — it seems to me that we all who are indebted to the Sanitarium, or to any other institution that is doing such work, as a mere matter of justice to society to say nothing of the pleasure it gives to yourself, to utilize the waste spots in your life, to prevent at least, corresponding waste spots in other peoples lives. Now, in this country, there is not very much interest in public health and it is due to the fact that

there is too much interested in public wealth and the ordinary conditions. In fact, I found when I was ill, out in Colorado Springs among all those consumptives there and in California, the ordinary way of it is for a man to lose his health in pursuit of wealth, not appreciating the fundamental importance of health, and then extending all his wealth in, often, a vain pursuit of health again. Consequently it seemed to me that the appeal in this country would largely be based on the relation of health to wealth and on the folly of losing health to gain wealth. And I have therefor, as an economist, tried to estimate in various relations, what health means in relation to wealth. In the first place, health is wealth. As Emerson said, "Health is the best wealth," and that is not only metaphorically true, it is in a sense, literally true. The capital of a country consists not only of the land, the buildings upon it, the stock within those buildings, the railways, the rolling stock, and the other tangible accumulations of dead wealth, but it included the live stock on the farms and it includes the human beings; and many economists are realizing today that that is profoundly true. Not only is that true but the total assets of a country are always chiefly in the men, women and children in that country and you can reckon it out in dollars

and cents to a certain extent what men, women and children are worth in their earning power as earning machines. What is it worth to this country to have efficient workers in our mills, to have efficient brain workers in our banks and counting houses, to have efficient men in public life, to have an efficient president of the United States who does not get sick. What is it worth to a country? Why, it is worth untold millions, untold billions of dollars, and any estimate of the worth must be minimum estimate. We cannot give maximum estimate, but you can work out the entailment of working power and you can work out what it costs this country from tuberculosis, for instance; and it costs this country from tuberculosis every year, over a billion of dollars in cold cash. That is wealth, loss of earnings, loss of working power, the premature cutting off of the breadwinner; and these things added together annually amount to billions of dollars any year. By counting the loss to the man himself as a sort of sentimental way of counting, leaving that out, there is still a loss of over \$600,000 a year to others than consumptives and tuberculosis, because tuberculosis comes in the middle of life when the working power is at the maximum and, even when the consumptives recover, or whether he

recovers or not, there is a long period, at least three years and probably on the average over four years, when he is largely incapacitated. During the first half of that period he is half a man in working power, and during the last half of it, he is no man at all. He earns on the average, half wages for a year and a half, then earns nothing for a year and a half before he dies. That is the usual course of those who die of tuberculosis. And of those who get well, they simply have a still longer period during which they are invalided. I have taken individual cases, the case of a broker who came out to Colorado Springs. He was not what you would call a rich man, but he said that tuberculosis from the time that he discovered it, had been costing him in the loss of earnings, in medical fees, in traveling expenses, and in other ways, at least fifteen hundred dollars a year and would continue to cost him at least half of that for the rest of his life, so far as he could see, because he was an invalid of the kind that he did not believe that he would be able to go back to resume his work and to do it at full tilt. He has therefore stayed in Colorado and has simply sacrificed this earning power because he had to. Now, tuberculosis is only one of some one hundred different maladies which are costing this country a

great deal. And it was only yesterday that I was reading an account of the cost from typhoid fever. Doctor Gould has tried to estimate what typhoid fever costs. Doctor Cober has also tried to estimate it and Prof. Glover of this state, at Ann Arbor, has tried to estimate it; and on the basis of these estimates, it is safe to say that typhoid fever costs this country annually at least one hundred millions of dollars. Now, of course, that is a small figure compared with tuberculosis, and yet it is quite a tidy sum to say the least. And typhoid fever is only one of a number of diseases. And when you add together the losses from the hundred causes of death, which can be worked out, taking the death rate, taking the period of sickness, where that is available, and taking the capitalized earnings in the support of the families that are cut off by premature deaths, we find that the loss in this country from unnecessary illness, is at least one billion, five hundred millions of dollars a year. And as this means unnecessary deaths to the tombs of over six hundred thousand people, and sick beds which are unnecessary to the extent of at least five hundred thousand all the time. There are at least five hundred thousand people unnecessarily ill, lying on their sick beds now and yesterday and tomorrow and all the time.



Now, these figures are large, and yet they are conservative. I cannot go into the proof of that but when I was writing the report to which Dr. Kellogg alluded, for the conservation of the national vitality, I got together all the estimates from the best experts in this country that were then available. That was about five years ago. As to the unnecessary illness and the causes, etc., these figures that I am giving you are the best result. They have very seldom been challenged and when they have been, they have been by people who have not really made a study of the subject and so far as subsequent investigation has shown, they have always proved the figures were conservative. For instance, in Boston recently, figures have been shown as an unnecessary death rate of infants to one year of age. In actual fact, simply by purifying the milk supply, nearly 50% of the death of infants under one year of age in a certain district which was experimentally tried three years ago, was saved. Now, in my report the unnecessary deaths of infants were placed at about 40%, and that was inside the figure, that was actually saved simply by the application of one preventive measure. And, if other preventive measures had been applied, a still larger percentage could be saved. And so with other things that I might mention. I say there is very little interest in the subject in this

country and it is found that the interest of well people can largely be stimulated by showing the cost in dollars and cents. I am secretary of a tuberculosis association in New Haven. The New Haven County Anti-Tuberculosis Association, it is called, which has a sanatorium near New Haven. And this sanatorium has now been running nearly ten years. It is found that the savings of earnings of the young men and young women who go through this sanatorium is far greater already than the cost of the institution and of their maintenance. That is, by actual count of the earnings that these young women and young men have made since they left the institution, it is found that those earnings exceed all the cost of saving their lives. In fact, to put it briefly, we estimate there that for every dollar that the State of Connecticut puts into that institution, the State of Connecticut gets back ten dollars. It was on that basis largely, that the legislature of the State of Connecticut has given us generous appropriations. So, hook-worm disease in the South. Think what the Rockefeller foundation is doing down there in saving lives, and yet they had such tremendous prejudice to overcome when they first went there, that the people were almost ready to lynch them for coming down there to try to save

their lives. It costs to cure a person of hook-worm disease; I suppose you have all heard a little of hook-work disease, a few years ago nobody had; somebody has called hook-worm the germ of laziness because it is the reason for the existence of the poor white in the South. Here is a capital instance of the relation between wealth and health. You have heard of the poor white, the "white trash" as it is sometimes called in the South; the cracker is is sometimes called, sometimes clay-eaters. The negroes even look down upon these "white trash" I am told in the South. Now, it is not their fault. They ought not to be nick-named, they are lazy, but they are lazy because they cannot help it. They are lazy because they only have 50% of red blood corpuscles in the blood that belong there and you know you are lazy when you get a blood count like that, and I am and anybody is,—anybody who gets 50% of the ordinary normal red blood count cannot do very much work. Why this anemia? Because they have the hook-worm disease. Not a germ really, but a worm which gets into the feet through the sole of the foot walking on unpromenaded ground barefoot. And the way to prevent it is ~~is~~ not to contaminate the ground or not to walk barefoot, or both, and it is so easy a thing you would think just simply an announcement of it would eradicate the hook-worm disease in this country at

once, but it has taken a long time, and not only is it preventive in a certain way, but it is curable and it is curable at about seventy cents a head; just a little epsom salts and one or two other simple remedies applied in the course, I think of something like two or three weeks, will eradicate it from the system in most cases. Now that cost of seventy cents, less than a day's wages, will enable the recovered victim to earn at least that money every working day of his life thereafter. Now what per cent. of a return, that is, on your money, is rather hard to reckon. But it is several million per cent. I think, a year. So you see that even from a standpoint of cold cash, health is worth a great deal to this country, and we are suffering untold, unnecessary economic loss every year because people do not apply this knowledge. Now of course, this is not looking at it from the highest point of view. I realize that. I always feel a little ashamed when I emphasize merely the economic aspect of the subject. You will say, "Don't be sentimental," and yet there is nothing that is really worth while in this world until it has risen to the plane of sentiment. And we want to save human life in this country, not simply to make bread-winners, not simply because human beings are like other machines, capable of earning a return on the investment, but because we love men, women and children, and because it is a noble sentiment to prolong and maintain human life.

Now in this country, we have achieved a good deal in spite of our lack of interest in the way of hygiene, but it has almost all been along the line of public hygiene. You know, and probably Doctor Kellogg has told you many a time, there are two great branches of hygiene. There is public hygiene and there is private or personal hygiene, which corresponds very roughly to the two great kinds of human ills, mainly in treacherous diseases like typhoid fever, smallpox, scarlet fever, diphtheria, pneumonia, and pneumonia is most important unless you include tuberculosis. Tuberculosis is rather difficult to classify in these two classes. Those on the one side and chronic diseases on the other side. The chronic diseases are the diseases which are not so specifically due to germs as they are to bad habits, which are due to overstrain of the liver, the heart, the nerves, the kidneys,—Bright's disease, arteriosclerosis and all the diseases of which you have heard so much from Doctor Kellogg here, and of which he is a master student. Now, those two kinds of diseases require two different kinds of treatment and two different kinds of lines are set, and in this country we have only gone on one of those two lines, either two. You take the health officers of this country. What do you find they know about? They know about vaccination for smallpox, they

know about disinfection, about inoculation, about pollution of water supply, about pollution of milk supply, about clean streets, about a correct sewer system, etc., but they know and care very little about eating and drinking and smoking and breathing, and they do not think of that as a part of their business. Most of the physicians in this country are violating most of the rules of personal hygiene, and they are doing it very largely through ignorance, perhaps more often through indifference. But it is because this country has not yet waked up to this one half of the problem. And that is true in most countries. The people are boasting of the decline of the death-rate all over the world. It is true the death-rate is declining all over the world, but why is it declining? Because we are fighting so successfully infectious diseases. We are getting rid of them very fast, but while we are getting rid of those diseases, the chronic diseases, the degenerative diseases, the personal diseases, are, for the most part, increasing. And it is just because we are decreasing the infectious diseases a little faster than we are increasing the chronic diseases, that there is a much decline in the death-rate, and when you analyze it you find that the decline in the death-rate is confined to those ages at which the infectious diseases have their most maximum incidence, namely, to the younger ages. And therefore, if you work out the death-rate in

terms of what is called the expectation of life, you will find that while the average duration of life is increasing, the expectation of life, as it is called, is not increasing at all ages. The expectation of life at the age of birth, age 0, is increasing, that is, an infant today may expect to live longer than an infant of 10 years ago, or 20 years ago, or 30 years ago, and that length of life has been increasing right along. A child ten years old today may be expected to live longer than a child could expect to live a generation ago. A youth 20 years old can expect to live longer than a youth 20 years old, of last generation. And so, as a man or woman 30 years old, the expectation of life is a little greater today. Of 40, it is about the same. Of 50, it is a little less; of 60, it is considerably less; of 70, it is still less, and so on. Now, that relationship by which the mortality late in life is found to be greater, while the mortality in early life is less than it used to be, that relation exists all over the world, save in two countries, England and Sweden.

In England there is this improvement in the early age and no degenerations in later ages. In Sweden there is this improvement in the early ages but also an improvement in later ages and Sweden is the only country of which I know this to be true. In fact, I can assert with considerable confidence that it is the only country of which it is true for which we have statistics. I visited the International Exhibition of Hygiene in Dresden two years ago, the most wonderful exhibit, a real world's fair on health that the world has ever seen in which every civilized nation was represented by a special building and special exhibit except one and that one is the United States which illustrates my point, that this country does not have the same interest in hygiene that other countries do. In that exhibition I studied for three weeks the statistical department and I was particularly struck with this fact; that Sweden was ahead of the rest of the world. Sweden showed improvement in the duration of life, in the expectation of life everywhere and improvement at all ages, in mortality. The mortality of centenarians is less there now than it was and not only that but Sweden was ahead of the rest of the world in mortality, had the greatest duration of life, the smallest death rate what is called the corrected death rate, the true death rate and I became interested to know why this was true. Well it is very simple. It is simply this that in Sweden instead of attending to only one half



the problem in infectious diseases, they have been attending to both halves of the problem. They have been attending to personal hygiene. They have been watching very closely for years the deathrate from the chronic diseases as well as from the infectious diseases and they have been trying to find out ways of preventing both kinds of diseases so I say you will find the greatest stride in <sup>the</sup> warfare against alcohol, in the warfare against tobacco, in improvement in dietetics, in increase in exercise. Taking alcohol, you know the Duttonburg System which Norway and Sweden have tried and adopted and the decline in the use of alcohol is more striking in Sweden than in any other country in the world. They are seriously thinking in Sweden of something that would make people laugh in this country of having prohibition not simply in alcohol but in tobacco. (Applause) In Sweden people live on coarser and by that I mean better food. They use this coarse, hard Swedish bread. Do you know that most of the ills from lack of personal hygiene start in the first three inches of the alimentary canal. They start with bad use of the teeth. In Sweden they have to exercise their teeth to eat this bread and that is what Nature intended. In this country we shirk that. We ask our flour mills in Minneapolis to do all our chewing for us and then we swallow the soft parts, the soft bread that is produced out of that fine flour which we ought to have ground up with our own grinding mill and so we mash our potatoes and we make puddings of every-

thing we can. We have soft liquid food and it pours right down into the stomach without due mastication and without the use of the teeth. Therefore, we are ~~subject~~ to decayed teeth most of all more than any other country except England where the people do the same thing we do. In Sweden they do not have that. Take the Swedish ~~peasant~~ girls who come over here, they come generally with good teeth. The only man I know in this country with a perfect set of teeth is a Swedish dentist in New Haven. I doubt if in this room there is a perfect set of teeth. I do not mean personal aspersions either. Certainly I could not throw stones because I have got a pretty imperfect set of teeth myself. Now these Swedish girls after they have been here five years having left their hard bread and taken up our soft foods have to go to the dentist. In Sweden they use this hard bread. In Sweden they are studying dietetics carefully. In Sweden they are taking up these problems which you are studying here at the Battle Creek Sanitarium on a larger scale, that is, with more diffuse understanding through the country than in any other country in the world and they are getting their dividends. That is what decreased death rate in the higher ages of life means. They are taking <sup>it</sup> up in the schools. They are studying defective posture of school children to see if the shape of the back of the feet is right to

prevent the lateral or other curvature of the spine and the lighting is right. They are seeing that their pupils take corrective exercises when anything is wrong. If they are getting round shouldered or with a defect of any kind due to wrong posture, they put them through corrective exercises and all the pupils are put through gymnastic exercises and they are taught the value of exercise, of deep breathing, of the outdoor life and of having it always systematically and they learn it as they learn anything else in the school as something to be applied the rest of their lives. Now, if we are going to make progress in this country and keep up with Sweden, and by the way, if we live another generation we will see that Sweden is getting dividends from this in other ways than merely a lengthened life. We will see it in wealth. We will see it in politics. We will see it in international respect and in numerous ways. No country can keep up in the international competition today unless it pays due regard to the vitality of its men and women. Sweden has great natural resources in iron. They have great water falls and in the next generation, the next century when coal gradually gives out, the country will be ahead that applies its horsepower through electrical connection or with waterfalls and you will find Sweden will use her increased vitality in increased enterprise, inventiveness and there will be another of the relations between economics and health in the economic importance of Sweden. If, in this country you

we are going to keep up with Sweden and for instance, Japan which is not so very behind Sweden and other countries which might be mentioned, if we are going to keep up in this international competition in any of its various phases, we have got to do it by personal hygiene, we have got to take up personal hygiene as well as the study and prevention<sup>ion</sup> of infectious diseases and that is exactly what this institution here stands for, the study of personal hygiene. Now, how are we ever going to introduce personal hygiene. Only this afternoon I was talking with a gentleman here who has had a lot of experience in many of these lines and he said, "You know that if we should try to tell the general public on a large scale the truths that are preached to you here and which rest on a substantial scientific basis that the world would simply laugh. They would say, Oh, that is the talk of a crank, that is fanaticism. They wouldn't even stop to see whether there is a scientific basis or not". What did that man mean? He meant to call attention to the a very important fact, the great obstacle to the introduction of personal hygiene is the customs of the people. When it comes to personal hygiene that seems to be a reflection on personal habits and personal habits are determined by imitation. If everybody uses soft foods the individual follows the crowd. He gets bad teeth

because the general custom around him sets the example which he takes up foolishly and would find it very hard to avoid following. How then are we going to overcome this inertia of custom? I want to call your attention to the fact that custom is not an active opponent. It is not a force operating in the opposite direction in an active way. It is more like a piece of putty than like a coiled spring. If you hit a coiled spring it hits you back but if you press putty it stays where you put it. You may find it very hard to press it. It won't go very far or very fast but when it does go it stays where it is put and that is the nature of the resistance of custom. Here inertia, there is nothing active in it and very little pressure counts and the good that can be accomplished by the people in this room in their own community if they do it in a tactful, systematic and persistent fashion is simply incalculable. I could give you many many examples of what I mean.

One of the most important, perhaps, is in relation to tuberculosis. I remember when I was in Colorado Springs taking the treatment there, I asked my physician why physicians did not preach fresh air. I said, "You are curing the patients here by making them sleep out of doors and live out of doors twenty-four hours out of twenty-four, or as near that as you can. Why don't you preach that to well people? Why don't you tell people when you go into their houses to treat them for some other disease, who know nothing about this, why don't you say, 'Open your windows. I do. Sleep with your windows open,' etc." "Why," he said, "they would run me out of the house. I could not talk that. I can't talk to my patients that way, I have tried it. It doesn't make any difference, they don't change their habits, and they don't want to be preached to about their personal habits. If I talk to them about how they sleep, about how they live and the rooms they live in, having foul or fresh air, and tell them they don't eat right, etc., they would say, 'That is all my business.' They will say, 'I will hire you when I am sick and let you come and cure me, but don't you talk to me about my personal habits.'" He didn't say, of course, that they absolutely talked to him in such a brutal way, but he gave me to understand that they had settlement to that effect. "And so," he said, "I have given it up, I am not going to bother my head about this." That was about twelve years ago. Think of the wonderful change that

has occurred in that time. I am rather an optimist, but the aerial farm has grown a great deal faster than I ever expected. Why, in New Haven only a few days ago, an architect came to me to consult with me in regard to an outdoor school, and I said to him, "Has this fresh air movement affected architecture?" He said, "Yes, it has, very much. We have wider windows, different kinds of windows today, and we have sleeping balconies. We have to build those often on houses today." Well, do you know, surely it was not more than eleven years ago when, in New England, the first attempt was made to sleep outdoors. When I was in Colorado Springs, only a few were trying it. I was one of the first. I got it from somebody else, it was not original with me. They had been trying it, though, for some time; it spread so that now, practically everyone sleeps out of doors, who have tuberculosis, and many well people, simply because they want the added vitality they get from it. I went from Colorado to California, and I found out there a few who slept out of doors and it was coming into fashion. But in each of those places, they said, "You can't do it anywhere except here, you can't do it in the East, it is too damp, too windy or something else." They always had a dozen different reasons why you could not sleep out of doors in New England. I happened to hear of a Doctor Millet in Boston, who was treating tuberculosis by the outdoor method because his patients were so busy they could not be out of doors in the day time. They had to work. A shoemaker had tuberculosis and the doctor told

him, "You have got to stop work, you have got to stay out of doors all day."

"Not on your life," he said. "Then you will die," the doctor told him. He said,

"I know that, but I'll support my family instead of having them support me."

The doctor said, "Then, if that is the way you feel about it, I want you to try

to sleep out of doors on your roof." The man did and he got well. In about

six months, he got over his symptoms, and, so far as I know, he is living today.

Doctor Millet took that hint, established an outdoor sanatorium where patients

could sleep out doors, and he has cured a great many patients. From that one case,

the thing has spread in the last eleven years, so that several hundred people in

New Haven sleep out of doors all the time winter and summer. It has spread to

other things. It was found by accident in the Presbyterian hospital of New York

City, that pneumonia could be treated in that way. A boy who had pneumonia, was

going to die, and he said, "I want to get outdoors, I want to get outdoors." And

the doctor said, "Well, he is going to die anyway, put him out on the roof."

They put him out on the roof and he got well. That gave the doctor a hint and he

put other patients out doors and found the fresh air was not only good for

tuberculosis but for some other things. Somebody has said, "Man is a slow-think-

ing animal." And the doctor said, "Then fresh air might be good for everybody,

whether they have tuberculosis or pneumonia or what. Well, it might not be good

for neuralgia and a few other cases, nevertheless, fresh air is an adjunct, some-



thing that aids in curing pretty much everything, and so people who are not sick at all but simply want to work a little harder to accomplish a little more, to feel a little more of the zest of life, have taken up sleeping out of doors. And now, in New Haven, there is scarcely a street but that if you look carefully behind the houses, you will see some sleeping balconies, just in that one little town, I know, and it is the same all over. I know a girls' boarding school in Pennsylvania where all the pupils sleep out of doors if they want to and I know a hotel in central New York where each room is provided with a sleeping balcony. So this fresh air movement has spread with great rapidity in twelve years. The part I am trying to emphasize is this, that there was a prejudice so great that this physician in Colorado Springs did not dare, for fear he would lose his practice, tell his patients the truth when they lived in rooms that were not fit for human habitation, and yet, in the course of simply a decade, very substantial progress has been made in breaking this prejudice. I can remember encountering it myself, even in California where you would think everybody would want to sleep outdoors. I told a gentleman out there about it, and he said, "Oh, well, I know that is a fad. He had a sick wife who really needed this treatment. And I remarked that perhaps this would be a good thing for her. "Well," he said, "she is not a crank and neither am I." He wanted to do what everybody else did.

Now, a similar case today would want to sleep outdoors to keep in the fashion. There is the difference, and the time will come when it will be just as unfashionable to do the unhygienic thing as it is now fashionable to do what is hygienic. Now, one of the virtues of this institution, it seems to me, is the fearlessness in regard to custom. The object is to find out what is really hygienically the best, irrespective of what people actually do. There is no attempt to compromise the custom. I do not know that everything that is new on the code of hygiene in this institution is correct. It would be very wonderful if that were true. It is not likely that it is true, in fact, the code is constantly changing and that is another thing I admire in this institution, that it is open-minded and that Doctor Kellogg and his associates, when they find evidence that they are wrong, acknowledge it and change and try to do what they think is right. And yet we do not know very much about personal hygiene because so little study has been put upon it, but I venture to say that the code of rules that are inculcated in this institution are nearer correct, far nearer correct than the habitual code, the code of habit in the community in general. Don't ever confuse the average with the normal. They are two entirely distinct things. I know an insurance company that has waked up to this fact. They used to take the average weight of people of whatever ages and say that is the normal weight. Why is it

the normal weight? Because it is the average. That begs the question. That assumes that the average is exactly right. It assumes we all ought to imitate the average and try to approximate to that. They now discover that the average weight of a person of 20, the average weight of a person of 50, is abnormally great. Most people are abnormally heavy late in life. What would you think of confusing the average with the normal in teeth for instance? You would find it out by taking the average normal state of the teeth. If that is so, it is normal to have one tooth in two abnormal and to have it filled with gold or something of that sort, and it would not be right to have a full set of teeth, as there would be something abnormal about that. Evidently the normal and the average are two distinct things. This institution is trying to find out what is <sup>the</sup> normal ~~next~~ diet. Is meat a part of the normal diet? I am not an expert in this and I do not know, but I do feel sure of this, from a long study of the subject, it is very complex and difficult subject. That the average diet is abnormal in regard to the use of meat. That whether the meat ought to be entirely eliminated or not, certainly, a great bulk of it ought to be eliminated, and in this country people are abnormally eating because they eat too much meat and perhaps it is true that they ought not to eat any at all. I am rather inclined to think that a very good case can be made on that score. Of course, Doctor Kellogg knows ten times as much about this subject as I do. Now, why do you know that people in the use of meat are abnormal in

this country, in various ways. Compare them with countries where they do not eat any meat or very much meat, as in China for instance. Compare the working efficiency. You will find that those countries that use no meat or almost no meat at all, have very much greater physical endurance than those countries that use a very large amount of meat. A book has been written on this subject by an Englishman named Russell, that shows that out very clearly. And I took great pains, some years ago, to collect all the evidence I could on that ground. And I became convinced that that is true, and I had had no sentimental grounds at all. Why does that come about? One abnormal thing leads to another abnormal<sup>n</sup> thing, and I believe that this series of eating I referred to a moment ago, the fact that we have our food ground up for us in the mill or the kitchen, and try to swallow it without doing the work to earn the right to swallow it, as nature intended we should do, then we suffer and that unhygienic habit, that dietetic sin, ~~is~~ leads to another, leads to decay of the teeth, but it leads to too much meat.

Do you know meat is one of the foods you can eat fast with ~~impunity~~<sup>impunity</sup>. You cannot eat grains fast with ~~impunity~~<sup>impunity</sup>. You cannot eat nuts fast with ~~impunity~~<sup>impunity</sup>, and people who eat fast naturally gravitate toward foods they find they can eat fast without impunity, and avoid the foods they cannot eat fast without doing themselves some harm. I sometimes put it this way, when you eat as fast as a dog you gradually

crave the food of a dog; when you eat as slowly as a horse, you gradually crave oats and grain foods that the horse uses. Why do we eat fast in this country?

It is a part of our American hurry. We have a quick lunch counter, with so many minutes for refreshments. We have to work by the clock, we have engagements and do not allow sufficient time between engagements for proper eating. We take the paper even to the table so then we are constantly in a nervous hurried spirit. Even if we did have an abundance of time, we could not but eat fast because we have that awful awful hurry in the back of our head all the time. That is where it comes from. It comes from the use of these artificial stimulæ, the railway, the bustle around us, the clock, the making of engagements. It is an abnormal life that civilization has built up. We cannot altogether get away from it, but we see it leads to all kinds of abnormalities. That the abnormality of hurry leads to wrong eating, to eating <sup>(fast)</sup> flesh food which you can eat rapidly, to the use of meat which you can eat rapidly without so much harm as other things. Slow eating will reform meat eating to a large extent. I tried that out with an experiment at Yale some years ago. Some students offered themselves for experiment and they tried the eating club. We got them away from the rest of the students where they ate in the great dining hall and gobbled as fast as they could. These students were determined to try what is called fletcherism or very thorough mastication, and these nine students offered to follow Mr. Fletcher's rules. They were

instructed not simply to count the chews or to make a mechanical thing of it, but not to make a bore of eating, because it has been found that people who do that do not get any benefit from slow eating but sometimes injury. As Doctor Kellogg told you, gastric juice won't flow unless you enjoy your food, and when food does not remain in your mouth long enough before you unconsciously swallow it, you get harm from it, so the students were told not to try to hold the food in their mouths longer than it naturally wants to stay there. Don't try to force it down but let it alone and enjoy it as long as it wants to stay in the mouth. Let your swallowing be involuntary. You know we have about three kinds of muscles, the biceps here is a voluntary muscle, it never works involuntarily except when something is the matter with it. The heart muscle is an involuntary muscle. It acts whether you want it to or not, and if you want to stop it you can't. Breathing is a semi-voluntary, it is either one or the other, the muscles of breathing. Most of us breathe involuntarily all the time. That was a voluntary breath. (illustrating) I can breathe voluntarily. Now the muscle is the same kind. It is not a voluntary muscle like the biceps and is not an involuntary muscle like the heart, but it is like the breathing muscles.

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First Annual Reunion of Sanitarium Patients at the Sanitarium Gymnasium, Battle Creek, Michigan, Tuesday, August 12, 1913 at 8 p. m.

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

Chairman, Ladies and Gentlemen: You have an opportunity tonight to participate in an event of some importance. I hope. It is of some importance to this institution and I hope it will be of some consequence to you because it is the first of a series of what we hope to be very good things. This is the first attempt at a reunion of Sanitarium patients, but I trust it will not be the last. I expect what we are beginning tonight will go on and be repeated every year for one hundred years and perhaps more, and some fifty years from now Wu ting fang has promised to be with us, also one hundred and fifty years from now. So those who are alive at that time will have the pleasure of seeing the astute Chinese statesman here if he keeps his word, for he promised to be here in 1956, then he is going to be here again fifty years later, he says. This is rather a new idea with us, though we have thought of it a good many times to gather together our old patients to see how many there were and we have been counting up heads the last day or two and we are surprised to find how many we have here who have been here before. We have today 1185 people in our family. Last week we had quite a number of transient boarders, -175; and then we had about 1350 or between 1300 and 1400 people all told, but (we have today 1185 guests in the house of whom 849 are sick people and here as patients and of these 849, we find 225 have been here before, --that is, they are "repeaters".) They have been sent here by their doctors or by their friends probably in the first place in the hopes that they might come home better people. This is a sort of reformatory, you know. This institution is a penal ~~institution~~ institution in a certain sense and a reformatory and it is important to know in such an institution how many have been committed for the first time and how many are "repeaters" and how many are really old offenders. Now I imagine of those who come here the second time, third time, fourth time----I met a gentlemen the other day who said this

was his twenty-eighth visit here. I imagine that quite a large proportion do not come back because they are back sliders, although I met a lady this morning from Grand Rapids--possibly she is here tonight, I don't know, I hope she is not, but she said, "Doctor, I have got to come again. I was here last year. I have been here twice, but I have got to come again. Doctor, I confess the truth. I backslide. I get along very well for about six months, then I backslide. I think I ought to come once in three months regularly and I think that would keep me right up in line. But you know my husband is a very good feeder. He is healthy; a great big man and can eat anything that comes along and it is pretty hard to resist the temptation. So after three or four months I begin to backslide and the first thing I know I am down again. I have those awful headaches. I wish I could get rid of them. When I come here I do get rid of them, but when I go home I get them again and you know why." Well I think it is a good thing to get together and compare notes as we are going to try to do tonight. I am not going to spend all the time talking. We want to hear from those who have had opportunity to experiment with the Battle Creek idea and find out how it work~~s~~.

Here are 275 people who have tried this experiment for nearly a thousand years. We have figured up the number of years these good people have had opportunity to try Battle Creek ~~year~~ ideas, -ideas of better living. They really do not belong to Battle Creek and we find the number of years represent~~ing~~ed is 887 years, for women 386 years and for men 501 years. The men are the worst offenders, you see. They had to be committed for longer periods, 501 years. Over 500 years the men of this audience at the present time here in this institution represent an experience of 500 years with Battle Creek ideas and the ladies represent 386 years. Now we want to get some ~~results~~ of the results of this experience. Here you are in the presence ~~of~~, probably of 7 or 800 people, men and women of intelligence that appreciate a good thing when they see it and are able to understand the value of actual practical experience and so I hope what is said here tonight will prove to be of value, not only to all of us here,



to us doctors, perhaps, in teaching us some of these things we need to learn but as evidence of the value of giving attention to the care of the health and the bodily care to the care of our bodies as we take care of our automobiles, but I am not going to occupy all of the time. I am going to try to keep still as I can and going to let some of you talk. This is your evening and it is your ~~time~~<sup>ime</sup> to talk. If you think we doctors here and the Sanitarium need some reprimand in return for the things we are giving to you, you will be perfectly free to say what you like, for this is your meeting. Who will speak first? We have some of our speakers on the platform here, you see, and I am sure you would all be glad to hear from Prof. Fisher again. He has spoken to you once or twice. You will be glad to ~~hear~~<sup>from</sup> him again, I am sure. (Applause)

Prof. Irving Fisher: Ladies and Gentlemen, I am not at all sure that Dr. Kellogg is right, ~~because~~ Having spoken already four times in something like a week, I have an idea you would like to hear somebody else and if there are 275 people here who are ready to testify, I think I should make my remarks short. First, I will say that I am very glad that this custom of an experience meeting has been started. We, at Yale, are great men on reunions. I have just been attending my twenty-fifth anniversary of graduation at Yale and they are great times for celebration and bringing back the Yale spirit of loyalty to an alma mater to the institution to which we owe so much, and I think I was one of those who suggested some years ago to Dr. Kellogg that it would be a good idea if he would try to get means of this sort so that old graduates of this institution could come and testify to this love of their alma mater. I think the first time I came here was eight years ago and I believe I have been a repeater to the extent of five or six times since. In fact I come out here every time I get a chance to spend a little vacation here. I have never been in the technical sense, a patient at the Sanitarium and yet the first time I came here I could not boast of being truly a well man. I had had tuberculosis some time before and was away from my work at Yale for three years, between 1898 and 1901, during which time I was

under the best specialists in this country on tuberculosis, Dr. Trudeau of Saranac Lake, New York, Dr. Corwin of Colorado Springs, Dr. Flint in Santa Barbara and had gone back to my work at Yale without getting back my original power to work and I was determined to restore that working power if possible. I became interested in personal hygiene and endurance as subjects which seemed to me were important to me personally and which concerned my professional work as an economist and I suppose I spent thousands of hours in studying personal hygiene during the last ten years. At first or during the first part of this period, I became greatly interested in the work of my ~~colleague~~ colleague, Prof. Chittenden at Yale on dietetics whose work, as you know, is a part of the basis for the dietary here at Battle Creek and it was because of the similarity between the low-protein ideas of Prof. Chittendon and the non-meat ideas of Dr. Kellogg that I first became interested in this institution. Having read somewhat about it or I corresponded with Dr. Kellogg and the first opportunity I had, I stopped over on a trip between my home and Chicago to see this institution. I remember extremely well that time and how rich I was from fatigue on the journey, from fatigue at a scientific meeting which I had been attending and remember telling Dr. Kellogg of it. But Dr. Kellogg thought I felt very much discouraged and that I felt that I was not even half a man so far as working power is concerned. I said, "I came here because I am interested in sanitoria," Having helped to establish one near New Haven ~~where~~<sup>for</sup> the treatment of tuberculosis. But I said, "I also would like if there is anything in this institution that can help me to get that help also." I notice that Dr. Kellogg smiled, seemed to think that there was certainly a great deal here that might be of use to me and I found that to be the case. I had supposed at that time that this institution was nearly a sentimental vegetarian institution, that it was a one idead place ~~rather~~ run by a one-idead man and I expected the only advice I would get would be to give up meat. Much to my surprise when I was describing my case to Dr. Kellogg and he observed me, he said, "Prof. Fisher, in your case I do not think diet has a great deal to do with it, in fact, as you have more or less adopted the Chittendon diet, I

would not have a great deal to add on that subject." "Well," I said, "then what do you think is the matter with me." (Well I was sitting in a chair in this position and he said to me, "Your vest is wrinkled" which did not seem to me to be a very coherent remark. I looked at my vest and saw the wrinkle but I did not see the point and I said, "What of it." "Well," he said, "if you will let me examine you I will find that your abdomen is wrinkled underneath.") "Well," I said, "what of that". "Well," he said, "if you will let me examine you further I will find you have some sensitive spots on the back bone", "And," I said, "how do you know." He said, "If you will let me examine you further, I will find your liver is congested with blood." "And," again I said, "how do you know", and I said, "Dr. Kellogg, if you will tell me what is the matter with me according to your diagnosis even if I don't believe that you know it, I will follow faithfully your advice because I am a great experimenter. Now how long do you think it will take me to improve my working power very considerably." I said, "I have spent three years of invalidism traveling about the country and I have spent two years at Yale doing half or quarter work and while I have never had any recurrence of my symptoms of tuberculosis and am listed as a cured man so far as that is concerned, I know perfectly well that I am good for nothing. I have spent these five years trying to regain my health and if necessary I can spend another five years getting back my working power. I have improved a little in the last two years but not very much." "Well," he said, "I think if you will follow my advice you ought to see some result in three weeks, and, in another three weeks you ought to be doing double the work you are doing now." He spoke very confidently and I thought, that is altogether too confident. I had no faith in it. That is tall talk. I did not say these things to Dr. Kellogg and I don't know whether he ever knew I thought them until he hears me speak tonight. ( I really had no faith.)

(It was not faith here that did the work but I followed out his advice. He found the sensitive spots he described and he diagnosed my case as splanchnic neurasthenia which in other words is congestion of the portal circulation, a malady which I now learn is exceedingly common among sedentary people although very seldom recognized and in my case though I have evidently been suffering from it knowing as I now do the symptoms of it for probably twenty or twenty-five years of my life, no one has ever called my attention to it until my attention was called to it here at this institution.) It turned out even better than Dr. Kellogg said. Within a week I had noticed a distinct improvement and within a month I was doing double work I had been able to do ~~for~~ previously and since that time there has been scarcely a month of my life that has elapsed but that I have improved in working power enough to notice it myself. This was the biggest lift upward that I got from this institution or from any person or institution in the world) but I have received many others and I suppose altogether at least half dozen suggestions which have been of very great service to me; the last being the use of the Special Culture. I began that about three months ago when I could boast of being as well as I ever had been in my life and perhaps considerably better but the instant I began to put the good germs on the track of the bad germs I noticed a distinct and almost sudden improvement and clearness of brain and power to work and felt less need of sleep; was satisfied with ~~more~~ fewer hours so that I can at least testify in this testimony meeting that to these <sup>two</sup> specific aids that I have secured through this institution and to a number of others which I would ~~not~~ won't take time to mention.

(Applause.)

Chairman:-

We are certainly very grateful to Prof. Fisher for this very frank statement of the good he has received from right living. It is not the Battle Creek Sanitarium that deserves any credit and I certainly don't

deserve any credit for the uplift which Prof. Fisher has felt but the credit is entirely due to his own efforts. I simply pointed out to him the way and he has been traveling in the way. ( One of the things I remember talking to him about on the visit that he mentioned, was the importance of exercises to develop the abdominal muscles here. Some months afterwards I called at Prof. Fisher's house in New Haven by his invitation and when he and his wife happened to be out of the room his three beautiful children, two little girls and a little boy all went down on the floor and began going through the exercises and they said, "Dr. Kellogg, do we do it right?" So I found he had set the whole family at work in building up the physique so as to fortify them against the things he himself had suffered from. Nothing pays so well as preventive medicine . ) That was a very interesting experience for me. We are very much obliged to the professor indeed. Now we are going to hear from a gentleman who is accustomed to talk, who travels about talking a great deal through the country and whose very business is to persuade people to use coffee. I have the pleasure of introducing my friend, Mr. C. H. Owens, Pine Bluff, Ark. who visited us some years ago for the first time.

[Applause)

C. H. Owens:

The Doctor has been after me now for several years and this is the first time he has had the opportunity of getting me up before an audience like this but as he says I have been selling coffee and was about to quit the business. I was converted here about four years ago to this Battle Creek Idea and I have followed it up about as religiously as any poor fellow could under the circumstances. In my travels, of course, I had to go to a great many hotels; some of them good and some of them were bad and of course at the bad ones I had to take eat<sup>just</sup> what they gave me, had to try to eat something that they gave me but I managed to get through and I kept working on them and working on them and a great many of them now

are adopting the Battle Creek Idea throughout the country and when they see me coming in sometimes they will go back and notify the cook, "Mr. Owens is here; cook a great deal more rice. We will have some rice for supper" so I have been feasting on that but I must tell you about my condition. A little over four years ago I landed here, I think it was the last day of April. I was about as near down and out as Dr. Kellogg will tell you as a poor fellow ever got to have got well. I got here and <sup>they</sup> immediately began to examine me and gave me the usual breakfast test, gave me my blood test, etc., and they put me to bed with two fine nurses and immediately wired my wife to come on. (great laughter and applause). After the doctor had examined me and found out what was the matter they immediately wired home for my wife and after she got here why, of course, and after the treatments, I began to mend again, began to pick up but I shall never forget the first time I ever saw Dr. Kellogg. Two or three days after I had come here and Dr. Mortensen was working on me faithfully, he came up to my room two and three times a day, he opened the door one day and in walked an elegant looking gentleman with a white suit on and he walked around the bed and he looked at me. He said, "Mr. Owens, we are going to get you out of this here. Sir, we are going to get you out of here? Of course that gave me a whole lot of encouragement from that time and my wife got here a few days after that and I began to improve right along. They would take me and wrap me up in blankets, roll me out on the lawn and where I could breathe the fresh air and as it happened I happened to have a very good appetite and the diet I suppose just suited me and I began to pick up right along and I stayed here I think it was a little over three months. I left here and went home and went right back on the road the first day of October and I have been traveling ever since. As I told you, I tried to follow out the diet as nearly as possible. Of course, we eat some things sometimes that do not exactly agree with us; sometimes vegetables that are cooked with bacon or something of that kind and it disagrees with me a little but I used to suffer a great deal before I came here with

headaches. I used to have them about every two weeks and I suppose that was because of the disorder of the stomach but since I took this treatment and have been cured and have followed this Battle Creek Idea, I rarely have a headache. It is the rarest thing I ever have a headache now. That shows that the Battle Creek Idea is a good one to live up to. You do not have those old troubles that you used to have and I want to say to these good people here a great many of you come here and you are cured and you go back home and follow up the Idea that you learned, don't get back into the same old rut and have to come back here every year. I come back here every year but it is a pleasure for me to come back here. I always look forward to the first of July as a time when we should come back to Battle Creek. I love to come here. I love to come to the place which has done me so much good and as you people that go home and go back into the same old rut of eating and drinking and smoking, things of that kind, it pays you to be good. It pays you to live up to this Idea. You will feel better and you will think more of it, won't you. Then another thing. It does Dr. Kellogg just as much good to see you come here and get well and then live up to this Battle Creek Idea as it does yourselves. I know in my case he was just as much pleased with my recovery as any man I ever saw in my life, as any of my own people. He is always glad to see me and it shows that you that he is interested in your case. It doesn't matter who you are or where you are from. He is certainly interested and he wants to see you get well. I hope that we will have the pleasure of meeting you here again another year if we have one of these reunions and see you all well and happy. (Applause)

Chairman:-

Mr. Owens' case reminds me of a case of a lady who came here from Philadelphia some years ago. One of the leading physicians of Philadelphia, in fact, two of the leading physicians men whose names are known throughout the entire world sent this lady here. No, they did not send her here. She was

a trained nurse. They thought she had cancer of the stomach and told her she had to die but she met one of our old nurses who brought her up here and she got well and Dr. Wier Mitchell who is well acquainted with the case used frequently to refer to this lady as the woman who was resurrected at Battle Creek for she was so nearly dead when she came that nobody thought she would live to get here. Mr. Owens' case was just about as bad, in fact, I think it was worse. When I first saw him his face was the color of this piece of paper. He could not raise his head from his pillow without fainting away. His blood count was 15% of the normal. It was 15 instead of 100. The hemoglobin was only 20, one-fifth of what it ought to be but he began to improve and in one month it was 40 and in another month it was 60, in another month it was 76 and then he went home. The next year he came back and it was 84 and the next year it was 82 and this year we find him looking more florid and handsome than ever and his blood count is 95, his hemoglobin so he has gotten about as near the top as anybody ever gets as a permanent thing. We feel very proud of Mr. Owens. He is our walking advertisement. He tells me that although he sells coffee he tells every man he sells it to that it is poison and he ought not to take it so I think one of these days he is likely to get out of the business. He is getting pretty tired of it. Now we are going to have the pleasure of hearing a word from a gentleman who comes here as a critic. He is a repeater too. He has been here before but I must tell you that he only remained a day or two the first time but he is staying with us a longer time this time, Dr. Rogers the medical director of the New York Life Insurance Company, the greatest life insurance company in the world. The doctor has come here as a critic and not as a patient and we will have the pleasure of hearing from him. (Applause)



Dr. Oscar Rogers: I am very glad indeed that Dr. Kellogg should have said in advance that I am not here as a reunionist for the reason that I never saw Battle Creek until about a month ago and, curiously, I had never heard of Battle Creek excepting by way of echo, rumor until a little over two years ago but my work has led me I think to be in position to speak with a certain amount of confidence of the character of the effect that the Battle Creek Idea or Ideas have on people.) My work for many years has been a selection of risks for a life insurance company which means that it is not my task to assign to each applicant for membership in the company; I serve on a valuation which shall decide whether that person shall be admitted or not and so (I have come to look on the human animal a good deal if you please as a veterinarian looks upon a horse merely from the standpoint of the capacity of that animal to accomplish what is expected of him. Life insurance is a matter of longevity and if a man is manifestly probable likely to live a much longer time than his fellowmen, it goes without saying that he is a much better risk for life insurance and on the other hand, if he is a man who is less likely to live the average duration of life/<sup>he</sup> is a poor risk for life insurance so that my work has been one that has concentrated my attention on the question of the probable longevity of any individual that happens to come before me either in person or through the report of some other physician and I want you to know an experience that I have been having for many years which gives me a great deal of trouble. Men in apparently splendid health, men who seemed to themselves to be in splendid health, who felt vigorous and strong and as if they were going to live to a great age I found curiously that really it was only the shell of a man that I was looking at and actually not the substance of him. The machine was burned out ~~inside~~- inside and <sup>yet</sup> on the surface of things he looked just as good as he ever was and I saw that over and over and over again. Now what shall we do with such people? It is very easy for us to say we are sorry but we cannot

accept you as risks for life insurance and so good day but there has been running for nearly 2,000 years a tradition that the priest and the levite when they pass by on the other side were doing the wrong thing and I take it if I see that a man is in trouble, if he is wounded and broken, it is up to you to do your best to help him along and so there has drifted into my work the problem how to offer help to these cripples who until they come before me feel that they are as good and vital subjects for insurance as anybody else. I had tried Nauheim and Vidy and various places in Europe, various sanitoria in this country and have seen the work of all of them and I am sorry to say that on the whole I reached the profound conviction that it was not when it boiled down and concentrated, worth a single bit. It was practically a dismal failure and I came to have no heart at all in saying to a gentleman who was evidently in distress, "take the treatment at Carlsbad". I knew/it was as sounding brass and a tinkling symbol on the whole although I saw some exceptions and then I happened to meet the distinguished head of this institution and talked with him long enough to get his idea and I saw that he had arrived at what I believed to be the correct conclusion and I have since then been an advance agent for the Battle Creek Sanitarium. ) I believe that I can look like the Pharisee on Mr. Owen and claim a certain holiness which he cannot claim because I am not selling any goods that I do not thoroughly believe in when I talk of the Battle Creek Idea. The fact of the matter is that most of humanity eat too much. That is fundamental and we eat too much meat and that is still more fundamental and when I saw somebody who really preached that I had this coat off and was working it and I said, "He is my man". Now of the people that I have been influential in sending to this place, I can say only that they drift back here from time to time and so instead of being a leader of those people, I suspect that hereafter that I too shall have to come back

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and in doing so instead of leading them, I shall be following them because I am coming to Battle Creek again. (Applause;)

Chairman:

We thank Dr. Rogers most heartily for this indorsement of the ideas of right living which are promulgated here. As a life insurance man, as the medical director of a great life insurance company, he has had occasion to study most critically things that make for life expectancy, that prolong life and his conclusions as he has stated here are the same as those that we have reaped here from our practical experience. I do not know that Dr. Rogers has recognized the fact that I wish to announce here that the Battle Creek Sanitarium is also the insurance business. We are competing with all the insurance companies of the world. Our business, however, is somewhat of a different line. We deal exclusively with impaired risks. We insure the people that the life insurance companies won't take. They are just the folks for us and I believe the life expectancy of the average man rejected by the life insurance company can be increased from anywhere from ten to twenty times. I believe it can be doubled, tripled, quadrupled enormously increased by daily attention to practices of right living, to principles of right living. A man whose blood pressure has gone up to 200 if that blood pressure can be gotten down to 125, 130 or 140, I am sure it means if that man has is kept within safe limit and his life may be extended for many years by a knowledge of how to live. We intend to keep on with this life insurance business and hope to be able to increase our activity throughout the aid and co-operation of the life insurance companies of whom we are really after all not in any other than friendly competition.) Now we have the pleasure/<sup>also</sup> of hearing a word from Capt. Simmons of Louisville, Ky. The Captain has been with a number of times. I think this is his sixth visit and he was with us in the old days before the fire. (Applause)

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Patients' Reunion of August 12 continued from n. b. p. 6229.

Mr. F. N. Simmons: Confucius said the prettiest word in the language was "reciprocity"; Buddaha said "humanity"; Mohammed said "Mecca"; the German says "the father land" is the prettiest word in the language; the Frenchman says "labelle franc"; the Englishman says "home sweet home". There is a charm and a sweet association connected with them all. I do not know what is the prettiest word to the American. We have so many beautiful words that it were difficult to say which were the prettiest of them all. The allopath says "elimination"; the osteopath says "adjustment"; Mr. Fletcher says "fletcherization"; Mr. Pinchot says "conservation". I believe that we are taught here to say the sbete noire of the Battle Creek Sanitarium and the meanest word in the language is "autointoxication". (Applause)

Thirteen years ago I was here for the first time. I have been here five times since, a striking indication of the appreciation that I have of this wonderful institution. I believe it is sane, it is philanthropical; it is scientific. I believe that they can carry out everything they propose to undertake and do. The thought here and the idea is back to nature and that is the solution of the problem. That is philanthropic, scientific and sane. But you know, the old darky said it was much easier to exort than to teach from the text and so I am only going to give you one or two ideas or thoughts along the line that I have been benefited.

When I first came here with nervous prostration, all broken up and cast down and I went to my room, on my dresser were these words, "~~Sleep-sweetly in this pleasant room or thou~~

"Sleep sweetly in this pleasant room,  
Oh thou who ere thou art,  
And let no murmuring yesterdays  
Disturb thy sickful heart;  
Nor let tomorrow mar thy rest  
With dreams of coming ill.  
Thy Maker is thy nicest friend.  
His love surrounds thee still.

Forget thyself and all the world;  
Put out each feverish light,

The stars are shining overhead.  
Sweet dreams! Good night! Good night!

There were consolation in those words to me and you may know I learned them and I have been repeating them since. (When I came up here four years ago last night, coming from Louisville, in the city of Chicago where I arrived in the morning I took my breakfast and I ~~then~~ found that I had a beautiful box of cigars from Vera Cruz, second only to Havannah cigars which had been sent to me by a friend. I had been an inveterate smoker all these times but the question came to me, "now it is against the rules in Battle Creek to smoke but here is the habit of all these years, having smoked since I was a young fellow of seventeen years. Now which is the stronger with me, the habit of smoking or the obedience to authority." As a law student I had been taught as a young lawyer, I had been taught that I ought to be obedient to authority, and, after eating my breakfast in Chicago, I smoked one of those delicious cigars and then debated the question all the way to Battle Creek, whether or not I should glide away like the Arab and smoke on the outside or whether I should be obedient to authority. I discussed the question, I say, all the way and when I came here I had made up my mind that instead of being a slave to the habit I would be obedient to authority. I stopped the smoking of cigars. In five or ten days I had cured myself of the habit and I think it was not three weeks until I had no longer the desire. (Applause) That is what I learned in Battle Creek. I tell you, my friends, the great trouble with us in coming here, is, many of us believe there is magic in Battle Creek; that all we have to do is to come here and we will get well whether we make any effort or not. That is not the teaching of the institution. The teaching of the institution is that the doctors can do you no good except to assist you in removing the obstacles that God in nature might do his perfect work.) That is the thought; that is the idea here. We are a good deal, I think sometimes with all the advantages around us in Battle Creek, we are a good deal like the steamers that went out from New York bound for a South American port laden with precious ~~freight~~ freight of human lives and other precious freight, going victualled for a seven-day voyage. And that

steamer went out beautifully from New York; sailed beautifully upon the water with a beautiful sky overhead until it had almost reached its port when a storm came up. The boat was disabled; was almost wrecked and became a derelict upon the waters. In this condition the water was gone and the victuals were exhausted and the people were dying from thirst, but at this juncture a vessel in the distance was spied and the cry went out, "Send us water or we die" and then the response came back in clarion notes, "Throw down your buckets and drink to your ~~fill~~ fill. You are in the mouth of the Amazon", and, you know it thrust its precious sweet waters fifty miles from its mouth and so it is with us here, ~~upocisus~~ We are surrounded we are in the mouth of the Amazon with fresh water all around us and yet we are insensible to it and many of us do not take advantage of the occasion and the place. I thank you.

I want to testify this evening that having come here thirteen years ago and this being my sixth time seems to ~~express~~ indicate an expression of my pleasure and gratification at coming to this place and I ask God's blessing upon the superintendent, upon the officers, upon the doctors, upon the attendants, upon all connected with this institution that it may grow and prosper and reach out to the farthest ends of the land and that all the people shall catch the spirit of the Battle Creek idea and live to it. (Loud Applause)

Chairman: Now we ought to hear a few words from the ladies. We shall be glad to hear a word from Mrs. Walton of New Haven, Conn. Will Mrs. Walton kindly favor us?

Mrs. Walton: Two years ago I made my first visit to Battle Creek and at that time I was <sup>in</sup> a very much run-down condition and Dr. Kellogg thought it was necessary to have an operation in order to insure me good health. Since that time I have been steadily gaining and now I am most enthusiastic over Battle Creek ideas. (Applause).

Chairman: It pays to be good? Mrs. ~~Ell~~ Alexander of New York City.

Mrs. Alexander: I am scared to death. I never spoke to an audience before in my life. My first visit here to Battle Creek was in 1899 and I derived

a great deal of benefit then and about four years ago I was quite ill, then living in New York City and I did not seem to get my health and I came to Battle Creek very much against my doctor's advice and I improved very much, so much so that I have been coming every year and instead of growing older I feel younger every year. I have been living up to Battle Creek ideas. (Applause)

Chairman: ( It is a great deal pleasanter to grow young than to grow old. I found myself immensely tickled a few months ago when I discovered that my glasses were too old for me and I had to go back eight years.) We will hear from Mr. Bishop of Grand Rapids who supplies the people of the country with fine furniture. We will be glad to hear from Mr. Bishop.

Mr. Bishop: Mr. Chairman, I ~~know~~<sup>think</sup> it an evidence of <sup>our</sup> good judgement our sound sense that we found out this great Battle Creek Sanitarium before and a double evidence of sound judgement and good sense that we are here at this splendid reunion. It is a pleasure for me to state that I was wonderfully benefited by an eight months' stay here last year. In fact, I almost felt that I was one of the family and I continued my stay for a considerable period after I had gained my health. It is a great pleasure to return here again today. There is about this magnificent institution, an unmistakable air of hospitality and home likeness. It is a great pleasure to return here. I thank you. (Applause)

Chairman: Now is there anybody else who wants to say a word testifying to the value of Battle Creek ideas or of healthful living.

Mr. Edward Nelton Bradford: Mr. Chairman, I came here about twenty-nine years ago. One point that has not been brought forward this evening is this: There seems to be a great deal of encouragement to get well. I have never really succeeded in getting well in all these twenty-nine years, so have an excuse for coming back again. I have been back again twenty-five times. I have been here every year for the last ten years and enjoyed myself here more than anywhere else in Europe or the United States. I patronize the swimming pool more than any other department and as soon as I have worn the water out, they change it I believe. One point that strikes me in all these years about the Battle Creek idea and the

Battle Creek institution is the excellence of the table and I think that I have some reason to be somewhat of a judge. I go to a great many of the great hotels in Europe and sometimes in this country. I don't know of any place in the world that has such an excellent table and I don't know of any other place where you could even get a glass of fresh apple juice in the world today except at this institution. I also find, for instance, the butter is something that we cannot find in any hotel in America really fresh unsalted butter. I presume salt is worth about half a cent a pound and everybody in America seems to ~~ix~~ want to get a lot of salt into the butter, so I have had my excuse for coming back during the twenty-nine years. I remember when I went away the first time, Dr. Kellogg told me that if I did right he didn't think I would ever have to come back again. That was in 1885 but I must have missed something for I have come back twenty-five times. I have watched with a great deal of pleasure the success of the institution all these years for I assure you I can remember very distinctly that it was not ~~popular~~ popular at all in the 80's and long in the 90's but I trust that its popularity will continue to increase. It is the most pleasant place I can find in America and that is my excuse for coming back again. (Applause)

Chairman: I remember very well twenty-nine years ago I received a letter from a man who was one of the star actors in "Four-Paugh" great show wrote me from Saginaw if I remember rightly saying his stomach was all knocked out and wanted to know if we could do something for him. So when he reached Battle Creek he came up to see me and got a few suggestions which he thought were of value and we have not found any better friend since that time than Mr. Nelton who is well known all over the world as one of the most famous jugglers who has been seen in modern times. We are always glad to see Mr. Nelton. He sometimes entertains us. I believe I saw Dr. Garden rise a moment ago. Doctor we would be very happy to hear from you.

Dr. Garden: Three years ago I came here and I had a complaint that was troubling me very much and to make a long story short I was cured of it and I remained cured of that disease from that day to this. There is one feature of this institution of the many that I would like to speak of if time would permit



and that is this: ( Every morning in various chapels here, God is recognized. The attendants and all connected with it recognize God and ~~that~~ <sup>if</sup> I have intreperted the purposes of Dr. Kellogg and his co-workers here, it is to work in connection with God. The other day a lady that was on an operating table and almost out into the beyond, just before the doctor ventured to operate, he asked God's blessing to rest upon him that he might make no mistakes, that his mind might be clear and that his hand might be steady. My friends, we can trust men that recognize God with our wives and our children and our mothers and our friends and I bless this institution. ) (Applause)

Chairman: The reason why we must recognize the principles of better living and obey them is because they are God's laws and the reason why we are sick is because we have sinned or somebody has sinned and we hope the purpose of this institution is to help to lead men and women back to righteousness physical righteousness which is really the foundation of mental and moral health as well as of physical health. Now shall we have the pleasure of hearing from somebody else.

Mr. Ortiz: Six years ago I had what the doctors in my part of the country termed a nervous breakdown. I was so weak I was not able to walk. My left side was half paralyzed and my memory was so poor I would forget things from one day to another. In fact, I didn't know anything. My brother read of the Battle Creek Sanitarium and he put me on the train and brought me up here and in three months' time I went back home almost well and I have continued to improve ever since until the present day. My own main trouble was caused so the doctors told me through dissipation, drinking and smoking, in fact, doing everything that I ought not to do but I quit when I came up here and I have not had a drink or ~~x~~ smoked a cigar since that time. Thanks to the Battle Creek idea.   
★ (Loud applause)

Mr. E. T. Moore: I am somewhat used to giving my testimony in meetings and I wanted to say this: I believe I owe it to God as well as to this institution. Three years ago coming the 5th of September, my doctor at Columbus, Ohio rushed me

off here so that I would live till I got here. I was on the point of a collapse when I got here. I asked the physician to whom I was assigned whether he could cure me. He answer was that I was seventy-two years old. That is all he told me but he put me on treatment and in seven weeks I was on my feet. And not being able to stay longer, went back home and under his advice went to Florida and again last year I went to Georgia and spent six months there but that did not suit my case. I was somewhat like Sidney Smith is said to have been. A party inquiring how he was getting along, he said, ~~that~~ he had the gout and seven other serious maladies but otherwise he was getting along very nicely. Now I got along in Georgia but I came to the conclusion that I was not going to get well there and so I came back here with a determination that with the assistance of Dr. Kellogg and his force that I might overcome the twelve maladies that I am afflicted with or have been afflicted with. I am getting better. (Applause)

Mr. A. D. Leahy: I also have been borne again. I came here one of those so-called invalids that looked to me like pretty healthy fellows. I take it as a privilege to be allowed to say that I am thankful that I came to Battle Creek six years ago for the first time. I was indeed run down, very unhealthy and if it had not been for my experience in Battle Creek in coming here every year and sometimes twice a year since that time since I came the first time, I am sure that I would not be alive today. With the care I have taken of myself understanding how to live as I have been taught here, I can say now I think that is perhaps the greatest privilege that has led people to come here that they can be taught how to live.

v-p

Mr. Leahy talking:-

I believe the time is coming ladies and gentlemen when people who practice the Battle Creek Idea will not think it is strange or unusual to see those Battle Creek Idea people living up to 100 years of age. I am sure if people generally will adopted the practice of the Battle Creek Idea the age of three score and ten will not be an unusual one at all. I think the greatest point in this institution is the fact that people coming here are taught how to live. I want to say also to the people here who are like myself, that perhaps we do not appreciate all that is done for us at the institution. We do not perhaps appreciate the things that we are connected with. The matter was brought to my mind today. I was talking to a gentleman and said, "You perhaps do not appreciate the work that is connected with this institution, the stupendous work" and I made a few inquiries today in the different departments which I would like to show you in connection with the institution. (We do not realize what a stupendous work we have here. For instance, in the month of July eleven thousand ninety-three quarts of cream were used in this institution. \$10,000 was paid for the fresh vegetables and fruits in the month of July for this institution) going to show ladies and gentlemen what work there is attached to it and what an immense expense there is to take care of us people. We come down here, go to our rooms, have attendants to wait on us indeed much better, much more generously than we can at a hotel where it costs us a great deal more money. I would like to direct your attention to the fact of what is being done and what the work it takes to do it. (6,954 pounds of butter were used in this institution in July. 96,000 pounds of potatoes. It takes 2,000 cantaloupes to provide breakfast for this numerous assembly every morning.) Ladies and gentlemen think it over. Think of the amount of work that is done and think of the great institution that has been built up by our servant, Dr. Kellogg. I take special pleasure in testifying

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to the benefit I have received from it and I also want to thank everyone connected with the institution for the good work they are doing. I thank you.

(Applause:)

Chairman:-

We are just getting started. It is like the good old fashioned Methodist meeting which has to warm up a little while before it gets under way but I think this is about time for us to think of closing but we want to have another reunion next year and expect to see you back here and a whole lot more. I hope next year we will have three or four hundred, perhaps five hundred repeaters. Some of you would like to bear testimony here but I am not accustomed to public speaking and I am going to suggest that we would be glad to have you write a letter. You can address it to me and bear your testimony for Battle Creek principles. Now please note we do not ask you to say anything about the medical side. I am not so much interested in that as the gentleman was just saying we are interested in the instruction of people how to live. (This institution is a good deal more of a university of health than it is a hospital. The principal idea of the institution is to teach people how to live, to convince people of the righteousness of what we teach by helping them to get well and then persuade them to keep right on living in the way which has brought them to health again. I ought not to forget to improve this opportunity to remind you that this institution is not a private institution. It is not a money making institution. It is an incorporated, philanthropic institution, incorporated under the laws of Michigan as a charitable institution. We do not pay taxes. That is the one thing I know to say about it is that we do not pay taxes because the fact is recognized that the work of the institution is for the public. This institution belongs to the public. Myself and other members of the Board of Directors, some ten directors in all

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are simply the trustees to hold this property for the benefit of the public so we hope it will stay here and go on for years to come and anything we ask you to do in behalf of our work here is not to benefit us but it is to benefit the public themselves who we hope are interested in the extension of these principles. Before I bring the meeting to a close I wish to call your attention to an interesting letter I have received from a gentleman who wanted to be here but could not stop. He had to go home so he left his testimony with me. He says he lives in Dover, Del. and had suffered from rheumatism for several years, could scarcely walk, suffered greatly in one of his arms and in his shoulders. He did not come to the Sanitarium but wrote a letter. He asked me what I should do and I wrote him a letter telling him what I thought he might do and he and his wife who were both suffering from rheumatism and other ills began at once to carry out the principles of this institution at home. He says my letter reached them one morning while they were at breakfast and they immediately cut out meats, coffee and tea and began following all the suggestions made them and in six weeks were entirely free from rheumatism and since that time he has eaten no meat. This was his first visit. He is a clergyman, Rev. Mr. Geo. C. Price of Dover, Del. and he is following the Battle Creek Ideas and has found that it has been a very good thing indeed for his entire family. He said, "Since that time I have led an entirely new life, not only physically but mentally also for my mind became so much clearer and I believe that I am closer to God than I ever was before." I have here a letter from our good friend, Sir Horace Plunkett, the Right Hon. Sir Horace Plunkett, fellow of the Royal Society and a member of the Privy Council of King George. He says that he has been steadily improving since he left here, that he is improving at the present time notwithstanding a great deal of hard work and that he is going to come back again the last of September to remain

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several weeks with us. Sir Horace Plunkett, as you know, is the late minister of Agriculture for Ireland and a man who has done more for scientific agriculture than perhaps any other one man in the world. (I have also a very kind note here from Dr. Stephen Smith, one of the great surgeons of the world, Dr. Stephen Smith of New York City. He is a member of the State Board of Charities and recently at the age of 90 years has been elected for another term of six years as a member of the State Board of Charities of New York State, a very great responsibility; perhaps the largest responsibility in that line anywhere in the world. Dr. Smith has been following many of the ideas which are promulgated here for his entire life time. He was an invalid boy. He thought he would not grow up. He had serious bowel trouble and stomach trouble and so was obliged to live on bread and milk. He could not eat meat but lived on bread and milk almost his entire life time and he believes he owes to that fact his wonderful activity and vigor at the advanced age of 90 years. Dr. Smith was with us last year and we hope to have another visit from him next year. He is still enjoying excellent health and hard at work at Skaneateles, N. Y. where he spends his summers writing a pamphlet. At the present time he is President of the Tree Planting Association of the state of New York and this very day he has been hard at work writing a circular to the people of New York to interest them in the matter of tree planting.) Now let me say again that we shall be glad to have others who would like to join in this testimony meeting but have not had an opportunity to speak to commit their ideas and thoughts to writing and send them in. We are going to have a reunion number of the Battle Creek Idea and the speeches will be printed in full or in abstract and a letter will count just as much as a speech. Quite a number were not able to get badges and copies of the Blue Book. These will be delivered tomorrow or next day. We will have to have a few extra badges made but as we ~~did~~ did not know quite so many were coming in and everyone who participates in this reunion in any

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way will be given a badge and a book. Those who came and did not get badges and books please call on Miss Quillard at the reception room. Those who are old patients wearing badges stop a moment after the meeting is dismissed. We are going to have some little refreshments tonight and hand shaking but will detain you only a few minutes at that time.

End.

V-M

C. S. Spyer Sep. 1913

RELATION OF PUBLIC HEALTH WORK TO RACE DEGENERACY.

The service which has been rendered the human race by the public health movement of the last half century is the noblest example afforded in human history of successful, philanthropic, human activity. ( Within the last fifty years the average length of human life in this country has been increased seven years. In Europe the increase has been considerably greater. It is safe to say that public sanitation has within recent years added to the lives of the present inhabitants of the civilized portion of the globe not less than four billion years of human life. Finkelberg's estimates show that human life is at the present time being increased at the rate of sixteen or seventeen years per century and that the rate of increase is increasing, having gradually moved up from four in the seventeenth and eighteenth centuries to nine in the first part of the nineteenth and nearly double this rate in the last half of the century. )

This marvelous beneficence, the proportions of which far exceed those of any other boon conferred by science upon humanity has resulted from a prolonged succession of triumphs achieved by man in recent times, in his age-long battle against the enemies of life and health. What these battles were and how they were won it is quite unnecessary to recount in the presence of an audience so familiar as this with all the details of modern sanitary progress. The chief purpose of this paper is to call attention to the remarkable fact that, notwithstanding the enormous saving of human life which has occurred in modern times and the doubling of the average length of life within two centuries, there has been going on at the same time a remarkable depreciation in racial vitality and stamina.

That the human race, or at least the civilized portion of it,



is degenerating at a rapid rate, has been suspected for quite a long period of time. Numerous writers within the last fifty years have called attention to the evidence of race deterioration and (a few years ago the English Government appointed a commission known as the British Interdepartment Committee on Physical Deterioration in Great Britian which was charged with the study of investigating this question in the British Isles.) The Committee conducted a careful inquiry extending through several years, in the course of which, testimony was taken from all classes of persons likely to be able to throw any light upon the subject, particularly physicians, sociologists, magistrates, scientists, clergymen and military ~~men~~ officers. (The voluminous report published by the Committee presents a considerable number of facts of great significance, as indicating that race degeneration is actually taking place in Great Britian. It is stated, for example, on page 177 of the Report, that in Manchester and other manufacturing districts, evidences of degeneration are very marked. There is a distinct depreciation of stature. In Manchester and Salford, for example, it has been found necessary to import men ~~large~~ from the country to act as policeman as a sufficient number of men large enough to serve in this capacity cannot be found in the districts named. An army recruiting officer testified that sixty per cent of the young men offering themselves for military duty, were rejected on account of physical unfitness, and this notwithstanding the fact that the standard ~~has-been~~ height for admission to the army has been reduced within the last sixty years from five feet six inches to five feet. In the examinations for admission to the army, it was found that out of every thousand applicants, nearly six hundred were under the old standard, and more than half had a chest measurement of less than thirty-four inches, the minimum standard of forty years ago. It was found also that notwithstanding the great reduction in the

height standard, the proportion of persons rejected because they were too short, was not decreased.

(Statistics gathered by the British Association for the Advancement of Science shows a decrease of one inch in the height of adult men in the last quarter of the last century.) Many persons who testified before the Committee, presented evidences of Physical deterioration among the English people in various directions.

Prof. Rubner in an address before the late International Congress of Hygiene held at Washington, D. C. intimated his belief that the human race is deteriorating and suggested that a given number of people, five or ten thousand for example, would be found to weigh less in the aggregate at the present time than the same number of people weighed a generation ago.

~~Within a few months,~~ Dr. Tredgold, an English Authority of high repute, Medical Expert of the Royal Commission on the Feeble Minded and well known for his studies in eugenics, recently contributed an article to the Quarterly Review in which he presented most conclusive evidence of a "distinct decline in the vitality of the English people and growing sickliness". Prof. Tredgold calls attention to a fact which has apparently been generally ignored by sanitarians, that average longevity is not a correct measure of race vigor. Says Tredgold, "It would be extremely fallacious to conclude that a diminished death rate is any indication of an increased power of resistance to disease and an improvement in the inherent vitality of a race".

For more than thirty-five years, the writer has maintained the same proposition, insisting that a high degree of race vigor is indicated by the attainment of great age by a large proportion of the members of a community rather than by a high average longevity.

Statistics fathered by Tredgold from various friendly so-

cieties, aggregating a membership of nearly a million and a half, demonstrate that notwithstanding the great advances in the prevention of disease through public sanitation and improvements in therapeutics the average amount of sickness at all ages has steadily increased during the last half century. The following table taken from the report of actuarie , appointed in connection with the National Insurance Act recently enacted by the British Government in 1911, shows the increase of sickness which has occurred during the last thirty years in several large friendly societies.

*Insert table here from March  
number Good Health page 125*

A study of this table shows a very marked increase of sickness at all ages of life, from sixteen to seventy years, ranging from 14% to 70% the greatest increase being at 16-19 years and the next greatest 55-69 years.

Tredgold also shows that the decline of the death rate in England has been confined to ages under fifty. Rittenhouse, Fish and others who have ~~make~~ made studies of this subject from the best statistics obtainable in this country, have shown that within the last thirty years there has been a very pronounced decrease in the life expectancy of men over forty to forty-five years of age.

Table-5.

The reports of the United States Sensus Bureau are a mine of most interesting and valuable information on this subject. A study of these reports brings out the important fact that the notable increase in the average longevity which has occurred within the last two or three centuries, is solely the result of the suppression of acute maladies in infants and adults. This is clearly shown by the fact that right along with the decrease in acute maladies of various sort, there has been a steady increase in the mortality rate of most chronic maladies, as shown in the accompanying tables and graphics for several of which I am indebted to Rittenhouse.

It is apparent then that while public sanitation has accomplished work of inestimable value in certain directions, it has not as yet accomplished all that could be desired. It may be profitable to consider some of the things which public sanitation has failed to accomplish.

1. While lessening the mortality rate from acute diseases, almost without exception, public sanitation has utterly failed to lessen the mortality from chronic diseases. Chronic maladies and degeneration of all sorts are clearly shown by each annual report of the census Bureau to be increasing and not at a slow and uncertain rate, but at a surprisingly rapid rate. For example, within the last ten years the mortality from heart disease has increased over fifty per cent; the mortality from arteriosclerosis has increased from 6.1 per thousand in 1900 to 21; in 1911, and increase of nearly 250 %. According to the Census Report, nearly four times as many people die from disease of the blood vessels today as a dozen years ago. Doubtless this showing of the Census Bureau is in some part the result of increased accuracy of diagnosis and increased attention given to blood pressure and the diseased conditions of the blood vessels in recent times.

The mortality rate from Bright's disease in the United States has increased 131% within the last thirty years, as shown by Rittenhouse. The mortality rate from diabetes, in spite of great improvements in the treatment of this disease, has in the last dozen years increased fifty per cent. The mortality from appendicitis and acute maladies chiefly dependent upon chronic infection of the colon, in spite of the great number saved by surgical intervention has increased more than twenty-per cent. in a dozen years.

Mr. Rittenhouse, the able expert of the Equitable Life Insurance Company, has shown that the mortality from chronic disease in general has doubled within thirty years. When we consider then fact that chronic disease kills half the people who die, or about seven hundred and fifty thousand people annually, it is evident that public sanitation and the efforts of health boards, and federal, state and municipal health authorities and agencies connected with the public health and-administration, have made no progress in controlling these causes of mortality which are responsible for half the deaths which annually occur in this and other civilized countries.

The significance of this failure appears when we consider that half the deaths from chronic disease which occurred last year, for example, would not have occurred if the people of the United States were as healthy as they were thirty years ago. That is, that the causes of chronic disease, whatever they are, have increased or multiplied to such an extent within the last thirty years that we are losing not less than three hundred and seventy-five thousand persons in the country along each year from causes which are certainly preventable since they either did not exist or were only half as active thirty years ago as at the present time.

Is it not the duty of state and national boards of health and of all health authorities to undertake to combat this rising tide

of mortality from chronic disease and to save the four millions who, we know, are certain to die unnecessarily from these causes within the next decade? Is it not just as much within the province of a board of health to endeavor to ascertain and to suppress the causes of Bright's disease, diabetes, arteriosclerosis, cancer, pernicious anemia, heart disease, hepatic aclerosis and other chronic maladies as to seek to control yellow fever, typhoid, small pox diphtheria and other infectious maladies? The increasing mortality rate of cancer, diabetes, Bright's disease and other chronic malades, as shown in the following table is most alarming evidence of a decline of race stamina and calls for a vigorous effort to stem this tide of degeneracy:

*Insert table from May number of  
Good Health Magazine*

2. While the death rate has been increasing, there has been a simultaneous decrease in the birth rate. In several civilized countries the birth rate is decreasing more rapidly than the mortality rate. In France, the birth rate has actually fallen below the death rate, so that the native population is actually dying out. In Eng-

land within recent years, the birth ~~rate~~ has decreased so rapidly that it has now almost reached the death rate, so that the population of Great Britian will soon be stationary. The birth rate, also is rapidly declining in this country, and in fact, in ~~almost~~ civilized country of the globe as shown by the following table copied from the U. S. Census Report.

*Insert table from Dr. Kellogg's  
Report on Race Degeneracy*

The Registrar-general of Great Britian states in his annual report for 1907, "At the last census period (1900-1912) the fertility of English wives was lower than recorded in any European Country except France". A reference to the above table will show, however, that in the United States the birth rate is diminishing more rapidly than in any other part of the world, with the exception of Australia and New Zealand. The fact appears that the fertility of American Wives is decreasing at the rate of 10% a year. If the birth rate continues to decrease at the present rate in the year 2013, no children will be born.

An eminent member of the Royal College of Surgeons testified before the English Commission on physical deterioration in Great Britian, that sterility was unquestionably increasing among the Eng-

lish and cited ~~the~~ this as an evidence that race deterioration was taking place.

Closely akin to this ~~is~~ growing lack of fertility in women is the rapidly increasing inability of women to nurse their infants. According to Holt, "In New York, at least three children out of every four born into the homes of well-~~to~~-do classes, must be fed at ~~some~~ some other fount than the maternal breast." (A Professor of Entomology of the University of California finds an analogy between the human race and bees, ants and some other insects. He insists that the increasing number of women who have lost both the instinct and the capacity for motherhood is evidence that there is developing in the human race, a neuter type corresponding to the worker <sup>class</sup> ~~caste~~ among bees and ants.) In certain parts of the United States the decay of the native population as shown by diminished fertility is far advanced. For example, among native born New England wives, the average number of children is only 2.7, while foreign born wives living in the same communities have an average of 4.4 children.

In the decrease of ~~birth~~ rate and the increase of incompetent mothers, we are face to face with a race disease which must inevitably end in what Mr. Roosevelt termed "race suicide", and is unmistakable evidence of race degeneracy. What have national, State or municipal health authorities done toward investigating the causes of this unmistakable and growing evil which threatens disaster to the race.

3. State Boards of Charities and special Commissions have, within the last forty years, so greatly improved the conditions under which the insane and other mental defectives are cared for that the death rate of certain of these unfortunate classes has actually fallen below that of the general community. At the same time nothing has been done to check the development of these defectives and so they are increasing in proportion to the sound part of the population. (Mental



defectives have increased within the last fifty years at the rate of nine hundred per cent. in a century. That is, at the present rate of increase, in one hundred years from the present time nine per cent of the total population will be insane, idiotic or imbecile. According to Dr. Davenport, mental defectives now constitute one per cent of the total population. (The recognition of a new class of mental defectives, the moron, gives us the key to a large number of social problems and explains the rapid increase of a certain type of criminals and the growing army of ne'er-do-wells. Of all classes of mental defectives this class is by far the most dangerous because not easily recognized except by experts, and so left to reproduce and increase without restriction.)

A careful study of the situation in New Jersey conducted under the supervision of Dr. S. C. B. Davenport, a few years ago, showed that the feeble minded class has doubled in that state within a single generation. Mental defectives are increasing in some countries and certain parts of this country at a most alarming rate. For example, the population of England and Wales has nearly doubled since 1860, while the number of insane has increased ~~more than ten times as rapidly as the~~ from 36,000 to 130,000. In France the insane population has increased more than ten times as rapidly as the sane. In Prussia the population has increased in thirty years less than fifty per cent, while insanity has increased from 20,000 to 98,000 or nearly 50%.

An eminent English alienist recently made the assertion that the whole human race will in time become insane. The writer does not share this pessimistic view for, notwithstanding the fact that at the rate at which mental defectives are at present increasing the whole race would become insane, idiotic or imbecile within less than three centuries, so sad a calamity is not likely to befall the human family for long before the race reaches the state of universal incompetency, the impending danger will be appreciated, the causes sought for and

and through eugenics and euthenics, the ~~cause~~ mental soundness of the race will be saved. Is it not high time however, that every State Board of Health and every other Health Official become enlisted in an effort to erase and eradicate this blot upon the brain which is so rapidly over-shadowing the race,

4. One of the most remarkable achievements of public sanitation is the reduction of infant mortality, but a study of vital statistics shows that the reduction in death rate of infants is chiefly due to the improvement of public milk supplies and a spread of knowledge of the care of infants. (Tredgold shows from the returns of the registrar general of England that the number of infants that die from "innate defects of constitution" in each 1,000 children born is quite as great as fifty years ago and this notwithstanding the fact that the total death rate of infants has been reduced one-third.

When we add to this the fact that a great number of feeble infants that formerly died soon after birth, lacking vitality to live under existing conditions, are now kept alive by scientific feeding and intelligent care, it becomes evident that the proportion of feeble infants and weakling adults must be steadily increasing. It is evident that there is a growing blight on the baby crop. If the same fact existed in relation to the corn crop or the pig crop federal and state authorities would give themselves no rest until the cause was found and removed.

Here is another indubitable evidence of race degeneration and a field open for thorough -going research and earnest work on the part of health authorities every where.

5. As a natural consequence of the increased number of defective babies, we have a growing army of defective children. Our schools are filled with defectives of various classes. According to Dr. Wood of Columbia College, New York, a nation wide investigation of the children in the public schools of both city and rural districts

shows that the 20,000,000 children in public schools at present:

One million have flat foot, spinal curvature, or other deformities sufficiently grave to interfere with health.

1,000,000 have defective hearing.  
5,000,000 have defective vision.  
6,000,000 suffer from malnutrition.  
10,000,000 have defective teeth.  
6,000,000 have adenoids, enlarged tonsils or cervical glands needing attention.

15,000,000 children of three-fourths of the whole school population have physical defects sufficiently grave to require attention and to seriously threaten health usefulness and even life in later years.

What would a farmer think of a flock of sheep in which three-fourths of the lambs were defective, or of a herd of cattle three-fourths of which showed deformities, decayed teeth or other unsoundness?

We have improved our horses and cattle till they are the finest that the sun ever shown upon. We have improved our dairy cattle until their capacity for producing milk and butter is almost beyond belief. We have improved our hens and our hogs to an amazing extent. Man has improved every creature he has redeemed from the forest and the plain with the exception of himself. Himself he has neglected until race degeneracy has become a certainty, and race extinction a possibility.

Should those who are the official custodians of the health of the people sit quietly by and see this process of race destruction going steadily on, Should not the work of Boards of Health include the work of discovering and eradicating the causes which are blighting the vitality and vigor of the race in the early years of life?

6. While the average length of life has been increasing in all civilized countries within the last three centuries, the proportion of centenarians to the total population has been diminishing. At the present time the most highly civilized nation has the smallest number of centenarians while the largest number is found among those people who still adhere most closely to the simple life. The Bulgarians, a

people numbering only five million, boast of 3,000 centennarians, or one in 1700. In Spain the proportion is one to 40,000; in France one to 190,000; in England, one to 200,000; in Germany, one in 700,000. We have in this country one centennarian to every 25,000 of the population but the number is rapidly decreasing as the natural result of the increased death rate after middle life, due to the increasing mortality from chronic disease.

~~Centennarianism is rapidly going out of fashion. The rapid decrease in the proportion of persons~~

(Centennarianism is rapidly going out of fashion. The rapid decrease in the proportion of persons of advanced age in all civilized lands is a certain indication of radical decay. The human race is dying at the top.) Why should not boards and departments of health State and National make it a very essential part of their work to inquire into the nature and causes of the maladies which are destroying the capacity of men and women to live out the normal span of human life. Public health work has not only failed to prevent race degeneracy, it has actually accelerated the rate of decay. Acute maladies and adverse conditions of life are a natural means of weeding out weaklings and securing the survival of the fittest. Public health work through quarantine protection of water supplies, and improving the general environment of human life has in a large measure set aside ~~the death~~ this great biological law. It is no longer the fittest alone that survives, but also the feeble individual who is afforded sufficient protection. The preservation of these weak and unfit individuals increases the average death rate, but at the same time decreases the average stamina of the race. Through hereditary <sup>ty</sup> weak strains are established which must corrupt and depreciate the stronger ones more and more from one generation to another.

Public health work must then inevitably tend to race depreciation, unless it concerns itself <sup>elf</sup> with the improvement of the weaklings which it preserves, and with the prevention of the propagation of incurable defects.

As regards the question, what can boards of health and public health officials do to check these evils tendencies which threaten the existence of the race. I am not prepared to lay down a complete program. This would involve far more wisdom and experience than I possess, and perhaps more than the world possesses at the present time. I venture to offer a few suggestions of things that need to be done to check race degeneracy and to make for race betterment/

First of all there ought to be set on foot a nation wide movement to secure trained and cultivated men for every position involving the responsibility of health administration. The present situation is absolutely intolerable. The health of men and women in the United States receive far less attention and consideration than does the health of swine, poultry and other domestic animals. The men charged with the custody of the public health especially in small towns and rural districts are in many instances far less well qualified for their tasks than those who have supervision over livestock.

2. There should be such thorough-going cooperation between boards of Health or health officials and boards of education that every school and every pupil attending every school may have the full benefit of the latest and the best knowledge with reference to health preservation. Every community should have the services of an expert who is not only thoroughly trained in all the principles of public sanitation, but is equally well acquainted with the principles of personal hygiene.

3. A campaign of education should be pushed so vigorously that every man, woman and child in the whole United States may be in the shortest space of time made acquainted with the general principles of eugenics and right living by means of moving picture exhibitions educational <sup>plays</sup> ~~plays~~, ~~and~~ ~~methods~~ and effects of food contamination, and adulteration should be graphically displayed. Up-to-date methods of dairying, the care of foods in the market, the store and the home, wholesome methods in the preparation of foods and all that pertain to nutrition should be made clear to the simplest mind by moving pictures and other ~~meane~~ means. The evil effects of alcohol syphilis, opium, and other drugs, the deforming effects of wrong habits in sitting and other careless habits should be impressed upon the popular mind by popular demonstration and exhibitions, together

with the effects of good habits of the out-of-door life, of healthful sports, etc. ( Every community and every public school should be supplied with swimming pools, play grounds, outdoor gymnasiums, and outdoor study places, all of which should be under the supervision of trained directors. )

The public will never supply these health advantages for children until made by education to appreciate the relation of a right environment and natural life to vigor and efficiency. Thru health conventions, health schools, parents' classes and various other means this educational campaign may be carried on. The school nurse may not only inspect, instruct and care for children but also visit the children's homes, and thus become acquainted with their home conditions improving the opportunity to give instructions to the parents.

We possess knowledge enough of eugenics and euthenics to create a new race within a century if the known principles of healthy living and scientific breeding were put into actual operation.

We know that tuberculosis is a house disease. We are able to cure half of the cases of early lung tuberculosis by training them out of doors. Still we continue to lose 150,000 lives annually from tuberculosis and are developing a consumptive variety of man which already numbers several millions of narrow chested, low resistance individuals destined to die early, and through heredity <sup>become</sup> a menace to the welfare of the race.

The white plague will never be controlled until we convince the average citizen of the importance of breathing out-door air day and night, living in the open air as much as possible and thus build-up his natural resistance to disease. Building laws should require provision in tenement houses for sleeping porches or other out-of-door sleeping arrangements. Residences should also be equipped thus.

We are still troglodytes, and will degenerate and disappear like the cave dwellers of the remote past unless we return to the open air, our natural environment.

We know that alcohol is responsible for a very large proportion of the unfortunates who fill our asylums for the insane and the feeble minded, and that its degenerative effects are hereditary. Should we not take an active interest in combatting this well recognized foe of the race in every legitimate way?

We are only too familiar with the appalling effects of syphilitic and gonorrhoeal infections upon the individual and the race, yet we leave the public in ignorance of the terrible facts which we possess and have made almost no effort to resist infection by methods which have been found effective in controlling the spread of measles scarlet fever and other infectious maladies. Our duty as custodians of the public health certainly requires that we should devise



some means of registering and quarantining every discovered case of venereal disease, and of preventing the extension of these vice diseases to the innocent through marriage and heredity.

Chittenden, Fisher, Folin and others have shown the dangers of an excess of protein and the advantages of a very low protein diet. The farmers of Iowa and Minnesota and the agriculturalists of Denmark have long made use of this principle in the feeding of pigs and other domestic animals with almost startling results. A few intelligent people have likewise profited by Prof. Chittenden's discovery which if generally put in practice would no doubt lessen the death rate ten per cent or more and lessen the cost of living at least twice as much. The general public are still in bondage to exploded errors, respecting human feeding although the high and increasing cost of meat promises to help along a much needed diet reform.

Sherman of Columbia, has shown that half of the people of the U. S. are suffering from lime starvation through the use of fine flour bread, and an excess of meat and cane sugar which contains practically no lime, while whole wheat contains four grains of lime to the pound, peas and beans 8 grains, and milk 16 grains. It is no wonder that three-fourths of the school children have defective teeth and other skeletal defects. The tooth brush will not stop the development of an edentulous race. Scientific feeding is the essential thing and the people must be made acquainted with the fact.

Bunge, Hindhede, have shown the evils of a meat and cereal diet, because of the preponderance of acids in these foods and have demonstrated experimentally the essential value of the alkaline salts, found in fruits and green vegetables, and especially the potato, a food which for other reasons, pointed out by Rubner, is far better suited to be made a staple diet than is corn or most other cereals.

Combe, and later investigators have shown the essential role played in nutrition by the enzymes of fresh fruits which are largely or even wholly destroyed by cooking at high temperatures and hence the danger of feeding infants exclusively on sterilized milk, and adults <sup>an</sup> on exclusive diet of cooked foods. Our primitive ancestors were ignorant of the art of cookery. The necessity for food in the state which nature provides it for our use still exists in the constitution of the race, and it cannot be safely ignored. Conditions allied to scurvy are widely prevalent and scurvy itself not infrequent as the result of popular ignorance of this important biological fact.

Cancer kills 75,000 persons in this country annually; one in twenty of all who die and ~~torches~~ <sup>takes</sup> three hundred thousand victims all the time; one seventh of all women and one-twelfth of all men perish by this horrible malady. Williams has shown that cancer is confined to the civilized races of men and to the domestic animals and especially high protein feeders. Cats and dogs are more subject to cancer than a human ~~being~~, being. Horses, sheep, bovines, and even swine are rarely affected.

Senn showed that appendicitis is unknown among the low protein feeders of Central Africa, and Lucas<sup>o</sup>Championneier noted its rareness among the Arabs of Algiers, and the inmates of asylums and prisons in France who have a low protien diet.

Buchard, and other investigators have pointed out the influence of chronic poisoning due to errors in diet and drug habits, in producing arteriosclerosis, a rapidly growing scourge in all civilized countries

played.

Metchinkoff of the Pasteur Institute, and Arburthnot Lane an eminent London Surgeon have ~~demonstrated~~ demonstrated a destructive role played by colon poisons as the leading cause of chronic disease. Metchinkoff finds the remedy in changing the intestinal flora by feeding friendly germs in buttermilk or other wise; Lane removes the colon; but Tissier, a colleague of Metchinkoff in the Pasteur Institute and the real originator of the friendly germ idea, suggests the more rational remedy, the adoption of a low-protein diet, largely excluding animal proteins. That this may be safely done is now admitted by all physiologists.

Why should not the people be made acquainted with these and other facts which profoundly influence their physical life? Why should we wait for the slow diffusion of life-saving knowledge through ~~physical~~-desultory efforts and private initiative while more millions perish for lack of knowledge.

Why should we not have in every State, under scientific direction, experiment stations for the practical testing and demonstrating of the principles and methods of living evolved by scientific research or human experience instead of leaving the public to be misled by faddists or ignorant enthusiasts, or to invite and cultivate disease and degeneracy by habits born of the ignorance and superstition of the past?

Is it not a legitimate and important part of the function of public health officials to callate the results of scientific research which bear upon personal as well as community health and to place these facts before the public in such ways as to command ~~in such ways as to comm~~ attention and to stimulate in every community, the development of a sentiment of respect for the body, as man's choicest possession and an ambition to <sup>preserve</sup> ~~maintain~~ its integrity and to increase its powers not only for personal advantage in happiness and effic-

iciency, but for the sake of ~~the-generation-~~ generation to come and  
thus for the preservation and improvement of the race?

( Acute diseases may be controlled by quarantine and public sanitation, but chronic diseases are a home product. They are almost altogether the result of vicious habits of living. Departures from the normal conditions to which the human constitution is adapted, hence, man and women everywhere must be introduced into the principles of eugenics and euthenics. Those who have had the good fortune to be well born should be instructed to live in such a way as to maintain, intact their splendid heritage, and pass it on to the next generation undeteriorated.)

Movements of all sorts which seek to promote the physical well-fare should be encouraged and unified. Eugenics and euthenics should be magnified before the people until their paramount importance is appreciated and legislatures become willing to appropriate funds as liberally for these essential means of race betterment as they are now doing for the improvement of crops and farm animals through similar means .

Prizes should be offered for the finest families, and the best

health and endurance records.

Thru State Life Insurance the whole population should be brought under Government medical supervision. By the periodical examinations, the early beginning of chronic diseases should be detected and thus arrested by timely instruction in regard to necessary changes in habits or occupations, and every such case should be made an object lesson by means of which relatives and friends should be influenced to adopt preventatives in time to avoid the same maladies.

The new science of eugenics founded by Dalton, supplemented by the now nearly perfected science of eugenics, when they come to be comprehended and put into practical operation, will result in a creation of aristocracy of health, in the development of a new race of man. Should not every Board of Health and official health agency be actively engaged in the battle against disease and degeneracy in all its forms chronic as well as acute. Why should this work be left to private initiative? Nothing could be more profitable to the State and nothing more prolific of satisfying results to those engaged in the effort than a thorough going campaign for race betterment through ~~same~~ living combined with scientific sanitation.

The establishment of <sup>a</sup> National Department of Health will provide a central bureau which to unify the work and collate its results. Prof. Fisher estimates that the application of the present knowledge of hygiene ought to increase the average of human life at least fifteen years. Think what it would mean to the nation ~~to~~, to the world, if the average man lived sixty years instead of dying at forty five. The addition to a single generation of one billion five hundred million years of life in this great and glorious country of ours is a goal well worth working for.

It appears improbable however that such a desirable result can be reached by public sanitation alone. The increasing death rate

after forty years, chiefly due to the unphysiologic person al-  
will soon neutralize the effect of public sanitation which has  
already nearly finished <sup>to</sup> the greatest task and can hardly hope to exert  
in the future so marked an influence on life extension. The thing  
now necessary is that the individual man as well as the community  
and the domicile shall be brought in harmony with the great biologic  
laws which govern human life.

What the world needs at the present time more than anything  
else <sup>is</sup> in race improvement. If race degeneracy is to be arrested it  
will only be accomplished by the development of a more resistant  
and better type of man, a tougher more enduring, more capable of  
wrestling with the problems of the twentieth century and the greater  
centuries to come.

Boards of Health and Health Officials have before them the  
opportunity inaugurate and carry forward a campaign of education which  
will accomplish this. The broader plans recently formulated by the  
executive of this association if well carried <sup>out</sup> and ~~if~~ especially <sup>if</sup>  
adapted by ~~the~~ State and municipal health organizations, will open  
a new era in public health work and will help to introduce the new  
and nobler race of man which coming centuries will see.

J. H. Kallogg.

Question Box Lecture at the Sanitarium Parlor, Monday, September 15, 1913,

at 8:00 P. M.

By  
J. H. Kellogg, M. D.

I see we have our regular Monday night "Question Box" and it is very full tonight. We will try to find the bottom if we possibly can but we will have to be industrious. A lady said to me today, "Doctor, can you cure me?" I said, "No! I never cured anybody. I don't know how." "Why?" she said, "I thought that this was a place where almost everybody could be cured of almost anything." "Well, that is another question!" I am perfectly willing to admit that several people have gotten well here at the Sanitarium. In fact, this is a cemetery for chronic disease. I don't know how many thousand; I think at least several thousand diseases have been buried here but I don't cure anybody and I don't know of any doctor that ever did cure anybody. Doctors don't cure. Medicines don't cure. Baths don't cure. Laying on of hands don't cure. Massage, etc., electricity do not cure. Well, you say, How in the world do people get well then. People get well because Nature cures. Now there is only one curing power in the whole universe and that is the same power that made us. Creative power is required to cure. You cannot put creative power into a bottle. You couldn't keep it there if you did. The cork would come out right away with a tremendous pop. You cannot keep healing curing power in a bottle. You cannot even put it into a bottle. You cannot control it by electricity or by any other human means. Healing power is creating power. The same power that made us my friends is the power that heals us. Nature we call that power. We have to appeal to good mother Nature if we want a real cure. Doctors can nurse, coddle, guide, instruct but Nature cures. If you want to get well then, you see the first thing you have to do is to get on the right side of good Old Mother Nature. If you are sick it is because mother



recognizes the fact that you are a sinner and is punishing you. If you have pain that means you have been sinning somewhere or other or somebody/<sup>else</sup> has sinned. I remember a good many years ago I was talking something after this strain and a young fellow away over in the corner, a tall, lean, hungry looking fellow, got up and said, "Now look here, Doctor, you are too hard on us poor sick fellows. I have had dypepsia all of my life and I am not at all the blame for it because I inherited it from my father. He had dyspepsia all his life. You are too hard on us." I had been telling them that they ought to be ashamed of being sick so ashamed they wouldn't tell anybody about it because a lot of them were talking all over the house about their maladies and everybody was trying to inoculate everybody else with their diseases. One man we had here inoculated forty-four people with his particular form of dypepsia and I wanted to stop it so I told them these old dyspeptics they ought to be so ashamed of themselves they they would not be going around telling everybody what was the matter with them because that meant they had been gormandizing, don't you know. That means you have abused your stomach and your stomach is kicking about it, making a row and that is why you are suffering. Well this young man was very much incensed. He said, "You are altogether too hard on us. I am not a bit the blame for my dyspepsia. I inherited it from my father. Well, I said, "It is in your family then anyway and you ought to be ashamed of it just the same. Your father sinned instead of you." Now when we are suffering it is because somebody has sinned. The ~~ways~~ of sin is death, the Bible says. "The Soul that sinneth, it shall die". Whatsoever a man soweth, that shall he also reap". Now that is absolutely true. That is a great biologic law. It is not simply an empirical rule ~~but~~ <sup>that</sup> has been laid down but it is a biologic law and there is no escaping it any more than you can escape the law of gravitation. If we sin, if we violate law, we have to take the consequences. Perhaps we can help ourselves out a little bit by doing work of supererogation. Our Cathloic friends will understand what that means, ~~but~~

By being extra good we can atone somewhat by being bad. We can get a little credit perhaps, that is, by being extra good and that is what you are here for my friends is to find out what you have been doing that was wrong as the old prophet said, "Cease to do evil and learn to do well." That is what you are here for. When you learn to do well and we turn over a new leaf and cease violating the laws of health and begin to cultivate health instead of cultivating disease which most of us have been doing; when you do that then good old mother Nature just takes right hold to cure us up, to make the most she can out of what is left of us and that is what we are here for my friends is to find out the right way, to find out how to live. That is a great thing, the greatest thing possible for any of you to accomplish in the few weeks you stay here is to find out how to live so that when you go home instead of cultivating disease you will cultivate health and we mean while you are here to give you such a great big boost upward that you will keep right on climbing after you go home so that instead of working down you will be working up all the time and there is no doubt but what everyone of you in this room tonight can get here in a few weeks time, in three or four or five or six weeks or whatever time you stay, you can get such a lift that it will just help you right along and you are not going to experience the greatest part of the benefit you are getting while you are here. You say, "Why don't I feel better?" A gentleman said to me today, "Doctor, I have been here for weeks and I don't believe I feel any better than when I came." I said, "How long have you been sick?" He said, "Oh, about twenty years" and I said to him then, "Do you expect to be cured in three weeks? Just think how unreasonable that is but if you get a good start here and keep right along the right road when you go home you will find as each week passes by and each month passes by, you will find yourself just as certainly

rising, coming up, getting better, better and better all the time, your efficiency increasing, your appetite growing, your skin getting clearer, your step getting more elastic, your eyes getting brighter and your brain friends will begin to say pretty soon, "How well you are looking" and pretty soon they begin to accuse you of good looks likely enough. I want to tell you this institution is a sort of beauty hospital. That is what you are here for. We doctors here are beauty doctors. That is what we are after, is to make you more good looking because if you can get some roses on your cheeks, get your eyes to snapping and your skin clean, healthy and wholesome looking, all the rest will be all right. I was talking with a little girl tonight who is thirteen years old and has had Bright's disease five years and a half. The first thing I did was to look at her skin and it is dry like the skin of a sick person forty years old because this Bright's disease is not a disease of the kidneys alone but it is a disease of the whole body and the disease manifested in the kidneys is simply a local manifestation of the disease you see. The disease is all over. The skin is just as much diseased as the kidneys. We have got to get that skin active so the first thing we are going to do for that little girl is to sunburn her all over with the electric light applied to the skin until that old skin peels off and a new skin blossoms out underneath, you see. The very first thing we are going to do for that girl is to roast her in the sun until she is just sunburned from head to foot and then she will blossom out in three or four weeks from now with a brand new skin. The old skin will peel off and all the pimples and the miserable roughness and scurfiness of that skin will be gone and she will have a brand new skin like a baby's and it will be more than skin deep. It will be springing way down deep into the tissues because these rays of light from the electric light and the sun shine away into the body two or three inches. That is why it is better than ordinary heat because it penetrates. The principal object of this "Question Box" is to give people particular information about how to live, about how to get out of the old ways and the old ruts and get into newer and better ways and better living. The whole

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thing is better living, right living. The thing which makes people sick from chronic disease is wrong habits. If you have got acute disease, scarlet fever, smallpox, mumps, chickenpox or typhoid fever, you have caught it from somebody don't you see. Maybe the old cat went over to visit the neighbors when the baby had diphtheria and brought it back and gave it to your baby. We ~~catch~~ catch it. It comes from the outside. We are not <sup>to</sup> the blame for having acute disease. Somebody is to blame but we are probably not to blame ourselves but when we suffer from chronic disease, my friends, that is a thing for which we ourselves are responsible. It is a home product, chronic disease. Most of it originates at the dinner table. That is the place where we cultivate more disease than anywhere else, the dinner table, the tea pot, the old pipe, the smoking room. They are responsible for a great lot, a large part of the chronic disease from which we suffer.

Q. What causes ulcers or cankers in the mouth?

A. Germs are to blame for those cankers and the reason why you have ulcers and cankers in the mouth is because the saliva of the mouth has lost its power to combat the germs which get into the mouth and so there are allowed to accumulate and to colonize and to make headway and grow. Now the saliva obtains from the blood materials which combat germs ~~axelim alexims~~, antedotes for germs and when the blood is healthy then the saliva is healthy and contains such a large amount of these germ poisons that the germs cannot grow in the mouth but when the blood becomes deteriorated by inactivity of the bowels which loads the blood with poisons by wrong diet, by the use of alcohol, tobacco, tea, coffee and other poisons which poison the blood; when the blood becomes deteriorated in this way and through lack of exercise which has the same effect or loss of sleep and living indoors, a sedentary life, one hundred things, everything that is unhealthy contributes to making the blood impure, to impoverishing the blood and to reduce the resistance of the blood. In such a state the saliva loses its power to destroy germs. Then these ulcers begin to grow in the mouth. A coated tongue is another result of this condition.

A coated tongue means bad blood. Ulcers in the mouth, sore gums, pyorrhea, ulcers around the roots of the teeth all mean bad blood. Decaying teeth mean bad blood. It does not mean you have not used the tooth brush enough, necessarily, when the teeth decay. If you do not use the tooth brush that encourages decay of the teeth but the real cause of decay of the teeth is bad blood. You will find plenty of animals that do not use tooth brushes and plenty of savages that do not use tooth brushes that have splendid teeth. I don't think the negroes of the south trouble themselves very much about brushing their teeth yet it is wonderful what splendid teeth many of the negroes have, especially when they live the simple life, those who live the simple life they used to have in the old days 50 or 60 years ago. It was almost universal that the negroes had fine teeth so in Africa where they are living the simple life they have splendid teeth. Why, my friends, just think of it. What a shame and disgrace, what a discredit it is the way our teeth are disappearing. Why, we are coming to be an edentulous race. We are going to be an edentulous race some time. Somebody has predicted that the gold mines of the future will be found in the cemeteries. The dentists are certainly utilizing an enormous amount of gold these days and teeth are disappearing. I suppose if I would ask how many people here have thirty-two sound teeth everybody would raise their hand. If I should ask how many have thirty-two sound home-grown teeth nobody would put up their hand. I doubt if there is a person in this room who has thirty-two sound teeth that grew in the jaw. Probably a lot of you have thirty-two sound teeth that you bought of the dentist, store teeth. Suppose you went out into the country to buy a flock of sheep and when you came to look those sheep over you found there was not a dozen in one hundred that had sound teeth but nine-tenths of them all had decayed teeth. What would you say about those sheep? You would say they were a measly lot. You would not buy such animals. If anybody tried to sell you a cow and you investigated the matter and found the teeth were decaying, you would not have such a cow. You would not want milk from a cow that had rotten teeth. You would not like to have your family served

with milk from a cow with rotten teeth. If you had a horse with decayed teeth you would send him to the boneyard. How much better is it for a man or woman to have a dozen decayed teeth in the mouth. Decay of the teeth is an ulcer of the tooth. A decayed tooth is an ulcerating tooth, the decaying rotting the tooth and going around with such a thing as that in your mouth, just think of it what that means.

A decayed tooth is an ulcerating tooth, a decaying rotting tooth, and going around with such a thing as that in your mouth. Just think of it! what that means. It means a decaying constitution. That is what it means. It means a decaying constitution, a deteriorating body. It does not simply mean an unclean mouth, neglect of the teeth, it means a decaying constitution. So it is very important to give attention to all these simple things. Then to cure an ulcer of the mouth or cankers of the mouth means something more to do than simply to make applications to the mouth. We have got to build up the whole body to get the blood right and that means right living. Right living is the foundation of it all.

Q—Why don't a case of colitis improve after more than twenty-five electrical treatments and taking twenty bottles of Tissane?

A—Well now, why does a person have colitis? Why? It is because he is bankrupt, he is bankrupt. That is the reason he has got colitis. Colitis means catarrh of the colon; it means an infected colon. Now a healthy colon might be infected. Any healthy person might get an infection of the colon but it would disappear. In a week or two it would be gone, he would be well, but when a person gets a chronically infected colon, has chronic colitis, that means he has lost the power to get well you see. That means that his margin of vitality which he used to draw upon when he got into an emergency and got infected, the margin of vitality which he used to draw upon to cure him up, to cast out that invading germ, that power is lost and now he is helpless. His situation is that of a <sup>citadel</sup> ~~city-belle~~ into which the enemy has gotten and has entranced himself within the <sup>citadel</sup> ~~city-belle~~ so that he cannot be driven out. The <sup>citadel</sup> ~~city-belle~~ has lost the power to drive the enemy out. When a person has colitis, he has got some millions and millions and millions of colitis-producing germs which has gotten into his colon and colonized there and fixed themselves to the wall and are growing and multiplying there by the billions every day and are manufacturing poisons which are being poured into his body and are deteriorating his blood and damaging his constitution and are spreading continually more and more along the colon. Why, people come here

that have five or six feet of the colon infected, sometimes the whole colon infected; sometimes the colon and the small intestine infected and the colon, small intestine, stomach, gall bladder and the whole alimentary tract infected by these colitis-producing germs. Now when a person has gotten into that condition, don't you see, the first thing necessary is to make a new man of him. We have got to have new blood and better blood, got to have a better constitution, got to have more vitality, got to lift him up onto a higher plain of living so that he will be able to cast the enemy out. Why, we can't cure a disease. We might give that man a dose of medicine of some kind, perhaps a dose of calomel that would, for the moment, drive out all those germs. Supposing that were possible. It is not possible but suppose it ~~was~~ possible. Give him a dose of calomel or some other poison to drive all the germs out and kill them all off, but the next day they would all be swarming back there again, don't you see. These colitis germs are in the air, they are in the food you eat, not in the food I eat, I hope, but in the food most of you eat. Every morsel of beefsteak you ever swallowed had in it, germs that produce colitis. That is the reason why meat eaters have appendicitis and the people who are not meat eaters do not. I just defy you to bring me a single case of a person living upon a non-flesh dietary, on a dietary of fruits, grains and vegetables that have colitis. It is the ~~rarer~~ rarest kind of thing. We have in this institution eight or nine hundred employees. We do not serve them any meat. ~~They~~ <sup>We</sup> go on from year to year here without a single case of colitis occurring among our employees. There certainly have not been <sup>all the</sup> in/nearly forty years I have had charge of this institution, we have not had a dozen cases of colitis in our employees and in that time we must have had twelve or fifteen thousand people employed in the institution, and we have not had a dozen cases of colitis among them all, of colitis or appendicitis. They are living here month after month, some of them for years. Colitis is entirely a new thing. It is an unknown thing among people who live in Central Africa where ~~they~~ they are practically entirely vegetarians. They do not have colitis and in France in the Insane Asylums, they do not give the insane people any meat. They have sense enough over there not to give their lunatics and their imbeciles any



simply some fresh baby germs that are put up and cultivated from the laboratory. After about a week, these germs under ordinary circumstances, the baby is likely to begin to get infected. If the baby nurses its mother and is properly taken care of, it can get through the whole period of infancy and childhood without having any bowel trouble or stomach troubles what babies ordinarily have. I am watching a baby in this town with very great interest. I am, in fact, related to the baby in a way, so I am watching the little grandson with a great deal of interest. He has been taken care of in a scientific way. I think he is now about eight or ten months old and he has not had the first sickness of any kind. Its mother and father has been brought up in the Sanitarium way so they are looking after that little fellow with such care that so far he has not had the first sign of sickness of any sort whatever, not one symptom of disease. He is absolutely perfect physiologically in every respect and it is simply because he has been kept entirely free from all these unhealthy germs and has had a fair chance for his life.

A great many people get colitis when they are infants and those colitis germs just stick by them all their life. Now the thing that is most important is to combat those ugly germs that make colitis. It is just like getting the weeds out of the flower garden. Perhaps some of you remember the amusing story Mr. Dooley wrote some years ago about Christian Science. He told about calling on a good many different doctors and in the experience in calling on different doctors, he tells about how one thumped his brisket, percussed him and various other things, then finally he came to an old doctor who looked at his tongue, felt his pulse and said, "Mr. Dooley, the trouble is, the weeds are getting into your posy garden." Now that was a remarkably astute thing for Mr. Dooley thing to say fifteen or twenty years ago before Metchnikoff had told us about any of those ~~thing~~ friendly germs, but he recognized that that was the real thing, that the weeds were getting into his posy garden for the alimentary canal is a sort of posy garden. Flowers ought to grow there. Acid-forming bacteria which are really vegetable growths, flowers we may call them keep the intruders out, but

meat and they give them the best kind of diet so as to give them the best possible chance for recovery. That is very important, especially for feeble minded people. They certainly need a good chance. It is a strange thing, isn't it that the feeble minded people and the insane people have so much better chance for their lives than sane people and sound people. Dr. Hurty, down in Indiana, the Secretary of the State Board of Health of Indiana called attention to that some years ago, that they were taking so much better care of their lunatics and feeble minded people down there that they were actually outliving the sane people. Their mortality was less and they are actually gaining on the sane people because they have so much better care. That is true over in France, so the lunatics never have colitis. And they have several Catholic institutions there, the sisters of St. Joseph and other orders that abjure meat entirely and they find that they are entirely free from colitis. Dr. Lucas Champonniere, one of the leading French surgeons made a study of this subject some time ago and found that down in the French army in Algiers, the Arab soldiers are free from colitis and appendicitis, while the French soldiers are very subject to it and Dr. Combe of Lausanne, Switzerland observed that the country people of Switzerland do not know anything about colitis or appendicitis. They do not eat meat but live on a simple dietary, mostly made up of fresh vegetables, cereals and fruits and are entirely free from those two awful diseases, so the important thing to do is to build the body up to a state of high resistance and that is best done by a natural diet. The next thing of importance to do right along in the same line, is to change the intestinal flora. Now unfortunately we all get infected. When we are born, we are born clean, we have no germs about us, absolutely not a germ inside of the body. When a baby is born there is not a germ in its interior, but it gets in in a little while. It gets in pretty soon. Fortunately the first inoculation of the baby is with healthy germs. There are friendly germs and unfriendly germs; there are germs which make for health and germs which make for disease, so the first germs the baby gets are health-producing germs, acid forming germs or bacillus bifidus. That is what this lady has been taking in Tissane that we were talking about a while ago. That is

by and by these alkaline germs, ptomaine poison-forming germs get in and they get in from the milk and from the barnyard. Then they get into the baby's colon and set up all kinds of horrible putrefactions there and poisons are formed. They come in from the filth of the street. Why, street dust is mostly manure powdered up fine. It is the intestinal excreta of animals powdered up fine made into dust and the father brings some of it in on his boots, rubs it into the carpet and the baby in crawling around on the carpet puts its thumb into its mouth or its hand and then puts <sup>it</sup> on the carpet and rubs up some of the germs off the carpet and then puts its hand back into its mouth again and licks off the germs and then goes back after some more so the baby gets itself inoculated. You have seen babies doing it many a time. The wonder is the poor little fellows live through the horrible dangers to which they are exposed. This baby I have been telling you about never once has been down on the carpet. If it gets onto the floor there is a clean sheet on the floor so it does not come in contact with these horrid forms of germs that come drifting in through the window and settle on the floor or on the furniture anywhere about the house. It is especially dangerous for babies. They come in from various other sources. We collect these germs that I have just been telling you about. I have just returned from Colorado and I have been collecting some ugly germs in my throat in passing through Chicago and that is why I am so hoarse tonight but I shall be well by morning. I hope so I shall be able to talk in a more luted way the next time I address you. Now we get inoculated with germs and they are the cause of most of the chronic diseases from which people suffer. I am making a somewhat lengthy dissertation on the subject so I <sup>won't</sup> ~~would not~~ have to say it over so many times in answering these questions. Germs will answer almost every question in this box. There are 161 different kinds of these germs that have been discovered and more than fifty of them are making poisons producing diseases. One of the most recent volumes in our library written by a most distinguished scientific ~~genelt~~ gentleman shows this. He says that we are going to stop talking about autointoxication after while and about intestinal infection. We are going to stop talking about it because we will after while find out the specific effect of each particular germ that invade infects the intestine.

We will know what particular symptoms are produced for instance by Welch's bacillus, one of the ugliest germs that has been discovered by Dr. Welch of Baltimore. It is one of the meanest and most contemptible germs I know anything about. This germ that gets into the alimentary canal and swells up the bowels with gas, the horribly offensive gases it produces and it gets into the liver produces abscesses and gets into the gallbladder and makes gallstones, gets up into the lungs and makes pneumonias. It spreads out throughout the body inducing abscesses and manufactures all the time poisons that get into the blood and <sup>the</sup> brain and make a man furious. It is <sup>this</sup> Welch's germ that makes women scold their husbands, that makes men stupid so they cannot do business. It is one of them at any rate. It is the most abominable germ. Welch's germ is such a poisonous germ that just a few drops of beef tea in which this germ has been growing infected into a guinea pig will kill it inside of three minutes. Now just think when a man has got something like that, ten or fifteen trillions of these Welch's germs growing in his colon, is it any wonder he feels bad. Is it any wonder he had headaches and backaches and nervousness, depression and a coated tongue and all sorts of troubles? These germs get into the body and set up all kinds of degenerations in the body. We are finding out gradually what these different germs will do and by and by instead of saying a man has intestinal autointoxication, we will say he has <sup>got</sup> Welch's bacillus infection and we will say of another man, he is infected with the paratyphoid germ and that another man has got proteus vulgaris infection and another has got bacillus subtilis/<sup>disease</sup>. We will say of another one he has got bacillus coli ~~similis~~ communis infection so we will have a long list of these diseases that we can trace directly <sup>the</sup> to individual germs that produce them. At the present time we know there are one hundred sixty one of these different germs and ~~more than~~ sixty growing in the alimentary canal but we do not know enough of their different properties to say which one is making the trouble so we have to attack them all and fortunately we have some very good remedies that are good against them all.

These gems are all of a particular kind in a certain way. They all have certain habits that pertain to them all. For instance they all like beefsteak.

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They all have certain habits that pertain to them all. For instance, they all like beefsteak. They all thrive in beefsteak and in cheese and in oysters and in fact, chicken, sausage and a whole lot of other things that some of you are very fond of. They thrive in those things. You say, 'How do you know that?' Because if you will go down to the meat shop and get a beefsteak or a sausage or oysters or any other kind of meats you like and take them to a laboratory and let the bacteriologist examine them, he will find these germs that make colitis and that make these troubles in the colon; he will find them all there. They are all there and that is where they come from in part. Of course, they are traveling about in the air as well and from the air they get into the meat but they like the meat so well that they multiply and grow there with great rapidity and in prodigious numbers so when you are eating beefsteak you are not simply eating beefsteak but you are swallowing a whole managerie of living germs along with it. The more tender the beefsteak is the more germs there are in it. If you want beefsteak that is reasonably healthy, go to the meat shop and tell the butcher you want the very finest beefsteak he has got. Tell him you want some beefsteak that was killed this morning so that it is tough, that it is in a state of rigor mortis and is tough and sinewy so it will be hard to chew. If you want to have that beefsteak and want to eat it in a healthy way, take it home, soak it over night in salt water with plenty of salt, the next morning wash it with four or five waters and run it through a clothes wringer until you get it quite clean and get all the germs and all the blood washed out of it and all the uric acid washed out of it, the fourteen grains of uric acid that is found in every pound of beefsteak, fourteen grains, that is all and seventy grains of uric acid in every pound of sweet breads so you must wash it thoroughly to get the uric acid out. Then cook it for about an hour and turn the water off so as to get rid of the extractives, those things that make the broth that you like so well, those things are poisons entirely. Those are the same things that go to make up the urine. The analysis of beef tea and urine is just the same.

An eminent

chemist a short time ago confessed that the only way you could tell the difference between beef tea and urine was with his nose. He could not tell by chemical analysis but only by the smell of it. That is the fact that the chemical difference is absolutely infinitesimal. It should be so because urine is extract of the tissues made by the body itself and beef tea or chicken broth is an extract of tissues made by the cook, don't you see. They come from the same source. They are all just alike so the analysis ought to show that so when a person has colitis the important thing is to change the intestinal flora and to do that we must change the diet. We have got to cut out everything that will introduce germs, everything that has got germs in it. We must take food that is clean, sterile, absolutely free from germs. That means good, clean, fresh vegetable food. We must be particular about it too. When you eat lettuce, if you don't look out you will be swallowing a whole lot of these germs along with the lettuce. The gardeners you know, ~~unless they are~~ make their top dressings out of night soil, dissolve it in water and sprinkle it on the crops or between the rows and then beetles, and frogs and snails and various kinds of creatures creep along the ground and gather up these germs, then creep up along over the lettuce and leave a trail behind them of the germs that they have carried along up from the soil so it is necessary that all these fresh things from the garden, cucumbers and lettuce and the berries of every sort, particularly strawberries, it is very necessary that they should be not only washed but disinfected. There is not an article of that kind ever comes upon our table here my friends that has not been thoroughly disinfected. You say, "How do we do it". Peroxide of hydrogen. It is <sup>an</sup> absolutely harmless disinfectant, nothing but oxygen in a concentrated form and everything of that sort that comes upon our table is soaked in a 5% solution of peroxide of hydrogen for several minutes after it has been thoroughly washed. Then, of course, it is rinsed again in sterile water before it goes upon the table. We never think of serving upon our table here anything that came from a market without submitting it to that kind of disinfecting process. We have

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been doing that for many, many years and we have noticed this. Fifteen or twenty years ago we always used to see every year, in the summer time, hear of every little while of an out break of bowel trouble. In the morning 50 or 75 people would suddenly call upon their doctors and say their bowels were out of order, troubled with loose bowels, suffered all night with terrible pain and griping of the bowels. Of course, we always knew it was infection that got in somehow from the food through some of these fresh things but since we have adopted this plan of thoroughly sterilizing all our green stuff, such a thing never occurs. We go on year after year without any such out break among our patients and it is a very great satisfaction. It pays to take care but now there is something more than simply preventing these acute attacks. You could get a dose of these germs not enough to produce an attack of dysentery or diarrhea but enough to inoculate you with these unhealthy, miserable germs that would go on growing in the intestine<sup>and</sup> making poisons there so as you go from one place to another and gather up more and more and more, by the time you get to be 40 or fifty years old you have got a fine collection, don't you see, of these disease-producing germs and if you travel a good deal, go about the world and drink water without knowing it is sterilized or clean, you collect a great variety of these disease-producing germs. If you have an attack of diarrhea sometimes it leaves you with chronic inoculation with those horrible germs that made that disease. In order to show you how easy it is for this accumulation to occur, I will give you a little personal experience. About 20 years ago when we were just beginning to study germs in a practical way and had just recently established a bacteriological laboratory I had had a class in bacteriology and I was making some cultures for them and I sent this class out all about the city and told them to collect a little dust from just as many places as they could to get into the pantry and to get some dust off the window sills, go into the kitchen, then out into the country and find a pigsty or a chicken coop or a dairy and get go as many different



places as they could and bring in collections of germs. Then we planted these germs in different cultures. They have to be shut up, you know, while they are growing. Our method of culture at that time was boiled potato cut through the middle with a sterilized knife and then the germs were planted on the cut surface of the white, clean, sterilized potato; then put under a bell glass. After three days' growing I brought these before the class and as I lifted off the bell glass from which the potato had been inoculated with some germs from a pig pen I got a pig peculiar odor. It was a very strong odor and was wafted through the room. I covered it up immediately. I got that one breath. This was in the evening about this time. About three o'clock in the morning I was awakened, was very sick at my stomach, terribly nauseated and suffered terrible griping. I had very loose bowels and vomiting and the material I vomited and the discharge from my bowels had exactly the very peculiar odor of the germs I had exhibited the evening before. I had simply got inoculated with those germs. I have been fighting them ever since. I don't know whether I got rid of them all or not but when we once get inoculated in that way with the germs you haven't any idea until you have entered upon the battle and have struggled at it in good earnest for a few years, you have no conception of what an intricate and difficult thing it is to get rid of these horrible germs when you have once been thoroughly inoculated with them for a long time. They get into every little hook and corner and fold and tuck of the alimentary canal and they bury themselves in the walls of the intestine and it is a very hard thing to get rid of them but they must be routed out. They can be starved out. They can be reduced to such a degree that they cease to become a prominent factor in an individual's life and an active cause of disease as they so often are. Now let us supply some of these principles to the questions we have got here.

Q. What is the probable condition of a man who travels constantly and pays no attention to his diet?

A. Well, I would say that man is preparing for having a preliminary training to make a visit to the Battle Creek Sanitarium. He is on his way here.

There is no doubt of it. He will come by and by. We will get him sure if the undertaker doesn't get him first. We are both after him.

Q. Please explain the new features of the menu wherein is shown the value of foods in regard to their acid and ~~sixtant~~ alkaline reaction on the blood.

A. That is a very interesting chapter. I haven't time to tell you all about it tonight. I think I will take that up next Thursday night and throw upon the screen a list of foods giving these properties and then we will talk about that. I am sure it will be more interesting than I could make it tonight.

Q. Will a diet in which grains predominate tend to produce an abnormal acid condition of the blood?

A. Yes. Bread and meat are the worst diet a person can adopt. Meat and potatoes are a much better diet. If you are bound to eat meat you ought to eat a lot of potatoes because potatoes to a very considerable degree neutralize the bad effects of the meat but bread and meat make a very bad combination because the meat produces an excess of acid and the bread produces an increased excess of acid. There is more acid than base in bread so it produces a predominant of acid which is bad.

Q. Can ones blood become alkaline by eating fruits and vegetables?

A. You can never make the blood alkaline or acid. The blood always remains neutral but the tissues may become acid. They never can become alkaline. The body won't allow an excess of alkali because the alkalines have to be taken in but the acids are produced in the body. They are both introduced into the body by the foods but the acids are produced in the body and consequently it is necessary for us to take a diet which is largely alkaline in order to neutralize these alkalies of the body. I will tell you more about that another time.

Q. I am a man of 40 years of age. I never drank or smoked in my life and am not fond of meat, therefore, eat very little meat; then only a little

lamb or chicken broth. How is it that I always get a nervous breakdown every year and get so bad I can't do anything and simply have to quit? What should I do in order that this should not happen? I have been here four weeks and am feeling much better.

A. Well, now I suppose I talk so much about meat here you have the impression that is the whole thing to be done. That is not the whole thing by any means. Smoking is not the whole thing. You know I think if a man lives outdoors and has plenty of exercise, lives an active, natural life in every other particular, he could smoke a good deal before he would break down but a man who does not smoke and does not eat meat, who lives a sedentary life; lives indoors, lives an inactive life, allows the bowels to become inactive may actually suffer more than a man who eats meat and smokes and lives out of doors. Constipation is worse than smoking or liquor drinking. The very worst thing that can possibly happen to a person is to have inactivity of the bowels so that he is continually flooded with these poisons that are always being produced in the colon when the bowels are not properly active and that "properly active" means that the bowels should move after every meal, once a day is the chronic habit of civilization, an artificial habit that has been created through our sedentary life. It is not the natural habit however. The natural habit is that the bowels should move after every meal. When there is an intake there ought to be an output. There ought to be a continual procession through that long alimentary canal but there should be no delay anywhere and when that is the case there will be a bowel movement after every meal so as to get rid of the debris products of meals.

Q. Tell me of a cure for rheumatism.

A. Now rheumatism is a disease for which more remedies are offered than for any other known malady. If you look into a work on Materia Medica you will find more than 200 remedies offered for rheumatism, drugs besides a host of other remedies.

Now if there was a single one of those drugs that was good for anything, that would cure rheumatism, there would be only one remedy, you see but when you have got over 20<sup>0</sup> remedies you may be sure none of them are worth anything at all. That is the reason why there are so many. Rheumatism can always be cured if we can only begin early enough but as Oliver Wendell Holmes said, "early enough in some cases means a couple of generations back." Some people inherit such a predisposition to rheumatism that it will develop conditions under which other people would be proof against it. Chronic rheumatism, I should say first acute rheumatism is an infection. People who have scarlet fever are very likely to have rheumatism with it. The same thing that makes scarlet fever makes rheumatism. Children that had tonsillitis and adenoids, sore throat, that suffer from these conditions frequently are likely to suffer from these rheumatism too. The same germs that make rheumatism and <sup>chronic</sup> tonsillitis ~~make~~ produce rheumatism. That is known to be the case. The same thing is true of quite a number of other diseases.

Q. Please tell me of a cure of rheumatism. Am 60 years old and very often get pains in my joints.

A. The first thing if you are suffering from rheumatism is to get rid of these germs that are making trouble in the colon because chronic rheumatism is due to chronic exposure to the body to the toxins developed in the alimentary canal. These poisons get into the body finding their way to the joints, set up morbid processes in the joints which are called rheumatism and they produce rheumatism in the muscles and nerves as well as in the bones so it is very important to get rid of it and that means a change of diet, an antitoxic diet, increasing the activity of the bowels so as to make three or four bowel movements daily, the application of diathermy, hot applications. There is nothing like heat in some form to relieve pain. Massage, applications of electricity, the outdoor life which is good for every chronic disease, all of these things are important. Now I see here are quite a number of questions.

Here is a little list of them. We will see how quickly we can get through with them.

Q. After treatment for inflammation what should be the diet and what exercise allowed?

A. That depends upon what the inflammation is. This question has been partly torn off and I don't see how to answer it.

Q. Why does meat eating increase hyperacidity?

A. Meat eating increased hyperacidity because it stimulates the glands of the stomach and causes them to produce the most acid gastric juice that the stomach is capable of producing. Prof. Pawlow found that out by his experiments in his laboratory in St. Petersburg. I went there seven or eight years ago and spent a little time with him and on purpose to verify his experiments and to learn the facts about it. This fact is unquestionably proved that meat of all substances produces extreme acidity of the gastric juice.

Q. Why does a man who quits eating meat gets over his trouble?

A. Because he ceases to stimulate the glands but now you say that is not my experience. When I had very sour stomach the doctor told me to eat meat and I did eat meat and I felt better. There are two reasons why you felt better and if you will watch the newspapers as I have been watching them within the last year, you will see occasional evidences of that today. One of the evidences of it that I will mention I was struck with eight years ago.

There are two reasons why you felt better; one was because the meat which you ate combined with the acid and temporarily neutralized it just as soda would but at the same time excited the stomach to make more acid. There is another reason you felt better and that is, probably the meat was cooked with a good deal of fat. You ate some fat meat with the lean meat and the fat meat lessens the ability of the stomach to make gastric juice. Fat lessens the activity of the stomach in this direction so we commonly recommend people who have too much acid in the stomach to take olive oil which is a fat and that is one of the very best means of persuading the stomach to make less acid.

Q. Should peas be parboiled to get rid of the uric acid.

A. Yes? Parboil peas and beans for 15 or 20 minutes and turn off the water and you get rid of a small amount of uric acid which is contained in peas and beans.

Q. How does urea differ from uric acid?

A. Urea is an end product. When you eat meat or protein of any kind it is assimilated into the body and when it breaks down it becomes urea. If you take more than is needed it is directly converted into urea without being oxidized into tissue. Uric acid is another <sup>end</sup> natural product, the product of cell work of the nuclei ~~nuclei~~ of the cell when it breaks down or the nucleus of the cell when it produces uric acid. Uric acid is the particular product of the nucleus of the individual cells of the body. Of course, lean meat contains uric acid and the living cells of plants also produce uric acid so when we eat such things as asparagus, we take a little bit of uric acid along with the asparagus because there are growing cells there but the amount is so very slight that it really amounts to nothing.

Q. Should dry prunes, apricots or peaches be parboiled before being cooked?

A. No. They contain no uric acid.

Q. Prof. Fisher said his working power had increased 100% in three

weeks by improving his portal circulation.

A. Prof. Fisher learned while here some exercises which he mentioned in public one time when he was here a few weeks ago. These exercises consisted of a lying upon the back and raising the leg or raising the body and so exercising these muscles very vigorously. By practicing this for ten or fifteen minutes three times a day, a little rest, of course, between the movements, he increased the strength of the abdominal muscles, strengthened them so that he was able to sit up ~~direct~~ and keep these muscles contracted so as to compress the arteries and veins of the abdomen and in that way keep the blood out of this region and have the blood up in the head where it belongs. That is a very important thing. I see a great many people here who have fallen down in this way, sitting all doubled up in this fashion. When you are in that position the abdominal muscles are relaxed, the blood runs down here, the blood you ought to have in your brain or head to keep you awake so you won't be put to sleep by more dulled thought (?) The blood is allowed to gather way down here when it ought to be up here in the head. When you sit up straight, raise the chest in this way and draw these muscles in, that drives the blood out of this region, forces it up into the brain where you want it or into the muscles where you need it. That is why we have these exercises in the morning before breakfast, after breakfast, after dinner, after supper in the intervals between and in the outdoor gymnasium. The principal reason for teaching these constantly recurring exercises is to teach everybody the habits of standing erect and keeping the chest up and drawing in these muscles so that the abdominal viscera will be properly supported. It is very important also to stimulate absorption.

Q. Can one make graham bread by using sterilized bran and ordinary ~~and~~ flour.

A. Yes. Mix these together, one part of sterilized bran by weight and four or five parts of flour. That makes a mixture from which you can make excellent graham bread. You cannot make very good graham bread from graham flour and unsterilized bran because there is such a great quantity of germs with the graham

but if you separate the bran and sterilize it and then put it back into the flour, it makes very good bread. That is the way we get such nice graham bread upon our table here is by sterilizing the bran, then the germs to not spoil it.

Q. If one takes Colax is it well to make it a part of the meal?

A. Yes. Mix it in through the meal.

Q. If we need undigestible material to furnish bulk, why not eat the pulp of watermelon?

A. It is all right to eat it if you want to but with many people watermelon pulp seems difficult to get out of the stomach so generally we recommend that people should not swallow the pulp but simply take the juice and let the pulp go. I want to say to you my friends, after you have gone away, if you want information on any question or such as you would ask in the Question Box, don't hesitate to write me or your doctor here and just as often as you want to. Our doctors are only too glad to hear from you and to help you along. I had a letter from an old patient sometime ago which covered about fifteen pages asking me questions and questions and questions and it took me forty pages to answer that letter. I kept a stenographer until three o'clock in the morning to answer that letter but it was worth while. He was sick and it got <sup>him</sup> on his feet, got him started in the right direction and converted him to better living and he has been a new man ever since and is occupying a very important position in a very influential college and is doing a world of good so I am glad to do that just as often as is necessary if I can be of any service. We are to be of service to you while you are here and after you go home. We are glad to keep in touch with you and to have you write us just as many questions as you want at any time you want to on any subject pertaining to right living. Don't write about politics, you know or anything of that sort. Don't ask theological questions. We don't pretend to be wise in these matters but anything you want to talk about better living or right living or how to improve your homes or health, we will be very glad to co-operate with you in your efforts in that direction. V-M



Q. What is tetter?

A. These are two or three kinds. That is a common name for skin diseases. There is moist tetter and dry tetter. Moist tetter is known as eczema and dry so-called is psoriasis. These are skin diseases that are due to bad conditions of the blood. When the blood is right and the alimentary canal is kept in a perfectly clean condition, these difficulties disappear. Dr. Bulkley of New York has found that persons who suffer from eczema are cured more quickly by a diet of rice than anything else we can do to them. No medicine applied to the surface nothing else he can do to a patient cures the patient so quickly as a simple diet of rice for several days and it is wonderful how eruptions disappear under this regimen. The antitoxic diet is essentially the same thing.

Q. Can persons get vaccinated at the Sanitarium against typhoid fever?

A. Yes. We can vaccinate you against anything anybody can ~~vacci~~ be vaccinated against. Typhoid fever vaccination has proven to be effective. I have never been vaccinated ~~farx~~ against typhoid fever and would never recommend it to anybody unless they were going to be out under circumstances where they could not take the necessary precautions against the use of unpure water. It is possible that one might be under such circumstances that he gets infection from typhoid fever. In such a case a person better be vaccinated.

Q. What are the functions of incompetent or defective thyroid gland?

A. A very lame condition of the throat and a hollow space above the upper end of the sternum and dry skin, atrophied skin, thick skin, dryness of the hair and falling out of the hair. These are all marked symptoms of this condition which is a very common result of auto-intoxication.

Q. On rising in the morning I find my hands are quite red in color with redder spots and a feeling of numbness, no strength of the grip and quite dry. What is the cause of this?

A. It is a vaso-motor disturbance that comes perhaps from the position in lying, may be from the slowing down of the circulation during sleep. The fact that it disappears quickly on rising shows it is simply a difficulty of the circulation

It is not a thing to be worried about. Improve your circulation by a cold bath by rubbing the arms and hands with cold water two or three times a day and that will be a very good remedy.

Q. Is there much if any danger in using various extracts in treating the thyroid gland?

A. Yes but one should be sure that the thyroid gland is insufficient and if you are going to use dried thyroid extracts, be sure it comes from a reliable house and is perfectly fresh because it gets ~~rancid~~ rancid and poisonous and produces sickness.

Q. Is vaccination harmful?

A. It is sometimes harmful. It is only a question of the lesser evil. It is not so harmful as smallpox.

Q. What is the cause of excessive perspiration?

A. There are many causes. One cause is a vaso-motor relaxation of and weakness. The most common cause of excessive perspiration is the reaction which occurs after fevers. A person who has tubercular disease is likely to perspire at some time during the 24 hours. You will have fever first in the night and then later will have perspiration. A person who has periodical perspiration in this way coming on regularly at two or three o'clock in the morning should have the cause carefully looked into.

Q. What is the cause of malaria?

A. It is an animal parasite that gets into the blood from the back of the mosquito.

Q. When the only equipment of the home is a bath tub, how can one get the equivalent of a cold spray after a hot bath?

A. It is just the easiest the thing in the world. The best way is to have some water at the right temperature at in two pails having water in one pail at 80 degrees or 90 degrees and in another pail water at 80 or 75 degrees. At the close of the bath simply stand up in the pail and pour the water all over the body. Stand up in one pail in the bath and pour a pail of water over the body. When the feet are in hot water that will encourage the reaction. If you have a warm room then you can allow the water to run out of the tub and let the water rub into the tub. First let it run a little warm, about 80<sup>o</sup>, then gradually cool it off. The cold bath can be administered in an ordinary tub just as well as anywhere.

Q. When a person has had nervous depression for years and the feeling is getting lighter, <sup>is</sup> it a sign that it is going away?

A. I should say if the cloud is clearing and the sun is beginning to shine it is evident that it is getting better. If the Load ~~is-light~~ does not feel so heavy but is lightening up, be sure you are getting better.

Q. What are the bad results of drinking an insufficient amount of water?

A.

Q. Is colitis in a child of two years old curable?

A. Yes it is always curable in everybody no matter how old he is.

Q. What is the best treatment of the disease in children?

A. Change the flora. The antitoxic diet and, if necessary, the use of the yogurt bacillus. Yogurt buttermilk is a very good thing for a child. A

diet of potatoes, fruits, and fresh vegetables with Yogurt bacillus is a thing to be commended.

Q. What is the best treatment for colitis? Is Olive oil good?

A. Yes, olive oil is good, only good for the stomach; not good for the colitis particularly. It is necessary in colitis that the case should be taken charge of by a doctor who should look into the case in the first place and find out where the colitis is. The colitis is sometimes in the cecum, sometimes in the transverse colon, sometimes in the descending colon, sometimes in the pelvic colon. This is rough illustration of the colon. Here is the cecum and here the appendix, here is the ascending colon, the transverse colon, the descending colon and the pelvic colon. The colitis may be in this part or in this part or in this part or in this part. The descending colon is the most common seat of colitis. It is very important to have an X-ray examination and that will show exactly where the colitis is. By an X-ray examination we can tell just what part of the colon it is in. We can see the colon and the shape and appearance and behavior of it will tell whether there is colitis present or not, then we will know what treatment to apply. Sometimes the disease is down here <sup>near</sup> the rectum, in the pelvic colon, the it is very easily accessible. If it higher up in this part of the colon it ~~is~~ has to receive very special treatment in order to reach it.

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Question Box Lecture by J. H. Kelling, M. D., October 13, 1913.

Sanitarium Parlor, Battle Creek, Mich.

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Q.--How would a vegetable diet benefit a base-ball player?

A.--I do not think I can speak very intelligently upon that subject because I am not a base-ball player, never have been and never have seen a ball game played all through, or any other game for that matter, so I cannot talk so much about it so far as that is concerned, but I understand base-ball players require a great deal of endurance, a strong heart, efficient lungs, well formed muscles and great endurance, particularly on the part of certain players. (There can be no doubt that a non-flesh diet is conducive to endurance. Nobody questions that any longer. It is perfectly well known that endurance requires the storage up in the body of glycogen. Glycogen is derived from sugar which is derived from the vegetable kingdom from starch. It is animal starch. The energy which an animal has ~~shown~~ which gives it endurance is due to its store of glycogen. An animal that has a very large store of glycogen in its muscles has endurance. An animal that has a very small store of glycogen cannot possibly have endurance because the animal will soon run out when the glycogen is gone. That is one thing. Another thing is that a person living upon a meat diet is saturating his body with poisons that produce fatigue and exhaustion. Fatigue and exhaustion are conditions of auto-intoxication. That is what fatigue means and what exhaustion means, simply saturation of the body with poisons. The body fluids and tissues are saturated with these poisons.) If a person lives upon the flesh of another animal this flesh contains these poisons already, so (when a person habitually lives upon animal flesh, particularly if he eats a great deal of it, he adds to the poisons of his own body the poisons of another animal, so he is nearer the point of saturation with poisons which produce fatigue than a person who does not eat meat. It is equally true that non-flesh eaters have the greatest endurance.) This is found

very well with animals. Mr. Roosevelt a couple of years ago when he was out in Africa hunting animals, as you remember, wrote a series of articles for one of the magazines telling about his lion killing and so forth. In looking over one of his stories I remember his telling about running a lion down on horse back and he ~~ix~~ made this statement, that a horse with a heavy man on his back could run down a lion in a mile and a half any time, could always do it in a mile and a half. The lion is supposed to be the King of beasts and the most powerful of animals. It has very little endurance and in a mile and a half could be run down by a horse with a man on his back weighing a couple of hundred pounds, perhaps, a heavy man. A gentleman mentioned to me a day or two ago that in reading Mr. Roosevelt's account of his hunting of animals in Wyoming not long ago, he told about hunting down a panther or some other carnivorous animal, <sup>perhaps</sup> ~~as~~ a wild cat, in the same way in a short time because the animal was soon exhausted, had little endurance. (Dogs are supposed to be carnivorous animals. They are meat eating animals at any rate, yet the hunter never feeds his dogs meat when he wants them to run. He feeds them on cornmeal and bread because experience shows him that this sort of food will give the animal the greatest endurance.) I was reading an article by a physiologist not long ago in which he called attention to the fact that men engaged in very severe labor when given a choice of a meat diet or a bread diet to support their hard work would always <sup>choose</sup> use the bread diet because with the meat diet they very soon became heavy, drowzy, *lethargic*, and lost their disposition and capacity for work.

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

Monday, October 27, 1913 at 8 p. m.

by

J. H. Kellogg, M.D.

Q—Is olive oil good for any one having hardened arteries?

A—Yes in general olive oil is likely to be good in such a case, but it might not be advantageous to use it in very liberal quantities, so it is important that the patient should have an examination to find out. The majority of persons who have hardening of the arteries, have or have had at some time, hyperacidity according to my experience. They have suffered from inactive bowels, and persons who have suffered from chronic constipation are likely to have hyperacidity because of the poisons absorbed from the colon which are excreted into the stomach and so irritate the gastric glands and stimulate them to make an excess of HCl, but this condition may have passed off, it may have passed away because when the glands are excited to excessive activity, they are worn out early and by and by there comes the ~~opposite~~ opposite condition. Every person who has hyperacidity, sooner or later if he lives long enough gets hypoacidity because the glands are worn out by their over work and then deficiency of acid exists, so it is important to see what the state of the stomach is in case of hardening of the arteries by a careful examination. In cases of hyperacidity I should explain a word further, olive oil is a very excellent remedy. (One or two tablespoonfuls of olive oil taken at each meal is one of the very best remedies I know of for hyperacidity. It is valuable because it prevents the formation of gastric acid. The gastric glands are prevented from making too much acid. One or two tablespoonfuls of ~~stirred~~ olive oil, not taken clear, but taken with food in some way, taken with salad perhaps. A very good way is to put a tablespoonful of lemon juice in a little saucer and add to that the two tablespoonfuls of olive oil, then stir it up with a fork till it makes an emulsion. In less than a minute you can make a very nice emulsion of it. Then take

the lettuce leaf by leaf or a piece of tomato or cucumber or whatever salad you are using and dip it in, one leaf at a time and eat it in that way, and in that way you can take a much larger amount of oil than when it is used in the ordinary way.)

Q—Is it well to take any portion of a potato having a bad heart?

A—No, a bad heart is a bad thing whether it is in a potato or in a man, but in the case of a potato, what is supposed to be a bad heart, generally is not very bad. The dark color you see on the inside of the potato when the potato is hollow is not decay. The potato grew so rapidly that it left a little hole in the center and was not able to fill it all up. The center could not keep up with the circumference, so a little hollow has been formed there and that brown color it is only necessary to cut it out and the rest of the potato is just as good. However, one much prefers to eat potatoes that are inviting to the eye as well as to the taste.) If you find any such potatoes on our table, I should advise you to send them back and that will give the cooks a lesson so they won't send such potatoes in. Our steward is instructed not to buy that kind of potatoes and if you find anything of that sort on coming to the table, please send it back and if you send them all back once or twice, perhaps they will be relieved.

Q—Can a man of thirty-eight with high blood pressure and hardening of the arteries be cured and by what method?

A—Now if a man of thirty-eight has high blood pressure and hardened arteries, somebody ought to be censured severely. A man of thirty-eight has no business to have hard arteries. He ought to be ashamed of it.) Perhaps that is the reason he does not ~~sign~~ <sup>sign</sup> his name here. I do not find any name signed to this question. If that man who has hard arteries at thirty-eight is in that condition, it is because (certainly he had been doing something very wrong that he ought not to have done. Perhaps he has been smoking or committing some other awful thing or crime against the body. Perhaps he has been taking beer or something of that sort now and then, or perhaps he has done something worse than that. Perhaps he has allowed his bowels to become inactive. That is the worst crime yet.)



Smoking is bad, drinking is bad but I want to say to you that neglect of the bowels is one of the worst crimes you can possibly commit against the body and it is almost a universal crime. It is a thing people ought to be severely censured for. Men and women ought to understand that they are committing an insult to their body and a crime against their body by neglecting the bowel. Somehow this has come to be regarded as a sort of matter that could be attended to when convenient, this attention to the bowels, but it is one of the essential duties of life and one of the most important things to be attended to with regularity and promptness is evacuation of the poisonous residues, the unusable residues. Why now, (what would you think of a neighbor, if you ~~permitted~~ had a neighbor who permitted the garbage can to get filled up and neglected and it was not emptied more than once a week or once in two weeks? What would you think of such a neighbor? The garbage can is sending off horrible effluvia, allowing the flies and mosquitos to propegate and defiling the atmosphere all about. What would you think of such a neighbor? You would want to move away or get that neighbor to move away.) You would want to have something done. (If each one of you will just look back over your experience, you can see from your own experience that what I am telling you is correct. You remember many a time when you were feeling, miserable, wretched, melancholy, despondent and you saw the doctor and the first thing the doctor did was to give you a dose of salts or of seltzer or tell you to take some hunyadi water or something else of that sort, something that will move the bowels. That is a common everyday experience. You felt better right away. It is evident then that you have been in a state of intoxication.) (Autointoxication is the worst kind of intoxication.) I remember I surprised a lady very much one evening and she surprised me very much in return. I examined her and told her she was suffering from autointoxication. "Entirely mistaken sir, you are entirely mistaken, I have not had a drop since night before last." "Well," I said, "but this intoxication you are suffering from is a great deal worse than whiskey intoxication." She said, "I do admit I do take a tody at night to help me sleep but last night I did not get any." You see she

was here where she couldn't get it. ( This is a great deal worse than whiskey intoxication; it is worse than tobacco intoxication. It is much worse than tea and coffee intoxication. If it happens you have got them all, good strong coffee and beer between times and tobacco all the time, if a person is in that condition, then has inactive bowels besides, that man is going to go to pieces early. He gets Bright's disease early, ) but ( here is another man whose bowels move regularly twice or three times a day, and I have met some such people who smoke and drink beer and good strong tea and coffee and abuse themselves in those ways continually and are still well, healthy and have soft arteries when they are sixty or seventy years old. I have met a good many such cases and I did not understand it until I found on inquiry in a great many cases of that sort, that those people who were so tough and hardy and can smoke and drink <sup>ad libitum</sup> ~~alibitum~~ and were still well at sixty or seventy, were people who had remarkably good bowels that moved two or three times a day, and that is what has made it possible for them to endure these other poisons. I am thoroughly convinced that colon poisons are the worst of all and the neglect of the bowels is one of the worst ~~atrocities~~ ~~indignities~~ physical sins any ~~man~~ body can commit. )

Q—How does arthritis differ from rheumatism?

A—Rheumatism is a form of arthritis. Osteoarthritis is a disease in which the bones are changed. There are little growths upon the bones, little warty hooklike growths formed on the bone about the joints and about the edges of the bones at the joints. In rheumatism, the disease affects the ligament around the joints but does not affect the bone. It affects only the soft parts about the joints. That is what we call chronic rheumatism, but in osteoarthritis, the bone is changed, either by hypertrophy or atrophic changes by which the bone is reformed and disappears, becomes destroyed in that way. Then we have also rheumatism of the muscles and rheumatism of the nerves. Any of the soft tissues of the body may be the subject of what is termed "rheumatism".

Q—When a person has had several attacks of melancholia or nervous depression, can they ever be cured?

A—Yes. Now if a person has had several attacks, that is proof ~~you~~<sup>he</sup> can be cured because he has been cured several times, don't you see. If he had not he would only have had one attack, so if a person has had several attacks and has been cured several times, you see, and if he has been cured once, he can probably be cured again, and if he can be cured, he can stay cured. If we just simply find what is the cause and remove that cause, if we can find what it was that cured him and keep right on doing it, he will remain cured. Water will put out a fire won't it? If you put the water on before the fire starts, you will not have any fire, you see. If your house got a fire and you put some water on it and put the fire out, then if you keep putting the water on the house, it cannot get a fire again as long as it stands. It never can burn as long as the water is pouring on to it, because water is a complete antidote for fire.) In just the same way right habits are an antidote for disease. I do not mean to say that anybody can live so carefully or so well that he can live forever. Of course not, because we cannot live so well as to avoid all infractions of the laws of health, but if one will live biologically, if he will live in harmony with the laws which govern his class of animals, for we are all animals, all belong to the great monkey family, and now if we will live according to the monkey code, if you please, according to the principle that created and developed this human race up to its present standing, if we live according to those great biologic laws that belong to our race of animals, then we would live well and avoid disease. Bright's disease, hardening of the arteries, high blood pressure, tuberculosis, and all of these various chronic maladies from which we suffer are all the result of wrong habits of life. Baboons, monkeys, chimpanzees, ~~and~~ orangs do not suffer from these diseases unless they are subjected to the same causes. The monkeys that live in the forest do not suffer from tuberculosis, they are perfectly well and do not die from pneumonia. They do not have Bright's disease, hardening of the arteries and that sort of thing. They are free from those troubles because they live according to the laws of nature,—that is, they follow the biologic laws which pertain to their order of animal life.)

Q—How long do they live?

A—I do not think anybody knows how long the gorilla lives in its native land. They do not live very long in civilization. The gorilla, the toughest animal of the forest has not been able to live a year in captivity. They have tried every sort of means. When I was on my way to Europe two years ago last month, I stopped in New York and called on my friend, Prof. Hornaday of the <sup>Central Park</sup> B----- Zoological Garden, and he took me out to introduce me to our kin in the monkey department and as he came in he sounded a little note, just uttered a little sound as he came into the place where the monkeys were and instantly every monkey in the place was shouting. They heard that note. He had learned to speak some monkey words. You know Dr. Garner went down and lived in Africa in a cage in a tree with the monkeys for several months so as to learn the monkey language and he has gone back there several times, and I think for twelve years he studied the monkey language and he has learned five words. He has learned five words that he can use intelligently with the monkeys and that they understand, and he understands that they use among themselves almost a universal language among them. Dr. Hornaday learned a few of them. He spoke some of those words and one of them a word of welcome, and as soon as he utter<sup>ed</sup> it, instantly every monkey in the place was shouting and jumping and pretty soon out came a chimpanzee <sup>which</sup> and rushed out and sprang up, threw his arms around his neck and kissed him, first on one cheek and then on the other and they really had a very lively time. I was glad he wasn't kissing me, but he was a most affectionate creature. There was a young gorilla there that had just been brought over. They sent him in at an expense of five thousand dollars clear to Africa to get a gorilla. They brought a gorilla perhaps ten or twelve years old, but in three months she was dead. She could not stand civilization.) (The men and women who are living now under civilized conditions are alive only because they were so tough they could not be killed by the conditions of civilization. They represent not the survival of the sickest but the survival of the toughest and it is only because they have developed a certain amount of immunity by long continued exposure to the conditions of civilized life that

it is possible for us to tolerate the conditions under which we live. Now you put the North American Indian or a South American monkey under the conditions under which ~~the~~ the average civilized man lives and he will die off in less than six months. They cannot endure the conditions.) (Some years ago I was making a study of monkeys and I got a monkey. I got Dr. Hornaday to send me a monkey and I took him into my home and he lived with me in my home and after about six months I discovered my monkey was coughing and I made an investigation and found he had tuberculosis, was dying of consumption and I made up my mind I had better be doing something for myself. Why wasn't I dying of consumption. The monkey had eaten at the same ~~table~~ table, at least had been eating the same food and he had lived in the same house and he was dying of consumption, and the poor fellow did die of consumption. We buried him with proper ceremonies and I began sleeping out doors. Mrs. Kellogg and I said, "that is a good hint to us we better change our practice right away" and we immediately had out door sleeping rooms constructed and have been sleeping out doors ever since. I think I should have been dead if it had not been for that monkey who saved my life by dying himself.) (Dr. Evans of Chicago, you know, turned the monkeys ~~that~~ at the Lincoln Zoological Park Garden in Chicago out of doors. People complained of him because the poor monkeys were shivering in the cold and he was guilty of cruelty to animals, but the monkeys all got well and were no more sick. Mr. Hagenbeck, the great animal trainer and civilizer I was going to ~~say~~ say, learned of that a good many years ago. The ~~hippopotamus~~ <sup>i</sup>hippopotamus, ostriches which he brought from Hamberg where they have quite cold winters, not quite so cold as we have here, but still a great deal of snow and cold breezy weather, he had doubts whether he could keep his animals. They got sick, did not thrive very well, but he tried the experiment. He turned them right out doors when it was in mid winter and one could go out and see the tracks of the ostrich in the snow and see them shaking the snow off their wings and the hippopotami and other animals from a tropical region were going about there in the snow. It looked certainly very curious, but he found these animals were perfectly hardy and were enduring a very considerable degree of cold weather and were very much more

healthier than they had been before. In fact, they were perfectly healthy as long as he kept them out of doors. We are naturally outdoor animals, suffering as we do because of our violation of the great biologic laws that belong to our race. Our race is dying because of it.) We are going to have a Conference here next January on Race Betterment and we shall have gathered here men from all over the United States to discuss this question of ~~fasting~~ the evidences of race degeneracy, the causes of race degeneracy and the remedies. We shall have a lot of distinguished people here and some of you may be here and if you are not, you will see an account of it in the Battle Creek idea and I hope you will take some interest in it and pass it along to your neighbors because this is really one of the liveliest questions we can possibly discuss.

Q—My hemoglobin is 72, what shall I do to ~~make~~ improve the condition of my blood?

A—That is the all important thing to do. Just to live out of doors, sleep out doors with your windows wide open breathing cold air all night long. Take cold baths, eat all you can eat and just a little more. Eat all you can digest at three meals then take meals between.) That is <sup>the</sup> a little more I am talking about, intermediate meals. (One or two ounces of malt sugar you can take an hour after each meal) and that will pass right in, that does not count. That is absorbed and (it is already digested so it is absorbed right away and it gives the digestive organs no labor.)

Q—Are the streptococcus lacticus in yeasts bear a very bad bacteria?

A—No. They are very desirable ones. The streptococcus lacticus is one of the best friends we have and yeast under ordinary conditions also is very harmless and really rather helpful. They both produce acids which are antagonistic <sup>to</sup> the putrefactive bacteria which make the mischief.

Q—What does constant pressure in the head signify and what is the cure?

A—It means a disturbance of the vasomotor centers. That is, the circulation of the blood is not regulated as it ought to be. It can generally be overcome by removing the causes and very quickly. The cause in such a case is almost always to be found in the irritation of the nerve centers by toxins under shoulder blades.

and how shall we cool them off? Cool them off by a neutral bath. After a hot bath get into a neutral bath at a temperature of about 95 degrees and lower it to 92 degrees. Cool off at that temperature. Take the bath at bed time. Get into bed and you will have no difficulty. Another way is to cool off by an alcohol rub, one part of alcohol and about three parts of water. The rapid evaporation of the ~~the~~ alcohol will cool the skin without producing too much reaction.

Q. How could a dilated colon be treated?

A. The only thing to do is to keep the colon thoroughly emptied, then it will gradually contract. Pressure applied outside by means of a properly adjusted abdominal supporter is a good help; then to keep the bowels moving three or four times a day so as to keep the colon thoroughly emptied is necessary. Otherwise the enema should be used. Never use a very large enema. One or two pints is as large as ever should be used and it is better to use the water at a temperature of 80 degrees or less rather than a higher temperature because this has a tonic effect upon the bowels causing them to contract and gradually restores its tone.

Q. How is one whose appetite is impaired able to ascertain when the stomach is sufficiently empty of its contents to justify the taking of food?

A, Prof. Pawlow says that hunger means juice so if you want to know if your stomach is empty, it is only necessary to know whether you are hungry or not. If you are hungry the probability is that your stomach is empty as Pawlow says appetite means juice. If you have appetite hunger for food, that means you have gastric juice with which to digest the food. You say I never have appetite. Now I advise you to get into the cold air as much as you can. An ice bag or two or three ice bags applied over the pit of the stomach for half an hour before meal time will often create a good appetite. The exposure of the face to cold air, the bathing of the face and hands with cold water is a very good remedy. The cold bath is an excellent remedy. Some of you know that from experience. You get up in the morning feeling as though you didn't ever want to eat anything but take a cold bath and in five minutes afterwards you have got such an appetite you are in a hurry to get to the breakfast table. It is because of the stimulating effect of the cold upon all the cells and all the glands of the body. Cold is a wonderful invigorant.

Q. What are some good references for treatment of colitis and auto-intoxication and hyperacidity of the stomach?

A—If you apply at the bookstand in the lobby, the attendant will be glad to show you some books and give you some references.

Q—What is meant by auto-intoxication?

A—It is poisons generated in the body. The term is used loosely. Intoxication arising from the intestine should be called "intestinal intoxication" rather than "auto-intoxication" because the contents of the intestine are really outside of the body just as though they were on the skin, because the intestine is simply a tube and ~~like~~ food taken into the body is really not in the body until it has been absorbed and gotten in among the tissues, you see, so this term "auto-intoxication" as applied to intestinal intoxication, is not really correct. The term "auto-intoxication" should be really combined to poisons formed in the body itself. For instance, a person who has jaundice is suffering from auto-intoxication; a person who has diabetes is suffering from auto-intoxication; a person who has gout is suffering from auto-intoxication with uric acid. These are good examples of real auto-intoxication. What we commonly call auto-intoxication is really not auto-intoxication at all, but is intestinal intoxication.

Q—Sometime ago much attention was given to avoiding fruits and vegetables at the same meal. Now they are considered right. Why?

A—Because we have learned to chew, that is the reason. If food is thoroughly masticated and chewed, we can mix ~~and~~ vegetables and fruits as much as you like and they won't do the least bit of harm. They all agree together in a liquid state.

Q—What can be done to prevent the formation of renal calculi?

A—The best thing I can tell you is to live out of doors, take a good deal of exercise, drink a great deal of water and make potatoes the staple article of diet, because potatoes will dissolve the uric acid and carry it off. That has been proven by Dr. Hindshede of Copenhagen.



Q—What is the best treatment to reduce <sup>high</sup> blood pressure?

A—There are various things. Cold baths, warm baths, moderate exercise, massage, frictions of the skin, diathermy, applications of high frequency, static and d'Arsonval current, antitoxic diet and frequent movements of the bowels are all good, but the last is the most important of all. There should be three or four movements a day.

Q—In cases of hyperacidity when Yogurt Buttermilk cannot be used, are Yogurt Tablets likely to be better?

A—Yes, Yogurt Tablets may be taken without any difficulty in those cases.

Q—Can tumors be cured without an operation?

A—Yes, some tumors can. Fibroid tumors can often be cured by the application of the X-ray. By recent improvements which have been made in the application of the X-ray, even large tumors have been cured.

Q—A Chicago firm which puts up Yogurt preparations says the Bulgarian germs cannot live in dry tablets but can only exist in liquids. Is this correct?

A—I suppose this refers only to the sort of Bulgarian germs that are made by this Chicago firm. It certainly does not apply to those that grow in Bulgaria. We have received numerous specimens of cultures from Bulgaria in a dry state that were very active, and we have specimens we have kept in our laboratory here for a year that contain very active germs. I think we have some kept two years and the germs are still active, so it must be the particular strain these Chicago companies are producing is a weak strain that won't stand any hardships.

Q—What is your opinion concerning the X-ray and radium as a cure for cancer?

A—The X-ray certainly does cure cancer, particularly skin cancers. Radium is found capable of accomplishing results that are not obtainable in any other way.

Q—Do you think it a good idea to use graduated dilators to produce regular movements of the bowels?

A—There are some cases in which this may be of value, but the real cause is not

reached. If there is contraction of the lower part of the bowel, it is because of ~~the~~ reflex irritation somewhere higher up or ulcer or something else ~~that~~ of that kind and the cause should be removed.

Q—Are peanuts wholesome?

A—Yes if properly cooked, but they should be parboiled to get rid of the strong peanut flavor, then should be cooked several hours. They may be cooked and served like beans. They may be mixed with beans and baked after thorough cooking. That is a very excellent way indeed to prepare them.

Q—Is peanut butter often adulterated?

A—I do not know that it is every adulterated. It is often made from cheap dirty peanuts which have been roasted. The ordinary roasted peanut butter is very indigestible indeed. The peanuts should be cooked at a temperature sufficiently high by steaming without roasting. The peanut butter you get upon our table when it is served, is made in that way. It is not roasted. It is cooked at a ~~lower~~ temperature far below the roasting point, so it has not been exposed to the roasting temperature which decomposes fat and produces harmful fatty acids.

Q—Cows don't eat meat, dogs do. Why do so many cows have tuberculosis and so few dogs?

A—But dogs do have tuberculosis. However, not so often as cows and the reason is the dogs live out of doors while cows are kept in the stable. If you put the dogs in the kennel and keep them there, they will have tuberculosis. The cows will get well and the dogs will die of tuberculosis if you put the cows out of doors and keep the dogs shut up.

Q—What should a person eat to avoid pernicious anemia who has a tendency in that direction?and what should he do?

A—Keep the colon empty, avoid the use of meats, live out of doors, take a large amount of outdoor exercise, live a healthy life in every respect.

Q—What is the difference between cane sugar, fruit sugar and malt sugar?

A—I explained that the other evening. Cane sugar is a di-saccharid; malt sugar

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is a di-saccharid; fruit sugar is a mono-saccharid. A sacharid is  $C_6H_{10}O_5$ . That means six atoms of carbon, 10 atoms of hydrogen and five atoms of oxygen. Now if we put two of these together— $C_6H_{10}O_5$  and add a molecule of water  $H_2O$ , you see we have  $C_{12}H_{22}O_{11}$  ~~and~~ that is cane sugar. Now if we have  $H_2O$ ,  $C_6H_{10}O_5$  and add  $H_2O$  to that, it would be  $C_6H_{12}O_6$  and that is fruit sugar or dextrose, both of which have the same formula. The formula for malt sugar is just the same as that of cane sugar. Cane sugar and malt sugar have just the same composition but the atoms are arranged a little differently and that is all the difference. When we break up cane sugar in the process of digestion it divides into one molecule of dextrose and one of levulose. Malt sugar breaks up into two molecules of dextrose.

v-p

Q. What does constant pressure on the head signify and what is the cure?

A. It means a disturbance of the vasomotor center, that is the circulation of the blood is not regulated as it ought to be. It can generally be overcome by removing the cause and very quickly. The case in such a case is almost always to be found in the irritation of the centers by toxins which are expelled from the colon. Get the bowels to moving well and it is a cure for almost all these chronic ailments. Nearly all these distressing disturbances are due to disturbed conditions of the colon. They used to be attributed to all sorts of intangible and vague causes that could not be removed but now we know there is a very tangible cause for it. We know all these chronic ailments, you can hardly mention one, that can<sup>not</sup> be traced right straight down to the colon and if you can get the colon to acting regularly three times a day that is the best thing that can happen to any patient who comes to this institution. To get three bowel movements every day for a while or even four bowel movements would be better.) (I met a day or two ago a lady who had been here a week and she said she was coming up every day, felt almost as though she had been resurrected. I said, "Are your bowels moving three times a day?" She said, "Yes, they are moving five times a day. They have not been moving without cathartics for several years and the cathartics made her sick every time so the change was very striking indeed. She was just being lifted as <sup>the</sup> a load of poisons that had been intoxicating her brain and burning every organ of her body were being removed was simply coming up naturally because the real healing power is in the body.)

Q. Is it injurious to take food into the stomach while there is still food in the stomach?

A. Yes, that is one of the worst insults you can offer to the

stomach, is a new meal while you have still got the old meal on its hand. The stomach must be unloaded of the food that is in it and must have an hour's rest before the next meal, at least. It ought to have an hour's rest before every meal. Now you want to know the reason for that and I will give you the reason. First of all, I must tell you that the work of the stomach which is one of the principal organs of the body is to make gastric juice. Now this gastric juice is made down here in little ducts in the mucus membrane. Suppose this to be the mucus membrane and here are some of the little ducts on the inside of the stomach and here are large cells lining these little ducts, and these cells make the gastric juice and pour it out into the interior of the stomach. Now suppose this is one of these cells and here is the center of it, the nucleus and the nucleolus. Now when this cell has been exercising a little while, a large number of little granules are to be found everywhere all over the cell. It is crowded full of little granules. These granules are the energy granules which enable the cell to work. <sup>It</sup> ~~They~~ make gastric juice by the use of these little granules here. That is, a cell that has been resting does. Now after the cell has been at work for a time making gastric juice for a meal, then the cell changes its form. It is shrunken, it is smaller, it has changed its form and appearance. The nucleus and the nucleolus are smaller and not so distinct and those little specks have almost entirely disappeared because that means that the store of energy which the cell uses in its work. When the cells of the stomach have been making gastric juice to digest a meal and the meal is not yet completely digested, these cells are tired out and they are in the condition I have just mentioned, and now if you introduce another meal, it is very evident that the stomach is not prepared for it. It must have three quarters of an hour of rest at least after a meal to enable the cell to gather a new store of energy ~~which~~ with which to carry on its work of making gastric juice. So you see it is impossible for digestion to be properly performed unless there is a rest between the meals and it is an impossible thing for the stomach to take one meal on top of another and perform the work of digestion properly.

The cells are exhausted and they cannot get any rest or opportunity for storing up energy until the work of digesting the meal in the stomach is entirely done.

Q--What causes saliva to flow freely in the mouth when one is not eating or hungry?

A--If you have a sore on the tongue or lip, that will produce a flow of saliva. There is a reflex irritation produced which will cause the saliva to flow. Salivation is sometimes present in certain forms of disease. If one takes sufficient doses of ~~mercury~~ <sup>mercury</sup> for example, the mercury will produce salivation and various other drugs will also produce it.

Q--Are mineral waters good for the kidneys?

A--They are the worst thing possible. There is no doubt that the increase of Bright's disease in recent years is at least in part due to the very large use of mineral waters of various sorts. These waters are called mineral waters because they contain mineral substances which are foreign bodies and many of them are more or less of a poisonous character. They are not so poisonous as ratbane, of course, but they are nevertheless often bad and more or less poisonous and to use these continuously, as many people do, means that the kidneys must be overworked, for the kidneys must eliminate these mineral substances and that is a superfluous tax that is imposed upon the kidneys in which they ought not to be asked to perform.)

Q--Is it true that the continued use of paraffin oil for inactive bowels will cause cancer?

A--No, there is absolutely no proof that the continued use of paraffin oil will cause cancer, but this is a fact that one cannot forget if he knows about it that the men who make this paraffin oil are very subject to cancer of the skin, and this cancer is so closely associated with the paraffin industry that it is known as paraffin cancer. There is a form of cancer known as paraffin cancer and it is connected also with some coal tar industry, and a couple of years ago, the British Parliament appointed a commission to investigate the cause of cancer in the paraffin industry and in certain coal tar work and in factories, and Dr. Ross of the Lister Experimental Institute of London or the Lister Institute of

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Experimental Medicine.) I think is the exact name of the institution. Dr. Ross who has a laboratory in the institution was appointed by this committee to make an investigation to find out the reason why workers in paraffin oil, in coal tar industry, suffered from certain forms of skin cancer. It is very very common among them indeed. This fact has been known for one hundred years or more. Dr. ~~Ross~~ Ross made an investigation and has been studying the subject of cancer for a great many years and he is an expert in this thing and he discovered certain substances which appeared to him to be the cause of cancer. Certain irritating substances, especially products of putrefaction, putrescin is one and cadaverin and colin is another. There are fifteen or twenty more substances which he believes are connected with the development of cancer.) He made a study of this matter and he found that there was in ~~coal~~ coal tar-----in black furnace tar there was none, but (in gas tar he found this substance and in paraffin oil and some fifteen or twenty tar products of various sorts, he found the same substances which he believed are the cause of cancer.) Then he found fortunately that these substances can be removed from the oil and will be removed from tar by very thorough washing.) by pulverizing the substance very finely and subjecting it to the action of water under great agitation for a sufficient time, the poison can be removed. (Somebody wants to know, what about Para-lax. Paralax is simply an emulsion of paraffin oil which has been subjected to this process of purification described by Dr. Ross.) I happen to know Dr. Ross and he sent me a report of his investigations when he completed them and called my attention to this thing, so I was able to give our patients here the benefit of this knowledge which as yet, I think, is not very generally spread about, though it will be as Dr. Ross's report is now published in a book and he has made his report to the English Government and I think there is no doubt it will lead everybody who wants to use paraffin oil to see that the oil is washed in such a way as to remove these irritating substances. (I do not think anybody can get cancer by taking paraffin oil, a little while, perhaps ~~for~~ even for six months or ~~more~~ a year, but when we know it is capable of producing cancer when the skin is continually exposed to it, it certainly seems irrational to recommend its con-

tinuous use until these irritating substances have been removed.

Q—Is horse-back riding or tennis playing objectionable exercise for one who has a prolapsed stomach?

A—No, but a person who is going to engage in horse-back riding who has a very badly prolapsed stomach or is going to engage in any active exercise should wear a supporting belt across the lower abdomen, a belt which acts on the principle of a truss is the best. That is, there should be a spring coming around on each side from a support in the back to lift just as the hands lift. An ordinary bandage does no good at all, practically because the pull is from side to side, it does not lift upwards but it is necessary that there should be an upward lift such as you make with the hands. There are such supporters that can be obtained and they should always be worn by a ~~xxxxxx~~ person who suffers from prolapsed stomach or bowels, especially by all ~~xxx~~ people who feel pain in the back when they are much on their feet. ( I remember some years ago, a man came here who was a traveling salesman and he was very much broken down and neurasthenic. He had had some operations, but they didn't do him any good. He had been operated on for appendicitis. His appendix was perfectly healthy and he was in a very miserable state. He had been a traveling salesman who had to give up his work because he could not carry his bag which weighed about twenty-five pounds, perhaps. This gentleman came into the office to see me and I looked him over and found he had a very badly prolapsed stomach, and I layed hold of his abdomen and lifted it up in this way and he felt relieved immediately, and I put on an abdominal supporter and as he looked at it, "Dear me," he said, "dear me, what a fool I am. Why I have been going around for two years with my hands in my pocket to hold my stomach up and why didn't I think of that before." This man, you see, had discovered the real cause of his trouble but he had not mentioned it before. He had discovered that when he carried his hands in his pockets and supported himself, he could travel and was relieved, but that was inconvenient to do all the while. Now he put on the abdominal supporter and he started off and walked fifteen miles the next day, had no trouble in carrying his bag and we lost the patient. He started for home right away.)



Q—How about the loaves and fishes with which Christ fed the multitude?

A—I can't tell you a thing about it. I don't know anything only what the record says and I cannot tell you anything more. It may be some theologian could work out something from the original greek which would show that those fishes were not fishes or something of that kind. I don't know. I don't attempt to explain it. I am sure, however, that the purpose of that occasion was not to teach a lesson in dietetics. The lesson that was taught was of another sort. If Christ had been giving a sermon in dietetics, I don't believe it would have been fish for all the <sup>sermons</sup> ~~sermons~~ in dietetics we have in the Bible lead me to believe that the Bible is on the other side of the question. The first intimation you get on that subject is in the 29th verse of the 1st chapter of Genesis. "Every herb bearing seed and every tree bearing fruit to you it shall be for meat". So you see the real meat grew in the field; it was not on four feet running around. They did not have to run after it to catch it, but all they had to do was to reach out their hand and take it off the trees or gather it from the ~~fields~~ fields. That is the original meat, and the application of this word "meat" to <sup>the</sup> flesh of dead animals is a misappropriation. It is a misapplication of the term. The real term "meat" the original term "meat" used in all words "meat" means food and it does not apply to the flesh of animals at all but applies to fruits, grains and the products of the earth. That is the real truth about it. Then there is another verse that has <sup>some</sup> ~~rather~~ bearing on this question, ~~The~~ sixth chapter of Genesis if I remember right. Whatever may be your view about the inspiration of it, everybody must admit this is very old history, very old writing and the oldest information we have got on the subject,—the 6th chapter of Genesis. "And the Lord told Noah to make an ark and to take the animals into the ark, all kinds of animals and then he said to him, "Take thou unto thee of all food that is eaten and thou shalt gather it to thee and it shall be food for thee and for them." Now ~~there~~ were the animals taken into the ark and there were a lot of them. If you figure it <sup>us</sup>, you will see there wasn't any more room than was necessary in the ark for all the animals

enumerated here and there is no record here that he took in any sheep for the lions to eat. He was only to take in seven sheep because the clean beasts went in by seven and the unclean beasts by twos, so you see if he only had seven sheep there would not have been sheep enough to feed the lions. They were in there a whole year and a pair of lions you know will eat a whole sheep a day, so if he had sheep for the lions to eat, he would have had to have 365 sheep, but there were only seven sheep, you see, so it is unreasonable to suppose that, ~~besides~~ <sup>besides</sup> if he had 350 sheep, we will say, for a year, he would have had to have food for 180 sheep for the whole year, don't you see. He would have had to have hay, corn, oats enough to keep 180 sheep <sup>alive</sup> for a whole year. And the same would be true with reference to the animals to be ate as food for the leopards and the tigers and the wildcats and all the other sorts of carnivorous animals. He would have had to have, you see, probably ~~one-hundred-times-as-many-animals~~, 50 to 100 times as many animals as he did take into the ark to support these carnivorous animals and besides that, he would have had to have ~~the~~ <sup>the</sup> enormous quantity of food necessary to keep this enormous great number of animals alive, and that would have taken several arks. He would have had to have a ship bigger than the Titanic or any ~~of~~ other of the big ships and that would not have been enough to carry the food for this enormous great managerie to eat if they lived on a flesh diet. This is the argument. God told Noah to take into the ark along with his animals of all food that is eaten, so if Noah did not take in ~~such~~ a lot of animals for himself and the other animals to eat, it is evidence that that kind of food was not eaten before the flood. That is my argument, so it is plain that the human race, according to the Bible, lived until the time of the flood, which was hundreds of years after creation, at least fifteen hundred after the beginning of the history of the world, on a non-flesh diet. Now ~~still~~ <sup>see</sup> another thing that happened. Noah, Methuselah and Adam, those men who lived before the flood lived to be nearly one thousand years old. Noah lived to be almost a thousand years, His sons began eating meat after the flood, you know and they lived six hundred years, and their sons four hundred years, their sons three hundred fifty years, their sons two hundred years and when they got down to the sixth or seventh generation

they were only living ninty or one hundredz years, and when they got down to David, only three score years and ten, so you see what happened after they began eating meat. Pfof. Metchnikoff tell us that old age is due to the poisons produced by the colon germ and meat is the choice food for the colon germ. It flourishes in meat, so there is a connection between those two ideas, I think.

Q—What should a person drink?

A—You can take your choice. You can drink water straight as you find it from the spring or artesian well or some other pure source or you may drink distilled water as you find it in apples, peaches, plums, cherries and all kinds of fruits. Fruits are about nine-tenths water, so if you eat a pound of fruit, you have been drinking in the eating of that fruit, one-tenth of a pound of water.

Q—When should a persons drink?

A—Now you may take if you like at meals half a glaas full or a glassful of water. I don't think it does anybody harm under ordinary circumstances unless you have hyperhydrochloria, gastric ulcer or a duodenal ulcer, then you must not drink water at meals. You must not take liquið food of any sort, but must take all foods in the form of puree or softer food entirely, Why? because you must swallow the food without much chewing. That is the reason. That is the reason why you should take soft foods so you won't have to chew them. With hyperacidity, you must swallow all foods without chewing, but it must be in such a state that it does not require chewing, but you must swallow it in a granular state, but it must be absolutely soft, pultaceous so it does not need chewing. The same, we must take not liquids in large amount because liquids excite the stomach to make gastric juice. A ~~max~~ pint of water in the stomach will cause the stomach to pour out gastric juice if there is not a particle of food there. The gastric juice of the stomach is somehow excited by the presence of a large quantity of water to make gastric acid.

Q—What is a proper diet for one not having enough acid?

A—You must eat good things, things that you like, that have a flavor to them and dry food that needs to be chewed well and chew it a long long time to get

mite that gets in here. It is an eight legged mite that is near relative of a mite that sometimes burrows into the skin and make a tremendous irritation in the skin, *Sarcoptes scabiei* of the itch mite. It is a cousin of the itch mite, but it does mischief nevertheless. It has the beautiful euphonious name of *demodex folliculorum*. The *demodex folliculorum* gets down here and there is a mother *demodex* and a father *demodex* and pretty soon there are a whole lot of little *demodexes* and they swarm out upon the skin and bit the delicate mucous membrane and irritate it and that makes pimples. They come out upon the skin and pick up the dirty germs and they carry them back into this gland and infect the gland and that produces pimples and acne and irritates the gland and produces an excess of secretion, so the gland by and by gets very greatly enlarged. It gets spread out into a big pipe like that and filled with a hard secretion that keeps forming and forming and forming and by and by it begins to stick out on the skin here and this end of it sticks out and catches dirt and gets black. That makes <sup>a</sup> ~~the~~ blackheads. and then you get hold of it and squeeze it here and compress it and as it comes out—suppose this is the surface down here instead of up there—as it comes out, (it comes out in a long string) like that (and the little black head on the end makes it look like a worm and if you take this worm and put it under the microscope and put a little oil on it so as to dissolve the fat you will see the little *demodexes* scrabbling all around. I can tell you about this so you will see that is not simply a disfigurement but is really a serious matter and that is why these black heads, when the *demodex* finally gets large it colonizes and they run out and creep down into other glands and spread the thing along and it travels from one part of the face to another and sometimes gets all over the forehead or through the scalp, down the back of the neck, down the shoulders and even on the arms. The remedy is to keep the skin thoroughly groomed. Mix the skin so as to get these glands always empty and that will get rid of the family you see. They can be killed off by the application of some antiseptic lotions ~~as~~ such as 10 grains of resorsin in an ounce of alcohol. Sulphur ointments of various sorts and lotions are good.) A solution of biclorid of mercury is very excellent for the purpose, but I would not recommend you to use it because it is

all the flavor out of it and well seasoned foods, but that does not mean mustard, pepper, pepper sauce, ginger and all those things which are harmful because they produce gastric catarrh and gastritis which destroy the stomach glands and by and by prevent the formation of acid at all. <sup>and</sup> ~~the~~ the stomach gets in to a condition apopsia.)

Q—Can Colax and Para-lax be used indefinitely in cases of chronic constipation?

A—Yes they can be used indefinitely because they act mechanically. Colax is agar-agar or Japanese ~~gelatin~~ gelatine. It has been thoroughly cleansed and made into convenient form to use, and Para-lax is simply an emulsion of paraffin oil that has been thoroughly cleansed to get rid of the offending substances.

Q—Why does not the horse have ~~in~~ tuberculosis?

A—It does have tuberculosis. It is not a very uncommon thing that horses when they are shut up indoors have tuberculosis. Tuberculosis affects lions, leopards and all kinds of animals that are shut up. It is a house disease. It is a disease that is results from being shut away from the sun and the air.

Q—Somebody wants to know why the lobby is not ventilated better?

A—We have rather felt that we had an excess of ventilation in the lobby. I am sure I would not imagine the lobby needed ventilation. The lobby is open to the whole house and there is a movement of air going all about continually, so we do not consider it necessary to ventilate the lobby.

Q—Is there any objection to the use of milk and lemon juice?

A—Not at all. The coagulation or curdling of milk before it is eaten does not do the least bit of harm, ~~but~~ It will be curdled in the stomach anyhow after it gets into <sup>a healthy</sup> ~~the~~ stomach.

Q—What remedy will keep black heads from appearing upon the face?

A—The important thing is to keep the face clean. Do you know what those black-heads are? Dirt. They are little patches in the skin that form a secretion of fat. Here are little glands in the skin that form fat. There is a secretion of fat going on here continually that is poured out upon the skin that makes the skin oily. These glands are particularly abundant about the face and the scalp. If the skin is not groomed and scrubbed and cared for very thoroughly, there is

likely to get into the eyes and do some mischief sometimes perhaps, but find oil should be put on the skin to soften up the fat. (After a hot fomentation or steaming the face, follow by oiling the skin a little with fine vasoline which is good for this purpose or a little lanoline is very excellent indeed. Then afterwards the skin may be squeezed thoroughly while it is still warm so as to get the glands thoroughly emptied out. Then the disinfectant should be applied, then cold water should be used and, by grooming the skin thoroughly in this way every day, a very great improvement can be secured.)

Q—Is a cold plunge or a very cold water treatment good for neuritis or otherwise?

A—A person who has neuritis and has a cold application of any sort it will generally increase the pain. In a general way it is good to build up the general health but the pain will usually be increased. If they are rheumatic joints or nerves or neuritis, cold always increases the pain, because cold increases sensibility. Heat diminishes sensibility and cold increases sensibility, so we have to be very careful about the use of cold baths. Then how shall we cool off you say. Cool off in a neutral bath. After a hot bath, get into a neutral bath at a temperature of about 95 degrees.

Q—What is the difference between carbohydrates, fats and proteins?

A—Carbohydrates contain carbon, hydrogen and oxygen. Protein contains, in addition, sulphur, nitrogen and phosphoric acid. It must contain at least nitrogen and phosphoric acid and some proteins contain sulphur also. Fats contain carbon, hydrogen, oxygen, the same as starches do and the sugars, but they contain only a very small amount of oxygen, a less amount of hydrogen and carbon and a very small amount of oxygen, not enough oxygen to combine with hydrogen and form water.

Q—When a person's stomach is very weak in digesting, while the whole system is run down and needs building up in health, strength and weight, what diet would you suggest?

*See p 25, 26*

A—I suggest calories. Call for the dietitian and the dietitian will take your case in hand in connection with your doctor and if you say to the dietitian, "Now I want to gain a pound this week," the dietitian will agree to give you that pound if you will obey orders.

It is the easiest thing in the world to fatten most people up. Sometime ago we had a lady who had a gentleman friend who was very anxious that she should be plumper and she said, "My friend said he would give me five hundred dollars if I would gain 20 pounds." "Well now," I said, "there is no trouble about it, you can gain the 20 pounds just as well as not." She says, "Do you believe it." I said, "Why certainly we will fat you up to order. How fast do you want to gain." "Well," she said, "just as quick as I can because I want to get home." "Well," I said, "all right, we will gain the 20 pounds for you I think at the rate of two pounds a week, so I think we can do it in ten weeks anyhow." She said, "Doctor, I will divide that \$500.00 with you if you will do it." "All right", I said, "it is a bargain and I will devote my part of the \$500.00 to some good missionary cause." "All right," she said, "it is agreed". So we started off. At the end of two weeks she had gained ten pounds. She had gained five pounds a weeks. She immediately left for home and never divided the \$500.00 dollars, so I lost my pay. (It is astonishing how rapidly the body can put on flesh sometimes. I ~~xxx~~ remember a lady who had been starved for a long time, came here looking like a skeleton. She had been here before and had been a very healthy looking woman with plump rosy cheeks and very red lips and when she came again, she looked as though she was ready to be buried, looked like a cadaver, had no color in her lips atall, was very thin just like a skeleton. Now this lady gained the first week, eight pounds and the next week ten, and in six weeks she had gained 40 pounds and she went home happy. She had been living on a milk diet before she came here and was nearly killed with the intestinal intoxication. The milk diet was not adapted to her case. The bowels were constipated and in all such cases when a milk diet produces inactivity of the bowels, it produces intestinal intoxication of the worst sort. When a milk diet produces looseness of the bowels, it works well and makes a person gain flesh and the patient will get along comfortably, but when it produces the opposite effect, it is poisonous and very harmful and this lady had been poisoned. The diet must be adapted to the individual.)

Do gain flesh

The thing that is necessary is this: eat 500 to a thousand more

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calories a day that your height calls for. Look in the Sanitarium Diet List and find the table which tells just how many calories a person of your height should take. Eat that number of calories then eat 500 to a thousand calories more every day and you are certain to gain in flesh. If you will take that 500 to a thousand calories in carbohydrate. If you take it in the form of fats you may not be able to digest and absorb it, but if you take it in the form of carbohydrate you will be sure to digest and absorb it all. Malt sugar and cream make an excellent prescription for gaining flesh.

Q—What general line of diet would you recommend for a person with hardening of the arteries?

A—The Sanitarium bill of fare is the best line of diet. Cut out meats, mustard, pepper, pepper sauce, cane sugar and all kinds of flesh foods, animal foods of all sorts. Cut out eggs, or if you take them at all, only eat the yolk, do not eat the white and don't take very much milk.

Q—Where do Pine Nuts grow?

A—On the tops of pine trees in cones; little kernels in the cones and when the cones opens up at the right time, they drop out. They look like little nuts. These nuts are cracked and the kernel which is obtained is sold in the market as pine kernels. "Pinions" they are sometimes called, but those we get in this country, mostly come from Spain. They are also grown in the foot hills of the Rocky Mountains. They grow in New Mexico and Arizona. The Indians of California lived very largely upon pine nuts in the old days.

Q—Did Grape Nuts and Postum originate at the Sanitarium?

A—No.

Q—To what temperature can milk be heated without becoming constipating?

A—It can be ~~sath~~ pasturized at a temperature of 160 degrees.

Q—Is there ~~any~~ not less danger to life from eating too little than eating too ~~much~~ satiety?

A—Of course, if one continually eats too little, the body would suffer and there would be a steady loss of flesh and the body would suffer serious injury, but it



surprising how little food we can get along with.) (There is that curious little creature, the common eel that lives a year without any food at all, a curious thing. The first year of its life, it starts out a little bit of a speck, one twenty-fifth of an inch in diameter and it grows for a whole year until it is three inches long without ever tasting a morsel of food, hundreds of times as large as at the beginning. It doubtless absorbs a little nutriment from the sea water ~~but~~ but it does not take any food at all. It hasn't any digestive apparatus in fact. Its teeth and digestive apparatus are not developed, but it is simply floating in the water. It cannot swim but simply floats and by and by gets drifted to the shore and begins to eat when it is about a year old.)

~~However,~~ the body can dispose of a moderate excess of food without any serious injury, but a great excess and a habitual excess is always universally harmful and leads on to Bright's disease and cancer.) (Cancer is a disease of over fed people. That is a thing to remember. Under fed people rarely ~~have~~ ever have cancer. In London cancer is almost unknown, is very rare indeed in the poor half-starved people of the east end, but in the wealthy part of London, it is entirely different. Cancer is very frequent claims about one in fifteen or sixteen of all the people <sup>who</sup> die in England.)

Q—What treatment do you advise for prolapsed stomach and colon?

A—The best thing is to stand on your head till things get settled into the right position, not absolutely on your head, but with your head lower than your heels, and let things run down to their proper place. Let gravitation help about restoring the position. It does not do any good to lift them up a moment because they will go right back again, but if you lie down on an inclined table with the head low for ten or fifteen minutes, very great benefit may be derived from the exercise and especially if immediately after this treatment, a bandage is applied to hold the parts up.

Q—Can you say what treatment you recommend for catarrh of the stomach and for chills and cold in the back?

A—For cold in the back, I recommend a hot bag and for catarrh of the stomach,

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a bran diet. In a state of acute catarrh, a simple farinaceous diet is best. Prof. Hayen of Paris found buttermilk a very valuable remedy in these cases.

Q—How can stasis in the ileum be cured.

A—The X-ray examinations show that the use of Para-lax is one of the most effecting means of stimulating the small intestine. The movement in the small intestine is greatly accelerated by the use of this ~~pa~~ variety of emulsion.

Q—What is the cause of feeling a fullness in the stomach after eating a small amount of food? for instance, a portion of soup?

A—That means the stomach is abnormally sensitive and irritated. Many times this feeling of fullness will disappear if you wait a little while and give the stomach time to digest itself. The stomach is contracted when you began to eat and it gradually relaxes and enlarges to accommodate the food as you take it in. It is a sort of elastic, collapsible bag, and as you take food in, the stomach dilates, enlarges itself, adjusts itself to the increasing quantity and sometimes the adjustment is a little slow, so if you ~~withersix~~ forget your stomach and talk and chat a little, very soon you see that there is room for more.)

Q—Should a person with hyperacidity eat such fruits as raisins, prunes and sweet oranges?

A—Yes.

Q—Is the X-ray examination necessary to ascertain certainly if a person has hardening of the arteries?

A—No it is not usually necessary for this purpose. Hardening of the arteries is determined by the blood pressure and by ~~examination~~ examination of the eye. In cases in which this hardening of the arteries, especially if the brain is affected, evidence will be found in the arteries of the back of the eye in the retina and the oculist looking in can see the hardened arteries at the back of the eye. That is really a very important examination that I donot think we employ as often as we ought to, but if we have a doubtful case, we always send it down to Dr. Colver to have an examination made of the eye and it is very clearly evident if there is any serious involvement of the arteries of the brain.

Q—If the race should completely eliminate meat as an article of diet, what would be the ultimate effect.

A—The effect would be excellent, it would be fine. The effect would be to make food cheaper, reduce the cost of living, to make the race hardier, it would eliminate a great number of diseases. For instance, tape worm would disappear. Nobody ever gets tape worm unless he eats <sup>a</sup> dead animal that had young tape worm in it. You see a man who has tape worm, goes around sowing the eggs of tape worm wherever he goes, and through the sewer he contributes, he sends in millions of eggs which pass down into some stream and an ox or a cow comes down and drinks the water and gets himself inoculated with these embryos of tape worm and they bore their way out into the muscles of the animal and there they lie in little white specks, called "measles". This most often occurs in the ox, but sometimes it occurs in the pig as well. Then a man eats that beefsteak when it is a little underdone, rare roast beef, you know. The rare roast beef of old England abounds in tape worm and ~~him~~ <sup>a</sup> man eats it and he digests the envelope off the little embryo and there is a little pair of suckers in there, four of them, and they attack themselves to his mucous membrane, get down into the stomach and small intestine, attach themselves to the mucous membrane and begin to grow and grow out a little tape worm on the end, then another one grows in front of it and pushes that one back, so they keep on growing until they produce a long procession and each little joint of tape worm is a complete worm, in fact, it is two worms, masculine and feminine; it is a bi-sexual creature and produces millions of eggs which are being scattered everywhere. So you see it takes a partnership between man and an ox to propagate tape worms. The man is the incubator, a sort of nursery. The ox is a hatchery and the man is the incubator. The two together make a fine success of it, and it is a growing business, it is increasing daily. By the association of the man and the ox, the tape worm disease, the parasites are bound to increase and are increasing more and more rapidly all the time.) (In Japan they used to eat raw fishes and they found the people were all getting tape worms because they eat these raw fish. There is the same partnership

between man and the fish over there as there is between man and the ox here, so the common people even have become educated so they will not eat raw fish any more, and in that way they avoid tape worm.) There is just the same association between man and the hog with reference to trachina. It goes a little further around in this case. (The first trachina were found in dead bodies in a dissecting room in Germany and the next were found in rats and how men ever got these trachina from rats, nobody understood for a long time. It was understood that the rats visited the dead houses at mid night and dissecting rooms, so it was plain to see where the rats got the trachina, but how could men get it. Finally, they had a feast over there and a whole lot of people were taken sick. A good many of them thought they had typhoid fever. Over 150 people partook of the feast and a large number of them were very sick and they thought it was typhoid fever. Some of them died and a post mortum examination showed the muscles filled with trachina, so there was suspicion they might have come from what they eat, and the investigation showed that sausages which they had eaten were filled with trachina. The sausages were eaten as sausages and these sausages are only often half cooked or not cooked at all, so here was another link introduced you see between man and the rat. Now it is ~~understood~~ understood where man got the trachina. A man has trachina and he dies; a rat eats the man and gets trachina, then the rat visits the pig pen to steal some of the food and the hog catches him; the rat dies and the hog eats the rat. So the rat dies and passes the trachina over to the hog, you see. Then the hog dies with its trachina and a man eats him and he gets trachina. So you see how it is that one scavenger eats another and in that way passes the trachina around.) but I think I will let you go. I thank you for your attention.

End.

From  
Question Box Lecture, Monday, November 3, 1913.

A.--Is sea bathing advisable in cases of renal calculi?

Q.--Seabathing won't cure renal calculi that is sure. A person who has renal calculi, in general, must have them removed. I removed a whole handful this afternoon from the right kidney of a patient, a lady who had been suffering terrible pain. The X-ray examination showed a great mass of stones and I think we counted seventeen when we counted them up. The kidney was simply a mass of stones, and its size diminished when the stones were removed fully one half, was just half as large as it was before. Sea bathing could not cure such a condition as that. The stones must be removed, but the question is to prevent their formation. The calculi would not be formed without a cause. The trouble as a rule is in the body at large. The fluids of the body are ~~disorder~~ at fault and contain an excessive amount of material that needs to be eliminated from the body, and if material goes through the kidney in such concentrated form that some of it crystallizes and forms these masses. Now how are we going to get rid of that material? By increasing its solubility, that is the first thing to do. We must stop the formation of this great excess by improving oxidation. It should be burned up more completely and made more soluble, and a very simple thing I can tell you which I think if every one of you would follow, you need not have renal calculi. If everybody would know what I am going to tell you and live up to it and practice it, I doubt if you would ever have renal calculi.

( Prof. Hindhede of Copenhagen a couple of years ago made a very interesting discovery, that when a person takes a diet of potatoes, the solubility of these substances of the body become marvelously increased. He adopted a new method of investigation that no one has ever tried before and a very ingenious, although a very simple method it was. He took a healthy man, living on an ordinary diet of meat, bread and things of that sort, a mixed diet, then he made an experiment to see how much more uric acid the urine of the patient would dissolve. He submitted the urine to ~~the~~ laboratory tests to see how much uric acid it was capable

of dissolving, and he found, in general, it would not dissolve any more than a certain amount, but when uric acid was added to it, it would precipitate <sup>the</sup> uric acid in large amount, showing that it was super-saturated. He found that to be generally true of people who were living on a meat diet, because the body is organized to deal with only a very small amount of uric acid. The human body is not adapted to deal with uric acid. It cannot burn uric acid or oxidize uric acid, or rather, I should say, it cannot convert it into urea. Indeed it cannot oxidize it or burn it. The uric acid is the end product in the human body, just as it is with the chimpanzee, the orang<sup>ou</sup>tang and the gorilla. Now with a dog, it is different. A dog can burn uric acid because a dog is adapted to a meat diet. A dog has been following a meat diet for so many thousands and perhaps hundreds of thousands of years that it has acquired the ability to deal with uric acid, and there are certain other creatures like certain birds and certain reptiles that eliminate almost all their waste material in the form of uric acid and they are able to deal with the <sup>se</sup> substances ~~with~~, but to the human body, uric acid is rank poison. It is an obstinate substance with the body and the body cannot deal with it, cannot oxidize or burn it. It needs to eliminate it and it can eliminate that portion that is formed within the body, for a small amount is formed in every animal body. (Hindhede found that when he took this man whose urine would not dissolve any more uric acid and was dissolving only a very small amount of uric acid, <sup>if</sup> he put that man on a diet of potatoes and had him eat very freely of ordinary Irish potatoes, the urine then would dissolve a large amount of uric acid. He found even in the most favorable cases in which the urine would dissolve some uric acid, that on a potato diet, the urine would dissolve 50 times more. That was a most wonderfully interesting and practical discovery.) When I was in Washington last fall attending the meeting of the International Congress on Hygiene, I met a distinguished professor of physiologic chemistry from one of the Eastern Universities, and when I met him the first thing he said to me was, "Have you heard of ~~Hindhede~~ Hindhede's discovery." Well I had heard of it because I had already had a letter from Mr. Horace Fletcher

who was one of his subjects, he was with him. (Mr. Fletcher had given himself as a subject and had lived on potatoes only with a little butter added and nothing else but potatoes and butter for fifty-two days, and he told me he never felt so fine in his life,) so he wrote me all about the experiments a long time before they were published, so I know about the matter and not only know about it, but we were already making practical use of it. (As soon as Dr. Hindhede made that discovery, we immediately began feeding our gouty and rheumatic patients potatoes. A lady said to me the other day, "What, would you give potatoes to a person who had rheumatism." I said, "Certainly if I wanted to save her from being a cripple," and that is exactly what we would do. You must simply live on potatoes very largely. Such persons have been eating too much bread, too much oatmeal, cornmeal, cereals of various sorts and not enough of vegetables. It is very important that we should learn that fact and make a practical application of it as soon as possible. Since Hindhede made those discoveries, I have been living on potatoes almost entirely and I believe it has been a great profit to me.) I will tell you what my rations have been to day and you can see how valuable the potato is. I have this morning, half of a small potato for my breakfast. It was about as large as a peach, and I took half of it for my breakfast. That is more than I usually take at breakfast, but I knew I had a lot of hard operations on my hands today, I had already had notice there were seven cases to operate upon, and some of them I knew had two or three operations a piece, so I knew I had got to ten or twelve operations. Then I knew I had to talk to you tonight and had a lot of patients to see at my office and I didn't know whether I would get any dinner or not, so I had an extra half of a potato, and said "I will have something to work on anyhow." Usually I only take a little fruit and a couple of cakes of Colax. Well I went about my work, worked hard this morning until half past three this afternoon. Then in order to give the nurses a chance to get something to eat, we had a little pause, and I said, "Well I will take a little lunch too, because this is the only time I will get a chance to take anything to day." So I stopped to eat a little lunch in order to give the nurses a chance to get something to eat, you

know. Well I had a nice large potato. It was a good big one, just a splendid big potato, and I didn't find any hole in the middle of it either, but I made a hole inside the shell pretty soon and I ate a potato and some squash, a slice of bread and some fruit and had a splendid dinner, and then went on to finish my work, then came down to my office and worked there until I came in here. I have been working every minute just as hard as I could work since I started out this morning at eight o'clock, and I feel able to work the rest of the night if necessary for me to do so. I could not say I do not feel the least bit tired, because I do. I have been standing on my feet and my whole muscular system and nervous system <sup>have been</sup> too ~~xxx~~ trained up to the very highest pitch of intensity for seven hours steady at the operating table before I went to my office, and I had some hard cases to deal with down at the office, some cantankerous people, some discouraged people and some difficult cases that had to be gotten into and now I am here just to have a little recreation along with you. ( Now I am satisfied from my ~~xx~~ personal experience that the potato is one of the most valuable of all our foodstuffs, that we must persuade people everywhere to eat more potatoes and not only potatoes, but fresh vegetables of all sorts, but the potato is the best I think, but it is important to remember that the potato has no waste in it. There is no waste in the potato. Please remember that. The potato is all digested and all absorbed so you must eat something else for bulk along with the potatoes. You must have parsnips and beets. Beets are the most bulky of all our vegetables, contain the most cellulose and huckleberries contain the most cellulose of all the fruits. It is interesting to know that. Then plenty of fresh fruit and squash and turnips are excellent. We must eat a large amount of material ~~xx~~ for rubbish. We need a great deal more than we do eat. We have become accustomed to a too concentrated diet, and the consequence is, chronic constipation and that is what created this institution. If it had not been for that disease, we would never have had the Battle Creek Sanitarium here and we could not do business six months if it was not for the viscious dietetic habits of the people.) Everybody knows that almost. (I had a message from a woman who kept a restaurant down town some years ago that



was very interesting to me. This woman was a restaurant keeper, had the high toned restaurant of the city, and a gentlemen, a business man who <sup>took</sup> take his dinners there, happened to meet me one day and he said, "Dr. Kellogg, I have brought you a message from Mrs. Webb." Mrs. Webb told me that the next time I saw you that I should tell you that she and you are partners in business." "Well" I said, "I didn't know I had anything to do with her heathen restaurant down there and I am sure I have never been in the restaurant and do not know Mrs. Webb, I never saw her, I do not know even where her restaurant is, though I have heard of it as 'Webb's restaurant'". "Well," he said, "Mrs. Webb told me to tell you that you and she are partners in business." "Well," I said, "how in the world do you make that out." "Well," she said, "Dr. Kellogg gets the folks here at the Sanitarium who have worn their stomachs out with high living. He gets them fixed up so they can digest something again, then they come down to see me and I give them a square meal. Then they have to go back to him to be fixed up again, don't you see, ~~we~~ we play right into each other's hands. He makes business for me and I make business for him." ) Now the restaurant keepers know that pretty well. I was in a railroad restaurant some years ago I remember, and I was waiting there. Why, it was forty years ago, but I remember ~~me~~ perfectly well! I had not thought of the experience for a long time, but it just comes to my mind. As I was sitting there in that railroad depot, there happened to be a counter in one side of it. I was waiting for my midnight train. A whole lot of people came up there calling for fried oysters, and the man was serving fried oysters quite liberally and by and by there was an interregnum when nobody was at the counter and I stepped up and asked him to give me a cup of hot water. He said, "Would you like some fried oysters." I said, "No thank you, I don't eat such vermin." He said, "That is just what I think about it." He said, "I would not eat one of those things for the world." You know, we don't live up to what we know. The majority of people know a great deal better than they do as regards diet. When we are doing a risky thing, very often we think we will take the hazzard for the sake of the fun and sometimes it is not so much fun as we are counting on.

Question Box Lecture at the Sanitarium Parlor

Battle Creek, Michigan,

~~February~~ <sup>See</sup> 2, 1913

at

8:00 P. M.

Q. What good to the body are the tonsils in the throat?

A. I used to think that the tonsils were chiefly to make business for doctors. Nobody knew the function of the tonsils but later it was discovered that the tonsils are allied to the lymphatic gland, that they are lymph gland, and that they have a very important function, that the tonsils located here in the throat where the germs are continually getting in from the nose down at the back of the throat and from the mouth two streams of germs coming, one from the nose and one from the mouth and right at the place of where these two streams of germs meet are located the tonsils, <sup>one on each side.</sup> They are like two sentinels standing on either side of the <sup>you</sup> gate /see watching sharply inspecting carefully every person that comes along. These are the defenders of the body standing right at the very gate, the citadel, the portal of the body to defend the body against germs. Now when you have tonsils swelling up, when you have the sore throat, it is because these tonsils have captured a whole lot of germs, so many germs that they have themselves become damaged, irritated, ~~by the germs and they~~ <sup>why</sup> inflamed by the contact of germs which they have arrested, so to speak, and the reason /the tonsils are here is to keep the germs from getting into the body. The lymphatic glands are all over the body are depots or lockups, we might say for arrested germs. The white blood cells are capturing the germs everywhere and they carry these germs into the jails, into the prisons. The lymphatic glands are the prisons and there is a whole string of of these glands along the throat here on either side and the tonsil in the throat is the first one in the chain. If the germs are going to get into the body through the throat they have to get by the tonsils. Then which are another barrier a little farther on and if they succeed in getting through that barrier they have got still

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another one beyond so if you have swollen glands in the neck it is because these glands are fighting for you. They are defending the body against the enemy and holding the enemy at bay. That is why they are enlarged. Now sometimes so many germs get into the tonsils that they become themselves a focus of disease like tuberculous glands for example, but in a normal state the glands are very useful as one of the body's defenders. Quite recently it has been discovered that the tonsils have another and still more remarkable function. They have something to do with the process of growth or development. They are very active. They are noticeably very large in children. Notice a small child or a child two or three years old and you will see the tonsils are large but after one gets along in years the tonsils cease to be enlarged. It is very seldom that you find a person twenty-five or thirty years of age with very large tonsils. Then a person of forty or fifty or sixty years of age would be almost a curiosity. Tonsils diminish in size with age. It is true of the number of the glands in the body that they are active very early in life but cease their activity later. For instance, there is a gland known as the thymus gland. Perhaps if you were not brought up in the way in which we live here at the Sanitarium some of you eat what is known as the sweetbread. Now did you know that the sweetbread is the thymus gland of the ----. You never heard of such a thing as the thymus gland of an ox or a cow. It is always a thymus gland of the chest and the reason why is because the thymus gland disappears as the animal grows up. (The thymus gland is the infantile organ, an organ that belongs to the infancy.) The human infant has a thymus gland which is very active during pre----- also during the development of the infant and (after birth this gland gets smaller and smaller and smaller but sometimes it remains persistent. Then it produces strange fits of strangling, syncope, asphyxiation and sometimes results in death.) I have known of a number of deaths of that sort. A child is suddenly seized with a fit, is not able to breathe, struggles for breath and after a while will die in one of these attacks.



That is because this thymus gland remains active and large. These cases were always mysterious until very recently it has been found that these glands can be seen with the X-ray so every child that has trouble of this kind ought to be examined with the X-ray to see whether the thymus gland is persistent. It occurs down deep behind the breast bone so it is not easy to examine the body in any other way but by the X-ray. Now, it has been learned that the tonsils are organs similar to this. They are organs very necessary for the development of the body and very active during the period of early development but later become simply ordinary lymphatic glands useful as other lymphatic glands are but not useful as developmental organs so the tonsils you see are really very interesting after all. Now what I have been saying about the tonsils applies only to healthy tonsils but in a growing child tonsils are sometimes large because the condition of the body requires large tonsils so it should not be always thought that large tonsils should be cut out. They should never be cut out unless they are inflamed. If they are in the state of active inflammation and repeated affects of inflammation occur, if they are infected then they should be removed, but the large tonsils should not be removed otherwise because it is necessary for the body, particularly for a growing child. Since these facts have been known it is believed that an enormous amount of damage has been done by removal of the tonsils when they ought never to have been removed. Removal of the tonsils does not injure or----- or do any harm in that way but it really takes away from a child something from its growth and development.

for any reason  
But if you want to be extraordinarily careful, then if you have a one percent solution of hydrochloric acid, have also a one percent solution of ordinary baking soda and you dip the food for disinfection into the acid solution then take it out and ~~rinse~~ rinse it off, then dip it into the alkaline solution then you rinse that off and if there is anything left on the food at all, it will be nothing but a little common salt because the acid and the soda combining together will make chloride sodium or common salt and that won't do anybody the least bit of harm. We need to be more careful in our homes than we are. Our homes need to be kept cleaner. Sometime we will do away with carpets and with wooden floors and with plastered walls. We will live in glass houses made opaque in different colors to suit the needs. We will have our closets made, perhaps, with opaque glass but glass <sup>that</sup> is not impenetrable to the light so you will always be surrounded with light and in the daytime the whole house would be light. Nobody could look in because the glass is opaque but the light could come in and in that way we would get the benefit of the wonderful tonic influence of the rays of the sun. But I must hurry on. Catarrh is not altogether due to germs. It is due to low vital resistance. Germs cannot do us any harm so long as we live high. Over in Scotland there is a mountain where people never have catarrh or influenza or colds, but when they go down into a valley below they get cold, get catarrh again, then if they go up on to the part of Mt. Ben Nevis they are very quickly delivered from it. There are no germs up there and when a person lives up there he is above germs that is the only thing to do, my friends, to get rid of catarrh or any of those things, Catarrh of the stomach, bowels or any other part of the body is to live above the germs so high that the germs cannot get the advantage of you.

Q--Should one with all the abdominal viscera prolapsed walk for exercise?

A--Yes. Such a person should walk but he should go on all fours like a monkey when he walks. I am quite in earnest about that too. I am not judging at all. It is one of the very best possible exercises for a person who has prolapsed organs. Now we are very curiously organized. When you come to study the human

anatomy and compare it with the anatomy of the lower animals one feels almost as though man was left incomplete or as though he was, <sup>somehow</sup> not quite as perfectly adapted to his position in life physically as some of the lower animals are. Now the various organs of the body, the important organs here. We have for instance the liver here at the top, next is the stomach and then the kidneys and the spleen on one side, the pancreas behind, then the colon, then the small intestine and the various organs. These are all arranged in the abdominal cavity in the order in which I have named them from the front backward. Now all of these organs are tacked to the backbone. Now when a monkey or a man gets on all fours so that the trunk is in a horizontal position, these organs hang very easily from ligaments which attach them to the spine, but when a person stands up then you see these organs come lying down, one on top of the other. With the dog or the monkey or cat or any other animal that is not true. These organs are arranged in order just suspended from the ceiling so to speak and they hang there easily and do not crowd one another. But you take an animal, a dog, a monkey or a man and make him stand up on his hind legs in a perpendicular ~~position~~ position, then you see what the situation is. Here at the stomach No. 2 with that great heavy liver lying on top of it pressing it down, then below the stomach there are the spleen, the kidneys, and these other organs and they are all lying here one weighing down on the other and not there is some provision made to prevent this. A very interesting provision is made too. I am not very much of an artist and I haven't been practicing on this thing for I didn't know this question was coming up or was going to be asked me, but I think I can give you something of an idea. The back bone projects out in the center and then along down here. I am making this representation to show how the cavity runs back on either side of the back bone. The back bone makes a furrow here and projects into the middle but I am making it as you see it at the side with the backbone going into the middle. Here is a shelf that projects out here below the diaphragm like that and these heavy organs lie on that shelf and that is the reason why they do not all go reaching down so that

the diameter of the abdominal cavity is very small just at this point. The chief diameter is higher up. When you get opposite this point where the back folds in most, the diameter is very small and the reason is this projecting shelf inside made by the forward curvature of the spine. For instance, here is the cecum. Here is the colon and here is the appendix. They lie right there on that shelf. Now see what happens when a person stands this way for example, stands in a wrong position. When the back is straight here or is curved back like that the thing that happens there is the shelf disappears and the consequences the cecum here and the colon pitch off and hang over in the open space here and pitch off. We will often see the colon pitched/and hanging a way off down here. I presume twenty-five percent of all the people in this room are in just that situation and the reason is they have formed the habit of sitting with the back in this way. Some of you are sitting that way now and the colons are pitching off the shelf way over into the abyss and you wonder why you do not feel well. I will show you next Thursday night some pictures on the screen to make this plainer to you, but it is a matter really of a great deal importance. This shelf has been formed here to provide for the emergency of standing up straight on the hind legs. The legs are really the hind structures that correspond to the hind legs of the horse, the monkey or any other quadruped. Man stands erect and standing erect he has to have some special provision so nature has provided this shelf to let the heavy organs rest upon. But if we stand in this position for instance so that the shelf is tilted, don't you see everything slides off. The same thing happens in the abdominal cavity that will happen to this table. If I tilt this table off everything will go. Just the moment a person gets himself in this position, the shelf instead of being in an efficient form in this position, the shelf comes down like that and everything pitches off. That is why a great many people get down hearted, don't you see because things are going down you see. There is something literally true about that. I will show you more about it another time.

Q. Will jilting in a vehicle over an uneven surface in driving prove injurious?

*when it is disagreeable?*

A--It would naturally prove disagreeable if your colon is hanging off into space here but if everything is nicely tucked away upon a shelf you would not mind it if there was a little jilting because there would not be jostling about.

Q--Why do you prescribe the same treatment for every disease?

A--Now I think I am the only doctor in the whole country that is made to stand up in public and give his reasons for his prescriptions. Doctors generally tell patients that that is my business, now yours. You could not understand it if I should try to tell you. It is one of the secrets of the profession, but now I will tell you about this. In the first place everybody is suffering from the same disease, that is the reason, everybody has got the same disease. That is one reason why they need very much the same treatment. Now I have recognized the fact that the treatment is very much alike. You come here to the Sanitarium and you are all able to eat the Sanitarium diet and you are all asked to take Sanitarium baths; you are all asked to take cold baths of some kind and you are all required to abstain from tea and coffee. The prescription is very much the same on general principles. Now the fundamental reason for that thing is because as the old profit said, "We must cease to do evil and lear to do well". Now the reason why we are sick/<sup>there</sup>is one cause for it all--is that we have wandered away from nature. We have gotten away from the right road. You know the little boy runs away from home when he gets out among the briers, you know what happens. You know what happens to the traveler when he gets on the wrong road. He has trials and tribulations and trouble and perhaps perishes before the searching party can find him and bring him back. As the one of old said, "All ye like sheep have gone astray", and we have gone astray and have fallen among wolves and these wolves are devouring us and that is what drives us to seek for some haven of safety where we can get away from these ravening wolves of dyspepsia gall stones, neurasthenia and all the rest of the ugle things you are altogether too well acquainted with. Now there is just one cure for that you see. There was one cure for the prodigal son and that was, to return home, wasn't it.

The only universal cure is to return to nature. When disease comes from getting

away from nature leading an artificial, abnormal we may say a depraved life for that is really the truth about this when disease comes in that way, don't you see, <sup>the</sup> we escape from disease must come in turning square about and getting back to nature to the natural way of life.) If we could only get people to believe that, if we could only get people to understand it and to become solely converted to that principle, that the only proper life, the only healthy life the only safe live is the natural life just as far as we possible can get. Now (I do not mean by that, that we should return to savagery and become savages again, that isn't necessary, but in ~~the~~ adopting the ways of civilization we have neglected to supply compensatory means to save us from the evils of civilization. When a missionary goes out and converts the heathen, the very first thing that happens is those heathen began to die off.) (I read a story sometime ago, it was a joke somebody got up, I don't believe the thing every happened of course, but it was representing this idea, represented the correspondence between a missionary and the mission board and the missionary started out and when he went out he carried with him a lot of bibles and a lot of other things to promote civilization. He got down there and had been out there a year and he wrote back for new supplies, that the heathen were being converted rapidly ~~from~~ send us more bibles and some civilized clothes and a few coffins, and the next year it came, more bibles, more clothes and more coffins and the third year it was mostly coffins and coffins quick. The heathen were dying off so fast. Of course that is an enormous exaggeration but nevertheless more than one missionary has noted that thing.) (Some years ago I read an article by a missionary off among the indians of Canada. He had been there for more than thirty years and he did not hesitate to say that one of the most striking observations he had made in his experience up there during all these years had been that ~~that~~ very soon after the indians became christianized, civilized, they began to die off. See how the great nation of aborigines or many nations of aborinines of this country have almost entirely disappeared.) Only a few scores of thousands of them left. The same thing is true of almost every country.

The negro is ~~about~~ the only savage that is even able to endure civilization, and the negro has finally gotten through the perils of civilization and has become acclimated and is evidently going to make a go of it.) Mr. Booker Washington says he has got a future whereas the Caucasian race has only got a past. That may turn out to be true nobody knows. We cannot tell what the future will bring forth but the important thing is to provide means by which we can prevent these destructive influences of civilization. Why see what house dwelling has done for us. Because of living in houses we have got tuberculosis. (No animal that lives out of doors has tuberculosis. Now man who lives out of doors every gets tuberculosis. If a man who gets tuberculosis will go out doors and stay there he will get well if he does not wait till he is almost dead. If an animal gets tuberculosis and it turned out of doors he will get well.) (Down in Massachusetts a few years ago when they found a cow that had tuberculosis they had to carry the cow to a certain slaughter house, the cut off tuberculous part and then would send the rest down to Boston markets to be purchased and eaten by the New England people. That was the custom all over the country, but now New England has got the start of the rest of the country in one particular thing. The New England farmer is nothing at all if he is not an economist. He knows how to economize. The country in which he lives has a soil so thoroughly worn out he has to economize to save every penny. The New England farmer discovered that people who had tuberculosis went out doors and got well and he said, "If my cows get tuberculosis in the stable, why can't I turn them out doors and let them get well too." So that is actually becoming a practice in New England at the present time. When cows get tuberculosis they are sent out doors. They are segregated by themselves and they are given a chance to recover and they do recover.) (What conclusion shall we make from this fact? Shall we come to the conclusion that we ought to move out of doors and live there ought not to have houses, no not at all. We will have our homes or fortresses into which we can flee if you please for deliverance from dangers of every sort. Every man needs to have his home as his fortress, but we will provide these homes with out door conveniences so that we can live

out of doors as much as possible. We can sleep out of doors all the time if we want to. We can have our sleeping rooms so constructed that the fresh air will be moving through just as freely as though we were under the open sky all night long, then we can have our out door play rooms for the children and our out door play grounds for the children. Why, our babies would not have tuberculosis and sore throats and large tonsils, enlarged glands and all that sort of thing if they were brought up right.) Babies ought to be brought up in this country the way they are down in Mexico and Porto-Rico. When I was in Porto-Rico riding through the towns there I saw the babies and children about the streets just exactly as they were born. Just as the cat and the dog and they were as hardy and as healthy as the cats and the dogs and (Darwin the great naturalist told of a trip he made in Patagonia where he saw mothers carrying their little naked babies in their arms, young babies only recently born and the rain was falling on a cold day and the air was cold so that the rain froze ~~like~~ as fast as it fell and he actually saw this cold rain falling on the bodies of those little babies and he saw the little particles of ice glistening on their shoulders where the rain had fallen. Yet those babies were healthy, tough, hardy and awfully hard to kill. Well I suppose the people who were weak were killed off by the exposure, so those who survived were necessarily tough and healthy) so we ought to live out of doors every minute we possible can, but our factories ~~and~~ our counting rooms, schools, offices the indoor life generally we lead makes it almost impossible for us to get a chance to get a breath of fresh air at all, so by the time a boy gets through school he is as Shakespearesays "ficklied o'er with the pale frost of thought" but it was not the thought



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

December 15, 1913 at 8 p. m.

by

J. H. Kellogg, M. D.

Ladies and gentlemen: allow me to introduce to you a late citizen of Alaska--a specimen of dried fish, on which the native indians of Alaska live. I received this by mail just the other day from a missionary away up in the northern part of Alaska. Now with this, came some other very interesting specimens which I am also going to show you. This is the native Colax of Alaska; it is a slab of sea moss which the natives collect and use, especially during the winter season in large quantities as a part of their regular diet. It is made up simply of masses of sea moss, layed together, pressed and dried in this form, so it can be preserved and they soak it up and cook it and eat it as their almost only source of vegetable food. Here is another specimen--the high bush cranberry preserved in seal oil. There are many berries, huckleberries, cranberries and soap berries which grow in great abundance in Alaska and these berries are collected with the greatest care and preserved, sometimes packed in bottles and dried in ~~them~~ this way. These are soap berries in this bottle. Every morsel of vegetable food these people can possibly get access to they preserve with the greatest care because their experience shows them that it is absolutely necessary in order to enjoy life and health that they must have vegetable food.

Now we have our usual list of questions here to night.

Q--How can you manage your diet when traveling or visiting?

A--Well that is rather an interesting question. I must tell you about a letter I just received from Sir Horace Plunkett a day or two ago and a word I received from him through a friend. Sir Horace Plunkett wrote me about a banquet he attended in Chicago and told me he found it rather difficult to follow out Battle Creek ideas of diet. Nevertheless, he managed to make out a wholesome meal. He mentioned the

things he ate at the banquet and certainly there was nothing at all that could be objected to in what he ate. He did not enumerate the things which he did not eat, but I learned from a friend of his who happened to be at the banquet with him who was here a day or two ago, a very interesting thing that I think I will tell you about in answer to this question. It seems that there is always a refuge for a man in trouble. Sir Horace Plunkett as he looked over the bill of fare, said to his friend, "Now this is awfully tempting. There don't seem to be much of anything here to eat and I am awfully afraid I am going to fall into temptation." But he looked about and pretty soon discovered a huge baked potato an unusually large baked potato and he said, "There is a refuge for me. I will take refuge in that potato." So he seized upon the whole potato and managed to make a meal of this potato and discovered that it was quite satisfying, but when he ate that whole potato, he really did not care for very much more and he occupied the whole meal in eating his potato, so that is really a refuge to him.

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and he really did not care for very much more and he occupied the whole meal in eating his potato so that was really a refuge. You can always find refuge in something. On every bill of fare no matter how bad it is there is something that is unobjectionable. When I go to a banquet I always take pains to seize on every bit of bread I can get hold of but generally bread is very scarce. They usually have a little piece about so long and about so wide and put that beside your plate and you don't see any more if you do not look out but I keep calling for bread and insist on the waiter bringing me some bread and I manage to keep up a constant -----of talk and am so busy I do not have time to eat very much. Sometimes my fork and knife will get busy on the plate with a fried oyster or a bit of beefsteak or something of that kind that has been set before me but it simply mangles the corpse and leaves it to be carried away by the undertaker and to be buried in proper order. We never have any burials at the table. Really to sit down to the ordinary banquet looks very much like an undertaker's establishment, doesn't it? Geo.

Francis Train who was a very curious sort of wag once prepared a bill of fare and published it. His bill of fare read this way. Well, in fact, the bill of fare was illustrated, every dish in which every article was served was a coffin and beneath each article was first corpse, instead of first course and second corpse instead of second course and third corpse instead of third course and so on down the whole five courses they were called corpses which made up the banquet. Now naturally that rather disturbs one's appetite to see a bill of fare like that. If the real truth were written beneath the things placed upon the bill of fare, I dare say many times they would not be eaten. A case that illustrated that very well occurred within my own knowledge. A little boy was at dinner when his grandfather was giving a dinner for all the relatives and had a big turkey on the table at Thanksgiving dinner. The little boy was somewhat acquainted with his grandfather's

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turkeys and he thought he recognized that turkey because it was so very large. They had one very large, very old turkey and he was well acquainted with it. As his grandfather began to carve the big turkey the little boy shouted out, "Say, grandpa, is that the old sore headed turkey?" Everybody's appetite for turkey disappeared clear down to the floor. There wouldn't anybody eat it because grandfather had to admit it was the sore headed turkey that he had killed. He wanted to get him out of the way and he thought the most convenient way to dispose of him would be to bury him in the stomach of his friends, you know. That was like a thing that happened down in Tennessee one time out among the mountains where there was a school teacher that was taking her pay in --- as they say down there. A little boy said to the teacher one day, "Madam, father asked me to ask you if you would like a shoulder of pork" and she said "yes, it would be very acceptable". She waited several days and it didn't come. By and by she asked the little boy "how about that shoulder of pork you were going to bring me?" Well, he said, "dad hasn't killed the pig." He waited a few days longer thinking the pig would be killed but it didn't come around and she said to the boy, "How about that shoulder of pig you were going to bring me?" Well, he said, "dad didn't kill the pig." "Why not?" "The pig got well". Now in a great number of cases when pigs are killed the butcher only gets the start of nature by a day or two or a few days at the most. Why ever pig you ever ate would have died of apoplexy or Bright's disease of the kidneys or obesity if he hadn't been allowed to go on his wicked way for pigs are gluttons, all of them and they die the best of gluttons and they are sick, they are all sick. A fat pig is always sick. You never saw such a thing as a healthy fat pig. Why, if you saw a man or a woman running around with the enormous mass of flesh that you see on a fat pig you would say he needed a doctor, that he was likely to die of apoplexy or obesity or something of the kind and you would get a doctor for him to help him reduce his flesh and the fat pig ought to

to have his flesh reduced too. The farmers all the time are trying to pile on more flesh. The process of fattening is a process of disease producing. Over in Germany I visited Strassburg, visited the place where they prepare the famous *paté de fois gras*. Do you know how they make it? The way they used to do it was to take the geese, put them on a plank, nail their feet down to the plank <sup>so</sup> until they couldn't get away and then sew their eyelids together so they could not see and then they would put them up on shelves, one above another in long rows. Every once in three hours a man goes around with a big syringe full of corn meal gruel, opens the mouth of the goose and fills it full of corn meal porridge or gruel. In the course of a few weeks these geese become enormously fat and their livers being so enormously light and fat that they fill the whole inside of the abdomen and the rest of the body sometimes becomes emaciated but the enormous fat livers of these geese are taken after the geese are killed and are made into a paste which is known as *paté de fois gras*. You have eaten it at the hotel and thought it was a very delightful thing. Haven't you? Yet it was only a paste made from a geese's liver. When one sits down to a banquet of that sort these are the things that he should be thinking about, the things that I have just been mentioning to you. Try to bring some of these things to mind and you won't be tempted then, don't you know. When they bring in the oysters just think about that oyster juice. I gave you the formula for oyster juice the other day evening and I want repeat that. You know what oyster juice is made of. Of course, it comes out of the oyster but how does it come out. Apple juice comes out of the apple. We squeeze it, compress it and get the juice out of it in that way but how does that juice get out of the oyster. It must be <sup>sweated</sup> ~~sorted~~ out or perhaps he is nauseated. Sometimes the bowels and kidneys are active and the oyster juice comes out of the oyster's body and that is what people consider a delicacy. Don't forget that when they pass the oysters around next time and the cheese. Why? You know what Charles Lamb said to the

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cheese monger don't you. He went down to get some cheese for his sick sister, hobbled down on a very dark stormy night to just have some cheese for his poor sister who was a little off in her head and when the cheese monger had cut the cheese off and was tying the string around the package he said to Mr. Lamb, "Shall I send it home?" Mr. Lamb replied, "Oh, no. Lend me a string and I will lead it home." (A man out in Denver had some cheese put before him that looked as though it was full of lice. In fact, it was a very lively piece of cheese and he pushed it off a little ways. He didn't want to get mixed up with such a thing as that and pretty soon the waiter came along and noticed that he pushed it away and he said, "Shall I carry it away?" "Oh, no!" "Leave it alone and it will take itself away." He thought it was able to travel.) (Now you might think of that when they pass the cheese around, don't you know and a beefsteak. When you look at a beefsteak stop to consider that that is a piece of an honest ox a meek eyed ox. Think of those beautiful meek eyes of that ox. Maybe you will sort of feel that that ox's ghost is there staring you out of countenance as you look upon his flesh and are thinking perhaps how you would like to put your teeth into his flesh just as a lion puts his teeth into a deer or into a man for that matter. The young lady artist called the attention of the mayor of a town in Wisconsin, who told me about the matter, to a very interesting thing. She called his attention at one time to the beauty of the eyes of a sheep and he said he had never noticed what beautiful eyes the sheep had but the next time he saw a sheep he stood and looked into its eyes and he really was astonished to see what beautiful eyes the sheep had. After that he said he never could eat mutton any more so whenever he saw mutton shops there were a pair of sheep's eyes looking right at him and he could not do it. Think about that when they offer to serve you some mutton chops. See those eyes. Just think of

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of taking the creature that had a character, that had a good reputation and you sit down and eat him character and all, a portion of ox, a meek ox and an industrious ox and a patient ox, a hard working ox, yet you eat him. A Chinese Buddhist was not inclined that way. A missionary sent me sometime ago some verses she had recited on a-stage in a Chinese city and. A missionary was going through the country and this heathen Chinese was following through the country reciting this poem everywhere he went. He was a missionary working in behalf of the ~~be~~ <sup>of</sup> humanitarianism. He was trying to convert his countrymen away from flesh eating, trying to antagonize the influence of the civilized and christian missionaries that were encouraging flesh eating and he was trying to do what he could to antagonize what he considered the evil influence of these missionaries who were inadvertently propagating bad ideas by their bad example and their bad practice. I remember very well the story. Here was an ox making a complaint or a cow. That was what the poem was, "The Cow's Complaint" and this cow complained that she was obliged to work very hard and got no pay and very poor food, that she was obliged to plough the fields for the planting of the rice and to plough the rice, ~~to~~ to destroy the weeds and help to cultivate the crops and she was not allowed to nibble even one little head of rice. She was punished if she did. Then by and by when the famine came there didn't happen to be any rice, <sup>then</sup> they sold the cow to be smothered and killed her and ate her flesh. She said, you know the Chinese believe in the doctrine of metempsychosis or transmigration of souls. They think when a man dies his soul goes into the body of some lower animal. If he has been a bad man it goes into the body of a toad, or a lizard or a crocodile or some other disreputable beast but if he has been very good it goes into the body of a cow or some other of the higher animals. This cow ended up her complaint. When I am a man and you are a cow, I will treat you then as you treat me now. It was a very ingenious application of their theology to this humanitarian principle.

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Q. What/Cornero's dietetic principles?

A. His dietetic principle was frugality, simplicity, and meagerness of diet. He ate very little, ate so small an amount it hardly seemed possible a man could have lived on the small amount he ate yet he did live and recovered from a sickness which at 40 years of age was thought to be his last sickness. His doctors found him at 40 years of age a broken down man and he said he never could be well but yet he lived to be 100 years old; recovered from his chronic ailments and lived a very useful life until he was more than 100 years ago. He died an illustrious man but he ate very simple food.

Q. A young student coughed very bad for 3 months. The doctors did not give him any relief. Finally he omitted breakfast and got well. The cough left him. Please explain.

A. It simply got well. That is all. That is a very simple thing. If the doctor had given him some medicine and the medicine had cured his cough, there would be something astonishing about that that we could not explain but when this man got began to live in a way that was right for him to live then his body cured itself. He was a student. Now students and literary people generally will find themselves better off to eat but twice a day. A man who works hard out in the field can eat three times a day, perhaps four and some countries, five times a day taking very small meals and eating often. It is all right to eat five times a day if the amount you eat is small enough and provided you have not got to slow a stomach. You may have a stomach that want get the smallest amount out in less than five or six hours and in such a case it would be disastrous to try to eat more than twice a day. When a larger amount of food is eaten the larger time is required for disposal of the food. For the average student or brain worker two meals a day are quite sufficient. Down at the International Congress on Hygiene held in Washington last summer a scientist



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from Boston, a physiologist reported ~~from~~ some very interesting experiments he had been making. He gradually accustomed himself to eat instead of three times a day, twice a day, then once a day, then once every other day and finally every once in three days and on that third day he ate as much as was really necessary for him to eat for the three days. He ate one large meal. He found that was not really best for him so he divided his third day meal into two parts, ate a light lunch in the fore part of the day, then a few hours afterwards ate a large meal, a three day meal. If he was going to eat a three day meal at once he could not eat cabbage but he must eat rather concentrated food. He found he was able to get along by eating once in three days the minimum amount of food which Professor Chittenden has found to be necessary for maintaining life. By eating the minimum amount of food once in three days he was able to maintain his health and strength permanently. In fact, he was <sup>in</sup> very much improved health. I am not recommending this by any means. I would not adopt that and would not recommend it because I think it is natural for us to eat every day as it is natural for us to drink every day and to sleep every day. There is a certain biological routine that we need to go through every day. We need to breathe, we need to eat, we need to drink, we need to sleep, we need to work and we need to exercise. This is our daily program which nature has marked out for us and we ought to follow it. A man who says, "Well, now I believe in fasting, I am going to try fasting." That man in fasting does violence to the law of nature. When a man is hungry and ~~feels~~ refuses to eat he is doing ~~with~~ violence to the laws of nature. He is doing just as much violence to the laws of nature as ~~when~~ he is when he refuses to drink, if he is thirsty. When a man is thirsty he should drink. He should not drink an unlimited amount. It may be he requires only a very small amount of liquid but he should drink what he requires. When a man is hungry he should eat. I don't believe in people going hungry and I don't believe in people going thirsty. I think when one is tired and sleepy he should sleep

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if it is twice a day or three times a day. One should rest when he is tired. He is doing violence to the body to ignore any of these instinctive voices which are talking to us. If you heard a voice speaking to you right out of the sky you would stop and listen, wouldn't you. You would pause and you would say, "Why, what does that mean?" You would say that is God talking. I must listen, I must obey and you would not dare refuse to obey if you heard a voice talking to you out of the sky. Now, my friends, these voices that are within our bodies, these instinctive voices, this voice that says drink when you are thirsty, that says eat when you are hungry, that says rest when you are tired and fatigued, those are divine voices. These are not mere blind instincts but they are divine voices. That instinct is the voice of the creator giving us an injunction with reference to our conduct and we should obey. This instinct is simply a divine voice that is planted in us that speaks to us in order that we should not by our free will violate the laws of our being and so do ourselves damage and injury. Here is a homing pigeon taken off out at sea 500 miles. That pigeon is let out of its box by and by and it goes up into the sky, then it makes a great circle round and round and round and then takes a bee line for home. Now tell me how it is able to do it. The pigeon may have been shut up in a box where it could not see a thing. The experiment has been tried of putting the pigeon under a chloroform and thus surpassing it, so that it could not by any possible sense it may possess know anything about what is going on, and a chloroform pigeon has been carried out to sea several hundred miles, turned loose and it goes straight home. There is a divine instinct, a voice talking to that pigeon, telling it the way home. My friends, we are not cast loose in this great ocean of eternity without guides. The power that made us, planted in us instincts to lead us right, divine voices that are speaking to us all the time, saying, "This is the way, walk ye in it." The important thing is to learn as Mr. Trine says "to get in tune with the infinite", but we often refuse listen. We certainly cannot promise any wonderful

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Question Box Lecture Cont.

That instinct is the voice of the Creator giving us injunctions to our conduct and we should obey. This instinct is simply a divine voice that is planted in us, that speaks to us in order that we should not by our free will violate the laws of our being and so do ourselves damage and injury. Here is a homing pigeon taken off at sea 500 miles. That pigeon is led out of its box by and by and it goes up toward the sky. Then makes a great circle round and round on the ground, then takes a bee line for home. Now tell me how is he able to do that. A pigeon that has been shut up in a box so that it could not see a thing. The experiment has been tried of putting a pigeon under chloroform and ostracizing it so it could not by any possible sense it might possess know any about what is going on and a chloroformed pigeon has been carried out to sea several hundred miles, turned loose and it goes straight home. There is within it an instinct, a voice talking to that pigeon, telling it to go home. My friends we are not cast loose in this great ocean of eternity without God. The power that made us planted in us instincts to lead us right; divine voices that are speaking to us all the time saying, "This is the way, walk ye in it." The important thing is to learn to listen as Mr. Trine says to get in tune with the universe but we refuse, we do not listen. We turn a deaf ear to these instincts in a thousand ways and that is why we have gotten into this horrible diseased condition. That is the reason why we have become so dull, that our philosophy has simply become the contemplation of disease. A pathological study of humanity and not a normal state. It is because we have turned our backs upon the right road or wandered out into the wilderness refusing to follow the voice that speaks to us. The Bible speaks about that voice. God told one worthy of God, "I will be a voice behind thee saying, 'This is the way, walk ye in it.'" That voice behind my friends is always talking to us. We ignore it, we forget, we neglect it.

It is not only speaking to us in confidence so that we recognize it but it is speaking to us in physical ways. We have a physical conscience as well as a moral conscience and it is this physical conscience that says to the boy when he first takes tobacco it makes him sick so that he vomits. He rejects it. That is a devine voice in the boy and it is crying out against it, protesting against it in every possible way but that boy forces it upon himself. A young man in my office a day or two ago, a business man of this city, who used to be a great smoker, said to me, "Why, doctor, it took me 3 years to learn to smoke. Every time I smoked I was sick as a dog whether it was a cigar, a pipe, or a cigarette, it was always the same. I was just as sick as a dog. I was nauseated. I vomited and really felt miserable, but I smoked cigars; I thought I had to smoke to be a man. I thought to be a man among men I must smoke, as other men did, so I must ~~smoke~~<sup>smoke</sup>." "But," he said, "I am done with it." It took him until he was about thirty-five years old to find out that it was a foolish thing to do, but he finally came to his senses and he repudiated it. Now his example for the rest of the time will be on the right side. What is true with reference to tobacco, is true with every other harmful thing. There is always a protest made when we do a thing that is not right. There are instincts within us when we are violating any of nature's laws that inform us of the facts that we are doing a wrong thing. Sometimes it is pain. When a baby puts its finger in a fire it is burned. That is the most painful thing. If it did ~~not~~ not give pain to put the finger in the fire, we would sometimes forget and sit down in a fire and we would burn up, or allow our hand or arm or foot or something to lie in the fire until it was destroyed. Pain is nature's sentinel that stands always on guard pointing out the way from danger. That is one of these devine vigils that are talking to us. Pain is the greatest blessing that humanity enjoys, one of its greatest blessings, at any rate. If ever you have pain, the thing

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should not be to get rid of that pain; that should not be the anxiety. The most important thing, my friends, is to find out what is the cause of that pain, from what you have already been doing that makes that pain; To see how far away from right and truth you have gotten. When a patient has pain and sends for a doctor, he says, "Doctor, I wish you would give me a hypodermic." That morphia the doctor gives simply puts the sentinel to sleep. It paralyzes him so he cannot speak, and the mischief goes on just the same. I remember very well a good many years ago, about thirty years ago, an old gentleman was brought in, who had had an accident. He had been thrown out of a carriage. The doctor came to him and he was fumbling with his medicine case to give him a hypodermic as quick as possible. I said to the doctor, "What are you going to do?" He said, "I am going to give him a hypodermic of morphia." I said, "Well, ought not you to find out what is the matter with him first? If you put him under morphia he will go to sleep and not have any pain and can't tell us anything about it so we will have to wait till he comes to then we can find out what is the matter with him and what is making the pain." The doctor thought I was awfully cruel because I would not allow this old patient to have morphia right away quick before we had investigated his case. The pain was a very essential <sup>guide</sup> ~~maxxi~~, to know where was the seat of the trouble. In fact, that was the nature of the incident and ~~and~~ what was necessary to do. He didn't get any morphia at all because we found out just where the pain was and then we knew what to do. A bone had gotten out of place. We put the bone into place and the pain was stopped. If we had put him under morphia we would not have been able to find exactly what was the matter or what was the cause of that pain. We would not have set it right and the man would have suffered for many years as the consequence. That is exactly what is the matter with most of you. You have come here, my friends, ~~in~~ because you have neglected to obey the voices <sup>within you</sup> that have been signalling. I am talking to you, you sit down ~~and~~ at the dinner table

perhaps at a banquet. You say, "Now this is a fine bill of fare, we are going to have a good time here." You never stop to inquire whether you need food or not, you never stop to inquire into the capacity of your stomach, whether it will hold all these things that you put into it. I remember a middle aged clergyman who one time had been eating all he could possibly hold, and he suddenly heaved a sigh. A friend next to him said "What is the matter, are you sick?" He said, "Oh, no." Well, I was only thinking, "Oh, for capacity." He wanted capacity to swallow more food. What for? Simply to enjoy the dinner while it was going down. I was reading, a good many years ago, a story in the Talmud. I had some very quaint stories and among others was this story, related by some Jewish Rabbi away back two or three thousand years ago. He told of a man he was acquainted with that said he wished he had a throat like a crane that was a mile long and that he could taste his dinner all the way down. That was the idea that man had of enjoying life. He would probably have had an opportunity to taste. *Prof. Fisher said to me* A bout one in three months I get a hankering for fried chicken and nothing ~~it~~ seems to me tastes quite so good as fried chicken. We talked somewhat about it. I made several remarks about it and we had an interesting chat about it and you know Dr. Rogers, the medical director of the New York Life Insurance Company happened to be riding with us, as we were riding in a car as we were having this conversation and he spoke up at once and said, "Professor Fishers, there is nothing in that. ~~that~~ The fact that you have a craving for it once in three months is no evidence that it is good for you. "Why," he said, "Once in three months I have an awful craving for lobster salad. I never eat it in the world for I know it would make me sick but once in a while I have a craving for it and feel ~~that~~ a strong temptation to try lobster salads but it always makes me sick every time. It is simply a fancy." It may happen that another man might have that hankering for liquor and go off on a spree and get drunk. Prof. Fisher said, "Do you think that?" He said, "I know it." Well, I had a letter from Prof. Fisher

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the other day saying, "I have lost my appetite for fried chicken" so I wrote him that I was glad to see he was a full fledged saint at last and I had admitted him to my church and we would consider him fully qualified for the new race. It is so with everybody that adopts these principles of simple living and sticks to them long enough. If you will adopt this principle of eating simple natural food that belongs to the <sup>human</sup> race to eat. That is a thing that is worth thinking about. The horse eats things that belong to the horse. A dog eats things that belong to dogs and a turkey buzzard eats things that belong to a turkey buzzard to eat but man undertakes to eat them all. He wants to eat everything that every other animal on the face of the earth eats. He sees a dog gnawing a bone and he thinks now then that bone must be good so I will gnaw a bone too. He sees a turkey buzzard eating something that has got old and rancid and he thinks that must be nice so he wants to eat limburger cheese and other things that are far advanced in decay and so he makes a scavenger of himself. That is all abnormal. These are all acquired appetites and they will all just drop off and will all be left behind so you don't have to go through<sup>a</sup> lifetime hankering for all those things. The tea and the coffee you think are so hard to get along without, perhaps after you go home you will be surprised to see that you have lost your appetite for tea and coffee. The President of the New York Life Insurance Company was here last summer and his wife, a lady about forty, I believe, suddenly discovered that her blood pressure was up to 160. I would not tell you this if it was not that Mr. Kingsley told the story to so many people himself that it became a public matter. Her blood pressure was up to 160. Well, that meant that she was getting to be an old lady. In fact, she already was an old lady although she was only forty and a lady just beginning to enjoy life with a real zest, she began to feel rather serious about it. I had a talk with her and I convinced her, I think, that her coffee had something to do with it. She dropped her coffee and in three weeks her blood pressure was down to normal and she was happy. I was in New York not very long ago and I happened to see Dr. Rogers

and Mr. Kingsley and I said to Mr. Kingsley, "How is your wife getting along without her coffee?" "Well," he said, "it was a little harsh. She doesn't drink it, has not touched a drop but it was a little hard when she first came home to smell the fragrant coffee and pass it out to the other members of the family at the table but she told me the other day <sup>that</sup> she had gotten entirely over any appetite for it and didn't care for it any more, didn't hanker for it at all. Her desire for it, her appetite for it had entirely disappeared." Now, if it were a potato ~~or-if~~ don't you see of if it were bread or any other wholesome article of food, that appetite would have been increasing all the time but instead it is the opposite. It is disappearing so that it is an entirely unnatural appetite so when you go home and go to travelling among your friends you have a splendid opportunity to spread abroad the gospel of simple living. You can always find some simple food, enough to help you through for a meal or two anyhow and it will do your friends a lot of good if they know the reason why.

Q. What is the difference between neuritis and rheumatism?

A. They are often the same thing, so-called neuritis or pain in the nerve is often rheumatism of a nerve. Neuritis may be inflammation of a nerve due to some other cause.

Q. What measures when one goes home from the Sanitarium should he adopt to combat high blood pressure?



Q---When one goes home from the Sanitarium, what measures should he adopt to combat high blood pressure?

A---The first place he must not go home until he has got his blood pressure down because if you do not get your blood pressure down here, you never will get it down in the world. If with all the measures that can be brought to bear upon your case right here, you cannot get your blood pressure down; it never will come down but will keep on going up instead. Blood pressure never comes down of itself until it goes down, down, down, down to the end. Blood pressure does fall after a while. A man's blood pressure normally 100 or 110 goes up when the arteries begin to harden, goes up to 200, may be to 250, then it stays right there when it reaches the top just as long as the heart can do the extra work required of it, but at 200 or 250 the heart has to do more than double the work it has to do at 125 with a normal blood pressure, it has to do double the work, so the heart is going to wear out in a short time just as a pump that is made to do duty at low pressure when high duty is required of it will wear out quickly because of the strain upon the pump, so the heart wears out and by and by that heart will begin to stretch, will begin to fail, will become diseased, then the blood pressure begins to fall because the heart cannot keep up the pressure that is really required of it, so the blood pressure keeps coming down; then comes loss of memory, giddiness, change of disposition, irritability, depression of spirit and shortness of breath and poor circulation. All of these things indicate that the secondary low blood pressure is developing, that the heart is failing and that is the thing that cannot be helped. When a person has gotten into that condition and it has gone on so far as that, the case is absolutely hopeless; nothing can be done except to keep the patient alive a little while, but there is no cure, no practical cure, nothing approximating a cure, nothing but the funeral ahead and not very far a head either, but when the blood pressure is still high and the circulation is still good and the heart still able to do its work, notwithstanding the high blood pressure, then is the time to add years to life by lowering the blood pressure by removing the causes you see. If you remove the obstruction, then the pressure will drop because the necessity for the high blood pressure is removed. That is the thing to do and there is a great deal a person can do at home in the direction

of removing the obstacles that cause the high blood pressure. One of the things that is very good to do, is to take a warm bath three times a week at a temperature of 100 for perhaps a couple of minutes until you get well warmed up, then lower it to 92. 92 to 95 should be the temperature and continue that for half an hour before bedtime and it is one of the best things in the world. No one thing that I know of is better than that. Then when getting up in the morning, take a cold <sup>water</sup> bath or a cold air bath. The cold water bath should not be taken by jumping in a bath tubful of cold water. A person with high blood pressure might get a stroke of apoplexy in doing that. That is a dangerous thing to do, but a cold water bath should be taken by wetting a towel, wringing it out of cold water and applying to one arm, rubbing it well, then taking a dry towel and rubbing the arm till it is dry and warm and red; then the other arm, then the chest, then the legs, then seasawing across the back, first with the wet towel, then with the dry towel and finally going over the whole body with a little oil, a little very fine vaseline or a little lanoline. The best thing I know of infact is what we call lanoline cream--~~six~~---one dram of lanoline, two drams of boroglycerid and six drams of cold cream or vaseline cream. A little of that applied to the skin will get the skin in a healthy condition and prevent irritation and it is one of the very best things I know of. Sometimes in the wintertime when the skin is very dry and there is irritation ~~of~~, itching of the skin, burning, uneasiness of the skin, then take the same lanoline cream but put into it ~~six~~ ten grains of menthol. Now this preparation was given to me by Dr. Bulkley of New York, a famous skin specialist and we have found it here in the institution of immense benefit to hundreds of people, and I am sure it is of very very great value. Almost any sort of itching or burning condition which is attended by dryness of the skin is relieved by this remedy. It is almost a panacea. Rubbing with this will bring the blood into the skin and help promote the health of the skin. I met a lady today and noticed some large brown spots on her hands and she had terrible headaches too. "Now doctor, what is the cause of these headaches," she said. I said, "Those brown spots on your hands." "Well," she said, "I didn't suppose that they had anything to do with my headaches." Certainly these brown spots do not actually make headaches, but they are

produced by the same thing that makes the headache. When you get rid of the brown spots on your hands, your headaches are gone and you won't get rid of the headaches until you get rid of those brown spots because they come from the same thing; they are due to poisons generated in the colon and circulating through the body. They harden the arteries so the high blood pressure comes on and that is due to the same cause too. Bright's disease, headaches, brown spots, bad complexion, they are all the same thing and old age is the same thing and the remedy is just the same--the simple life, live out of doors. If you have to live indoors during the day time, you can all live out of doors at night; you can open the windows and let the wind sweep through even if we cannot sleep on the porch or in a fresh air sleeping room. There are many houses constructed with these arrangement now a days so we can attone to a very large degree for our indoor life during the working hours by staying out of doors during the sleeping hours. And don't be afraid of colds. I am anticipating all the time the pleasure of the fresh keen cold weather that is coming by and by. We haven't had a taste of winter yet. This kind of weather we have been having is very pleasant, very agreeable, but after all it is not good. It does not give us the real boost that we get from cold weather that is coming on a little later. When the temperature gets down to zero, the weather is just as pure as the driven snow; there are no germs in it. It is concentrated oxygen and it is marvelously stimulating. Every time one takes a breath of that cold air, he gets a little life out of it. The cold air has wonderful tonic power just as cold water has tonic power, and, since one breathes a thousand times an hour, the body gets a thousand little lifts. Of course, one breath don't amount to much but a thousand breaths makes a big lift. Then eight hours spent sleeping in the cold fresh air gives you eight thousand little cold baths and every one of them is a tonic bath, every one of them is charged with the most powerful kind of medicine, so you see cold air is of wonderful value. Don't be afraid of it. Be afraid of being shut off from it.

Q---Are olive oil rubs good after bathing?

A---Yes but the lanoline bath is better.

Q---If you take a specimen of a civilized baby and a specimen of a wild baby and educate them in the same way, how will them compare?

A---There are different kinds of civilized babies. There are civilized babies with a fine pedigree and of fine quality that are far ahead of anything you can find in the woods and the forests, and there are other civilized babies that are way down at the other end and the feeble-minded babies are increasing. At the present time, one per cent. of the entire population of the United States are defective mentally, one in one hundred. If you happen to get one of that sort of babies, the wild one would be a head of it. There are no imbeciles or idiots among ~~these~~ indians. Native people are practically entirely free from those two things, idiocy and lunacy. They do not have any lunatic asylums to take care of crazy indians. They get crazy sometimes under the influence of liquor but they are not born crazy or feeble-minded. It is just as ridiculous to find a feeble-minded indian as to find a feeble-minded deer or squirrel. You could not imagine such a thing as a feeble-minded bear or squirrel in the woods. They are born under natural conditions and are <sup>not</sup> subjected to degenerative influences which are making feeble-minded, idiots, imbeciles and lunatics in our civilized communities. But this thing is to be taken into consideration, however, we are all born wild. Some of us are tamed more than we ought to be. A persons education is simply a process of taming and a good many of us are spoiled in the taming. We are made too tame. It is better to remain wild than to be tamed so thoroughly that one loses his spontaneity and his initiative. When a boy first starts into the public schools, the little fellow is just brimful of questions, asking the teacher all sorts of questions. He is full of curiosity and full of interest, but the teacher says, "Keep still, keep still, I haven't time to bother with you." How many times parents do that same thing. The child is asking all sorts of questions to show that the child's brain is thinking ~~and~~, investigating and the parents say, "Keep still Jimmie, keep still, I can't bother with these foolish questions now." So the child is continually repressed, repressed, repressed, forced back upon itself and it begins to think and by and by it is almost a wicked thing, a crime to ask questions, so it ceases investigating, thinks and thinks and thinks and begins to make schemes and plans of how to get away from this restricting authority and how to escape from this slavery and charlatanism and to get the freedom

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which it longs for. A great many boys are thought to be wicked and pernicious and bad when they are simply repressed too much; and if a child does not do exactly what he is told, pretty soon he gets whipped. I don't believe in corporal punishment. We have had a lot of children in our home and I never whipped one of them in the world. I never said a cross word to one of them, did not find any occasion for that sort of ~~thing~~ treatment. I never scolded a child in the world. I felt this way about it: If I cannot get obedience from a child without adding brute force, it is because he is a good deal smarter than I am. If I have no advantages over this boy, except that I am bigger than he is and have got a bigger body so that I can overwhelm him, if that is the only superiority I have over this boy, then I ought to be licked myself and he ought to get the start of me, he is the master. I am not the master. So I set out in my beginning with dealing with boys and girls. I decided that I had got to deal with them in ~~the~~ some way to secure obedience and respect without the use of a whip or any kind of corporal punishment. I will be glad to tell you about my experience in that line when I have time. I do not mean to say that no child should be whipped. A child should always be whipped when he needs correction and the parent is so stupid he doesn't know any way to correct him except whipping. It is simply parental stupidity that makes the whip necessary or that makes corporal punishment necessary. There is absolutely no necessity for it in the nature of the case because corporal punishment is always wasted punishment. It is not in any way connected with the wrong doing. If a child has pilfered something, he gets whipped; if a child has told a wrong story, he gets whipped; if a child is late to dinner, he gets whipped; if the child doesn't go to bed when he is told to or don't get up in the morning, then he is whipped. Everything he does has the same remedy don't you see, no matter what his fault is. The punishment is just the same. Now one remedy is not good for all ~~different~~ different kinds of diseases. I had a boy once who could not remember to hang up his hat and coat when he came into the house. He was so brimful of what he had seen outdoors, he never thought about putting his hat and coat upon a hook. It went right down on the nearest chair or sofa somewhere. We had mentioned to him a great many times the way to take care of his things, but

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it didn't make any difference. The next time he came in he forgot all about it. I thought the matter over for twenty-four hours. Mrs. Kellogg says, "What shall I do for Willie to cure him of this way of taking care of his things. I have talked to him repeatedly about it." So I had Willie come in and talked it over with him. I said, "Willie, I think the only way is for you to form the habit of doing this thing right, so you may put your hat and coat on and go up stairs and come down and take it off and hang it up. Then you may put in on again and go up stairs and come down and take it off and hang it up again, and you may repeat that performance six times Willie." All right, Willie did it six times and he didn't forget to hang up his coat and hat again in the whole week. At the end of the week he lapsed and forgot to do it. Then Willie went up and down stairs and took his coat and hat off, hung them up, put them on again and went up and down stairs and took them off again and repeated this for one hundred times. It occupied him all day. He never forgot to hang up his coat and hat again. He had got the habit of doing it you see and couldn't get away from it. We had another boy who could not give attention. When I talked to him, he was looking all around the room. He knew everything else that was going on except what I was saying to him. So I made a long chalk mark on the dining room floor and made that boy walk that track and walk it a whole hour and he had to keep his eyes right on the track. Every~~time~~ time he waddled and got off the track added a minute to his time that he had to walk. He kept on walking that way every day. He had to walk that track for half an hour to an hour until he got the habit of concentration. He got the habit of fixing his mind upon a thing. There is a natural remedy for every fault a child has and the thing is to find what the remedy is. One time one of our boys positively refused to do something I asked him to do, I said, "All right, we will quit. You are a rebel. You rebel against me and we will separate right now. You may go to the barn and live with the horses out there." He was about four years old. I said, "You may stay out in the woods with the squirrels and the birds, but we cannot live in this house together because we are not friends any more. You are a rebel and I am the Governor here, so you are a rebel and you have to be expelled from the country and when you come back the doors and windows will be locked and you can't get in. You can go to the

woods." That boy started for the woods but he pretty soon came back. He remonstrated at first, but finally started to the woods. Then he was gone about fifteen minutes, then came back, threw his arms around my neck, looked up in my face and said, "Papa, I will be a good boy." We didn't have any trouble with him because he saw that we ceased to do business except on the basis of proper relationship. ~~That girl xxxxxxxxxx~~ I might have thrashed that boy and he would have hated me as long as he lived. I think there is a great deal to be learned yet about dealing with children. We have only begun to know what the child<sup>is</sup> and to begin to understand the psychology of childhood and of infancy and of adolescence and we manage our children very badly. They are often very badly abused as I said, they are sometimes too much condemned. A man told me of a dog he had taught. He was a house dog and became so much interested in watching the house that he leaped out upon anybody that went by and looked at the house. He bit a man and did him some harm so the owner took that dog and thrashed him until the dog was almost dead. That dog after that never barked at even a cow. He would allow anybody to walk in on the premises and carry off anything they wanted to carry off. He was fairly subdued. His will was broken and that is what parents often think<sup>that</sup> they have got to do for the boy. They have got to break his will. A boy with a broken will is not worth a fig. You want a boy with a will that is big enough to stand up against temptation and the evil which he is going to meet in the world and will enough to undertake enterprises and carry them through and such a boy is worth while.

Q. What is a mad stone?

A. It is a figment of the imagination. There is no such thing as a mad stone. There are somethings that are called mad stones but they are humbugs. They belong to a class of things that are called fetishes. It is simply a relick of barbarism, an idea brought over from simple Africa by the colored people when they brought over in the ships. They had mad stones and all kinds of fetishes and amulets that they wore about them. Things of this sort, however, are sometimes to be found in rather high quarters. I remember a gentleman sometime ago showed me a horsechestnut wich he had been carrying in his pocket

for ten years to keep off the rheumatism. Emerson tells about a man he knew who carried a horsechestnut to keep off rheumatism and it is very successful. He said the man had not had rheumatism for years during which he had carried the chestnut now for six years previous so that the chestnut was retroactive. Mad stones are of the same sort.

Q. Would a laxative diet causing frequent movements of the bowels give relief in colitis?

A. Yes, with the right diet free bowel movements, normal bowel activity, three bowel movements a day with the right diet and general improvement of the general health and obedience to health laws will, in time, cure colitis. That is, the colitis will disappear. It is the body that cures the colitis. It is not the diet that cures the colitis. Proper diet simply removes the cause of the colitis. A high protein diet encourages colitis by furnishing material which supports the colitis germs which encourage the growth of germs which make the colitis. Mustard, pepper, peppersauce, ginger, etc., irritate the bowel and so promote colitis because the irritated intestine ~~turn~~ retains the germs and gives them ~~enough~~ an opportunity to grow and that produces colitis. Proper bowel movements will help. General health-building will give the body a chance to cure the colitis.

Q. What is enteritis?

A. Colitis of the small intestine, if you please. It is the same disease found in colitis, in the colon. That same disease higher up in the small intestine is enteritis. And still higher up in the stomach is gastritis and in the gallbladder it induces gallstones and colicystitis and up in the gall ducts it produces what is known as colonitis or catarrh of the liver or infectious jaundice. They are all the same thing.

Q. Is it really true that you never eat meat, eggs, milk, peas, beans or nuts.

A. I am sure it is not true. I am sorry anybody slanders me



in this way. It is true I do not eat meat and I do not eat eggs and I rarely taste ~~take~~ milk, sometimes a very little in some food I eat but I avoid milk and peas and beans I rarely eat. I have no particular craving for them and I eat nuts rather sparingly. I do not feel a craving for protein. I rather feel an aversion to high protein food and yet peas and beans and nuts I regard as entirely wholesome foods.

Q. How many calories of protein do you eat daily?

A. Somebody is interested in my private affairs. I am not a very expensive boarder. I think I eat about 1300 calories a day altogether. My protein is less than 10 per cent. of my total ration, I think about 150 calories per day.

Q. Why are very fleshy people always cold even in very warm weather?

A. Because they have this thick layer of fat which is a non-conductor. The temperature is high inside but there are so very few blood vessels in the fat tissue that the blood is spread out over a larger surface. In very fat adipose tissues the blood vessels are very few and consequently the blood is not so warm. There is <sup>also</sup> generally quite free perspiration in very fleshy people in warm weather which keeps the skin cool.

Q. Are there any regenerative agencies at work which will counteract what some think to be the race degeneracy of the present age?

A. Without any doubt there are such agencies at work. Certainly, there must be. If there was not there would not be any hope for the race at all. While race degeneracy is going on there are forces in operation which, if encouraged, will result in race regeneration. That is why we are going to have a race betterment conference here next month and I hope you are all going to be here. We are going to start a new race next month. A gentleman came just yesterday with seven children and wished to have them registered as pioneers of the new race and I think they are very likely candidates.

Q. Are the juices of the orange and grapefruit injurious to a person with too much acid in the stomach?

A. They may be because the acids of fruits as well as sugar have the effect to stimulate the stomach and make more acid so while they are not in themselves more injurious, they may stimulate the stomach to make so much acid as to induce unpleasant effects.

Q. What should be the bath practice for a person with a weak heart?

A. He should take a cold air bath exposing the body to cold air while rubbing the surface generally or with moderate vigor or taking a cold bath by piece meal, an arm or a leg or the chest or some small area of the body making the bath of the particular part complete before passing on to another part.

Q. Does the Bible teach the age of the earth as about six thousand years?

A. I do not so read it.

Q. Relief in the severe attacks of acidity is secured by bending backward and pressure between the shoulder blades by pressing ones self against the projection. Would a narrowed cecum above the ileo-cecal valve drawn up and cause acidity of the stomach with terminal pain of the chest opposite the lower end of the sternum?

A. That's getting things down pretty fine, isn't it? This patient secures the most satisfactory repose by <sup>the</sup>sitting up position and cannot lie down without being subject to attacks of acidity at night. Now this condition that is described is not whimsical. It is a real condition. It is one of the real facts that are observed in a good many cases. I have no doubt that the patient obtains relief in just the way he has mentioned and the reason why relief is obtained is because in

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the upright position breathing is more active. The stomach is relieved of its congestion. Many persons wake up <sup>in</sup> the morning with very severe pain in the stomach. When they get up and begin to move around, <sup>after</sup> a little while the pain is gone. These things are due to stagnation of blood in the viscera and the movement is stimulated. The circulation of the blood is stimulated and the discomfort is relieved and the attacks of pain cease. The reflex pain ceases. Suppose the spinal cord is running down here, it sends out these large branches every little ways and this branch divides into two parts. One part comes to the skin of the back and the other part goes into the stomach an internal viscus. Suppose this branch that goes to the stomach and leaves another branch that goes to the spine, leaves another that goes to the kidney, another to the colon, another to the bowels and leaves another branch that goes to the appendix perhaps, now if there is congestion in this internal organ in the body, pain will be felt in the back. In what part of the back? To what the other branch of this same nerve is distributed so, for instance, suppose this to be the gallbladder and you have gallstones and inflammation of the gallbladder then you will have pain and a sore spot right back here at the upper part of the lumbar vertebra because of this trouble with the gallbladder and it is because the same nerve supplies that ~~sore~~ spot in the skin of the back and gallbladder. They are both supplied by the same nerve, different branches of it so one part sympathizes with the ~~sore~~ <sup>other</sup> part. These things we feel upon the surface, especially along the back, nearly always mean trouble with the viscera. They do not mean trouble in the back. They do not mean trouble with the spine but they mean trouble in the viscera. If you have pain between the shoulder blades it generally means a sensitive stomach. Congestion of the stomach may be ulcer of the stomach. If it is pain low down in the back it is generally gallbladder trouble or trouble about the liver. ~~if it~~ If it is lower down in the back

about thispart it does not mean kidney disease but colitis, trouble in the colon an irritated colon and no trouble in the kidneys. Pain lower down in the back may mean trouble in the rectum or bladder or some other pelvic viscera.

Q. What is the trouble when green mucous passes from the bowels?

A. Colitis.

Q. What is aortic insufficiency?

A. It ~~is~~ means one of the valves of the heart which controls the mouth of the aorta is insufficient and allows the blood which is forced out of the aorta to come back into the valve again.

Q. What is over compensation?

A. The heart has got too big and ~~and~~ is beating harder, working harder than is necessary.

Q. What is the cause and is there a cure for floating kidney?

A. The cause is an overloaded colon and relaxed abdominal muscles. The membrane which surrounds the kidney, the capsule of the kidney, also surrounds the kidney. It is the same membrane that goes around the two. <sup>are</sup> They both in the same fold of membrane here and when the kidney becomes overloaded and falls down it pulls the kidney down with it. It is always the right kidney that is prolapsed, nearly always. Sometimes both kidneys are fallen out of place because the entire abdominal contents have dropped down out of place because of the relaxed condition of the abdominal muscles.

Q. May a person have too large a supply of blood?

A. Yes, but such cases are really very, very rare. All one has to do is to drop off a meal or two to reduce his blood. He doesn't have to be tapped to take the blood out. I hope you won't forget to improve the opportunity to get all the benefit you can from this delightful fresh air.

I don't see as many people outdoors as I would like to see. A few people were ~~are~~ out playing tennis this morning and quite a number of people went out for a walk but I dare say there are persons in this room who have not been outdoors today. I see a whole lot of people looking kind of strange and sort of wishing that they had been outdoors. I see a score of people in this room that have not been outdoors today. Why, my friends, there is more health and vigor and emanation and get well outdoors than there is in the house, a great deal more. If you could do but one thing, stay here in this institution, and let us do everything we can for you or go out of doors and stay out of doors for the next six months, never come into the house again, for the whole time, that would do you more good than what we can do for you here. I am perfectly frank to tell you that a simple out of door living close to Nature will do you more good than all the medical treatment I know how to give. It is worth a great deal more., See what it does for the poor consumptive whose lung surface is half gone. At a consumptive sanitarium the consumptive patient is fed a lot of things he ought not to eat and a lot of things done to him that ought not to be done to him but he is kept out doors and in spite of that feeding and<sup>a</sup> good many other things that are not just right, in spite of it all, that man will get well. Half the people who go to consumptive sanitariums get well. In some of them 60 per cent. get well. Think of that and there is not a thing done but turn him out of doors. If they would do all the other things that we do here what wonderfully better results might be secured. I hope sometime to see a Sanitorium after the Battle Creek Sanitarium System for consumptives. We will have it some time and then I believe we shall be able to cure at least three-fourths of all the people who come. Thousands and thousands of people are dying from tuberculosis who ought not to die but this is the point I want to make

Thousands and thousands of people are dying of tuberculosis that ought not to die, but this is the point I want to make. If an outdoor life will cure a person whose lungs are half gone and his whole body infected with this awful disease, what will it do for persons who have simply got dyspepsia, a little indigestion, so-called torpid liver or some other simple thing, or neurasthenia. Just think what it will do for such a person! It is one of the most powerful of all curative means. Why? Not because there is any specific virtue or sunshine or outdoors, but because it is getting back to nature. That is the reason, because it is returning to a natural mode of life. Now for the same reason, the natural diet you get here in our dining room has marvelous curative power in it. Why? Because it is the natural way. The ordinary diet is the unnatural way and working for disease all the time and when you have stopped working for disease and give that great power, that great force that dwells within us, that so-called vis medicatrix naturae, really the curative power that made the universe which still dwells within us and is working within us, when we give that power a fair chance and cease to antagonize it and work against it, it is wonderful what it does. It is marvelous the miracles we are seeing here every day. The other day a man walked in here with a great big hood over half his face. What was the trouble? An enormous great cancer was here in his face. He came from Washington, D. C. Had been operated on twice for sarcoma, one of the most malignant of all kinds of tumors, and here was this great cancer in his face which had returned after it had been removed twice. He had been given up as a hopeless case and sent away to die. Ten days afterwards I saw that man going around with his hood off and I could hardly believe my eyes. He had just a little swelling under his jaw. He is still here and an aged man and there is scarcely the smallest trace of that cancer left, just a little swelling under the jaw and that is disappearing. Some of you have seen him. I see a dozen hands up of people who have met him and seen him and know just what I am telling you here. Now you can see him if you want to. If you inquire at the Men's Medical Office if you want to meet that gentleman and interview him, you can. That has been accomplished under the influence of the X-ray combined with the hygienic diet, treatment and care that we are giving to him. New methods have been

developed and have been recently perfected. We sent our X-ray man last spring to Germany to become acquainted with these new methods by which the X-ray is made a thousand times more effective than it has been before, a thousand times more powerful. Currents are applied now by the new methods than could be used before and the consequence is, we are able to cure cases that before were absolutely hopeless. That poor man by this time would have been almost ready for a funeral, but now instead of being ready for a funeral, he sees perhaps, ten years of life spread out before him with all the pleasure of living with his friends. Now what has accomplished that? I have not done it, the X-ray has not done it but the X-ray has smitten this cancer. It has dealt a mighty blow upon this neoplasm, this parasite that was ~~existing~~<sup>growing</sup> there and that has given the powers of the body a chance to rally and they had sufficient resistance to overcome the enemy and to cast it out by the aid of the X-ray. That is exactly what diathermy does, that is just what diet does, that is what massage does and all the other physiologic remedies that are being used here. They simply help, Nature does the work. I thank you for your attention.

v-p