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SANITARIUM PARLOR LECTURES. (Jan.2/96.)

Religion of the Body.

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Good evening, Ladies and Gentlemen: I wish you all a happy New Year,--if it is not too late. This is the first opportunity I have had of meeting you since my return from the West. I am glad to see you all so happy,and trust we have all started out this new year, to make a good race for life.

I thought I would talk to you a little while this evening about The Religion of the Body. (The idea that there is anything religious in giving attention to the rules of health is, to a good many, perhaps a novel one, nevertheless it is not by any means a modern idea. The ancient Greeks made health-getting and health-keeping, the observance of the laws of health, a part of their religion. It is said that Lycurgus placed this illustration before his subjects: He obtained two spaniels, both of the same breed and age,and subjected them to different kinds of education and treatment. One of these dogs he fed every day from his own table; he brought him up on dainty tidbits and gave him the benefit of all the luxury that it is possible for a young dog to enjoy. The other dog, the king subjected to various hardships, employing him in hunting. After a year of training, he brought the two dogs out upon the public square before several thousands of the people and placed a dish of tender and choice morsels and a living hare before them. One of the dogs immediately plunged into the dish of tidbits, while the other chased the hare, caught him and brought him to his master's feet. Now said the king, "You can see, in the behavior of these two spaniels the influence of education upon the dog, and if education has this effect [illegible] you must readily

see that it has an effect upon a human being." The dog who had been brought up in a luxurious way only had respect to the gratification of his appetite, while the reverse was true of the other

Now, it is unfortunate that in civilized lands there is altogether too much attention given to the gratification of the appetite and the satisfaction of what we might term the Propensities of the body--the animal appetites; while, on the contrary, there is too little attention given to the development of the hardier and higher elements of character. Indeed it is a very serious question, in our time, how we can develop hardy and strong traits of character, ~~and at the same~~ in our children, and at the same time give them the comforts which we desire to give them. The boy who is brought up under circumstances in which he has to endure hardships and difficulties, and the girl who has had to encounter various perplexities, amount to a great deal more, when they come to man and womanhood, in doing the world's work, than do those who are brought up luxuriously.

Now the ancients believed in the cultivation of health; they believed in the religion of the body. The development of the body was ~~regarded as a thing~~ regarded as a sacred thing among the ancient Greeks, and that is why the Spartans obtained such preeminence physically; and in many of the nobler traits of character, certainly no nation has ever excelled them.

Disregard of the body and the care of the health seems to have come in with the darkness of the middle ages. When the fanaticism of the early ages ~~(of the early church, I might say)~~ destroyed the magnificent baths of Rome constructed under Nero and Caracalla, which we now see in ruins,--when the fanaticism of the early church destroyed those most civilizing of agents

baths, it was the beginning of a deteriorating process which developed to its grossest ~~fo me~~ phase in the middle ages. A most eminent historian tells us that for a thousand years of that period, not a man, woman or child in all Europe took a bath except by accident. Even at the present time, among European nations we find relics of this neglect. In certain portions of Spain it is impossible to get a regular bath. Some years ago, a traveller stopped at an inn in a little village in Spain and called for a bath tub, but there was no such thing to be found on the premises. After repeated inquiries for something suitable the landlord finally brought him a dish by means of which he managed to take his bath, but while at table the next day, he recognized the same dish as the one in which the soup was served. An Eglishman once went to a hotel in Madrid, and after stopping there for a couple of days, the landlord turned him out, and the reason was this : He had asked for a bath, but there was no bath tub; finally the landlord brought him two butcher's trays, and, in a sort of Colossus-of-Rhodes manner, he managed to take a bath. Of course, by this method of bathing, a few drops of water were spilled out upon the floor, and, the floor not being very tight, the water went through and the guests in the room below complained that there must be a shower overhead. So the landlord turned out this guest, saying he wouldn't have any more ~~dirty~~ English guests who were so dirty they had to take a bath every day.

There was one time in the world's history when the bath was utterly ignored. Indeed, two hundred years ago, the people of Paris were forbidden to patronize public baths, ~~and, as a result,~~ at the present time you can scarcely find a public bath in Paris. There are two or three floating baths along the Seine, and one or two

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The Archbishop of Paris actually issued an edict prohibiting the members of the church from visiting public baths, and as the result, at the present time, you can scarcely find a public bath in Paris. There are two or three floating baths along the Seine and one or two others. But if you want a bath, you must order a bath-tub by telephone, and they will come trundling up on wheels of vehicles of various kinds, and you can take your bath up stairs, a one-horse bath, a two-horse bath or a wheelbarrow bath. This neglect of baths was carried to such an extent at one time that it was considered to be pious and religious to be dirty, and it was declared that the purest soul was to be found in the dirtiest body. One man boasted that he hadn't taken a bath in 50 (?) years, and another, that he had 300 patches on his pantaloons, and these were exhibited as evidences of his piety.

But some one may ask, "Whose business is it if I neglect an injure my health? It is MY health." I remember a young man whom I used to talk to upon this subject some twenty-five years ago. He was continually eating tidbits confectionery and candy,- this was his besetting sin. I was continually telling him that he would repent it. "Well," he said, "it's nobody's business if I do eat candy; I've a right to eat it if I want it." But I have been patching up his stomach for some time, and now he lives upon a very limited bill of fare. He never thinks of eating candy. He cannot eat many things that one can eat without injury, who has a perfectly healthy stomach. He has to do "works of supererogation now, in order to have tolerable health.

But it is "somebody's business" whether one takes care of his health or not. A man owes to the community in which he lives

his very best faculties. A man has no right to be sick just be - cause he chooses to violate the laws of health. Suppose, for example, a man tries to burn up his barns, or suppose a man takes out of his safe his money, his family jewelry, bonds and other valuable papers, and takes the beautiful and expensive pictures off from his walls and the choice bric a brac from his parlors and should take them all out into a public place and should undertake to set fire to them and burn them. His neighbors would stop him at once,--and he might be arrested for arson if he burned his buildings. He has no right to destroy his property? Why? Because, in the first place his wife and children have an interest in his property; even his third and fourth cousins have an interest in his property, ~~and~~ if he dies without anybody else claiming it. Hence he has no right to destroy his property.

What is so valuable to a man as his health. All that a man hath will he give for his health is good Bible doctrine; a man would give all he has in exchange for his health. Then if a man will really give all that he has for health--when it comes to the last consideration a man will give everything for his health. Now, if a law protects things of lesser value, it certainly has a right to protect health also; it has a right to protect life,-- and so it does. A man has no legal right to take his own life. If a man deliberately undertakes to take his own life, the law says that is unlawful. A ~~amn~~ man has no right to take another's life, and he has no right to take his own life .

Now what is the difference between a man's taking his own lif by cutting his throat, by shooting himself, or by the rope ?

And what is the difference between a man's shortening the term of his natural life by cutting his throat, or by constricting his breathing capacity. One method shortens life at one end of the lungs, and the other method shortens life at the other end. It ~~may be that~~ the constriction may be so regulated as to cut a man's life off in a minute, in a year, in five years, but the principle is the same. Is not that man just as much a suicide who shortens his life ~~life~~ five years by his manner of living as is the man who puts a bullet into his brain. What is the difference? One ~~died~~ destroys himself by a sudden process ~~of self-destruction;~~ the other, by a slow process. There might, however, be this difference,--one might destroy his life ignorantly, and the other knowingly. In such a case there would of course be a difference in the moral responsibility. Still there is no doubt but that moral responsibility exists in both cases.

We might find many other parallel cases. The man who saturates his body with nicotine so that brain, action, feeling, motion and all the various processes of the body are filled with poisons. Now the excretory organs are the means by which those poisons of the body must be eliminated, if at all, and by which the blood can be kept free from these impurities. Now the man who saturates his body with nicotine or tobacco in any form, or ~~if a man saturates his body~~ with alcohol, whether with the use of hard cider, brandy or or any other intoxicating drinks,--the man who does that, necessarily imposes upon his skin, lungs, liver, kindeys--all his excretory organs-labor which Nature has not designed them to do., labor which they ought not to do, as it is in addition to the normal labor of these organs in eliminating the poisons formed by the body.

The consequence is, these organs must wear out sooner than they otherwise would do, as a locomotive would wear ~~itself~~ out sooner that it ~~should~~ by otherwise do, by imposing extra labor upon it,--for instance, being made to drawing against the brakes. That is what these extra poisons are to the body; they are like brakes when applied to the wheels of the locomotive, paralyzing the delicate nerves of the bodyand in every way interfering with ~~the~~ the processes, ~~of the body~~, compelling the liver, for instance, in addition to its ordinary work, to destroy the poisons of nicotine when it should be engaged in destroying the poisons of the body. We are told by medical investigators that if we introduce nicotine into the portal vein (the vein which goes to the liver) it will require twice as large a dose to kill a rabbit, as if it were introduced into the skin. Why? For the reason that when introduced into the portal vein the poison must go through the liver,and half of it is destroyed by the liver. That is the reason a doctor will give a quarter of a grain of morphia in the mouth and half as much by hypodermic injection; because , when put into the skin by hypodermic injection the whole effect is expended upon the body,and when taken by the mouth,it is passed into the portal vein, carried to the liver,and there, half the poison of the drug is destroyed.

Now if the liver must expend a large share of its energy in destroying the poisons of nicotine, thein--tea and coffee--if the liver is devoting a large share of its energies in destroying these useless poisons--if a large part of its energies is used in that way, it cannot use all its energies ~~in~~ has not enough left to destroying the poisons of the body, and hence they accumulate. It is no wonder that the man who chews tobacco has a sallow complexion. This is

not because the tobacco accumulates, but because the poisons cannot be removed, the energies of the body being used in eliminating the natural poisons generated by the tissues. When poisons accumulate within the body, the brain is tired. Why is the brain tired? Because the poisons paralyze the brain-structures so that they cannot continue their work. The same is true of every structure of the body. Every effort and movement of every organ and tissue of the body makes poison, and it is the duty of these excretory organs to carry these poisons out of the system, so as to enable the various organs of the body to perform their work properly and normally. Now if these poisons cannot be eliminated, the organs of the body cannot properly perform their function the body cannot rise to high tide, and the consequence is that the life is less efficient than it ought to be.

I want to make this point clear, that in order to live the best and the highest life we must live a pure life; we must eat what is good for us to eat, and drink what is good for us to drink. It is singular that so many people imagine that it is possible to make good bones and muscles out of garbage. It has been found that dogs are subject to jaundice when fed upon garbage. It has been found that when fed upon bread and milk they do not have jaundice but when fed out of the garbage barrel they are certain to have it. The garbage box is the dog's table, and the table of the French hotel is the garbage box of those who take their meals there. The man who eats at this table will find that his dog, who eats the crumbs that fall from his master's table will have ~~the~~ jaundice; it is no wonder that his master gets jaundice. But there are some things found at such a table that I think even a dog won't eat, for example, I never have seen a dog eat cucumber

pickles,-- and very few dogs could be induced to eat Switzer cheese, or Limburger,--I doubt if any reasonable dog would eat such articles as that . (Laughter.)

It is an astonishing fact that many parents will feed to their families what they wouldn't think of feeding to their domestic animals. No farmer would expect his horses to eat such things as he provides for his wife, his daughter or his son to eat; he would not allow his horses to eat such things if they were high-blooded. The lady who has a pet canary takes an infinitely greater amount of pains that its food shall be wholesome and properly prepared and that it is a healthful food than she does in selecting the food for her family. As she makes out her bill of fare for dinner, the question with her is, "What do my husband and children like, and what do I like," and so, the mince-pies, cookies and other "goodies" are prepared--not because they are adapted to the wants of the bones, brains and muscles, but to suit a perverted taste; and for this reason the pepper,pepper-sauce, mustard, etc., articles which burn and blister and sting the throat as they go down, and which continue to burn and blister and sting after they get into the stomach. Such articles are not taken into the stomach to make better bones, blood, muscles and tissues, but simply to gratify an abnormal and unnatural taste. A wild Indian wouldn't think of eating such things; he knows where to find wholesome things and how to find them; he won't suffer for anything that he wants to eat that is wholesome, because his sense of taste and smell shows him what is wholesome and what is not. Anything that has a smarting, stinging, burning taste he knows to be unwholesome, because Nature has put these tastes into these things as signboards which say with the utmost

distinctness to the uncivilized man--the unperverted man, "These things are unwholesome and not fit to eat." Nature puts these things into those articles that are unwholesome. And yet, see what pains we take to gather these unwholesome and injurious things and, with them, contaminate pure, wholesome and blandly flavored articles,--putting these poisons into things which are perfectly wholesome. I saw a lady the other day who was horrified with the idea of putting a mustard plaster over her stomach,--"Why," said she, "I thought you applied galvanism, etc. It might raise a blister and be sore for six weeks." "That is very true," I replied. "Well," said she, "cant you prescribe something else?" "Why," said I, "I thought you were very fond of mustard plasters." She was then eating every morning mustard enough to raise a blister as big as my hand, as I told her; that, as she was applying mustard to the inside of her stomach, it ought to do as well to apply it to the outside of the stomach.

The inside of the body is more important than the outside, because the mucous membrane is capable of so many transformations, and the gastric juice digests the food performing the alchemic process of converting food into blood, bones, brain and muscle--and even into thought. Now of course an irritated mucous membrane must be a crippled one. People who put things into the stomach that will not make good brains, bones and muscles, etc., impose an extra burden upon the eliminative organs, as I have stated bef before.

An English doctor, some years ago expressed to me the belief that the Americans were a nation of dyspeptics,--said he "In your practice in America, I suppose you have mostly to deal

with dyspeptics." "Yes," I said, "we have the reputation of being a "nation of dyspeptics," but then we have some other diseases to deal with,--rheumatism, Bright's disease, and the great long list of nervous diseases, particularly neurasthenia and a great many other complaints, some of which are quite peculiarly American. I didn't realize then so clearly qas I do at the present time, that rheumatism, as it has been pointed out by Bouchard, a most eminent French physician, and also by Vigoroux and Prof. Dana of New York, that nervous diseases ~~which~~ are also due to the poisons of the stomach and of the body,--in fact that a large share of the cases of Bright's disease and the organic changes of the body and the various degenerations of the body and tissue changes--are really induced by the poisons set up by a fermenting and decomposing amount of food in the stomach; that these decompositions work mischief in every fiber and every cell of the entire body, and really come to be the foundation of almost all the diseases from which we Americans suffer, so that, for instance, we are really treating dyspepsia when we are treating Bright's disease; we are treating the results of a bad diet when we are treating nervous disease.

Many complain that they are suffering from overwork. I have frequently had people say to me, "I am suffering from overwork. "What have you been doing," I ask. "O, I've been doing this, that or the other thing,"--only just enough to serve for a pastime. People are often weary after doing work enough to represent recreation--just enough work to keep them from getting rusty in the hinges. The fact is, that the work is usually hard because the body is laboring under so many disadvantages. It is almost im-

possible to injure the brain by normal, healthy work; but the brain is injured by work when it is not thoroughly supported by a healthy stomach. When supported by physiological work, the brain will endure an unlimited amount of work; you can work your brain as hard as it is possible for you to do without the least possible damage to it, so long as that brain is supported by a healthy stomach, so long as the blood is pure, so long as the system makes healthy blood. When the brain has worked so long that it is getting into a dangerous situation, Nature's great remedy for work, balmy sleep, comes in and renders it impossible for the brain to work longer without rest. Now suppose a person goads himself up with tea or coffee, or spirits ~~some similar poisonous drink~~, so that he compels his brain to do a little more than it ought to do: then he is making drafts upon his constitution; he is introducing a larger quantity of poisons into his system than ~~he~~ it is able to endure. But I am satisfied that a healthy man may work his brain as hard as he can without injury. The brain is almost fluid, jelly-like in its structure; it is supplied with about one-fifth of all the blood there is in the body, so that it is better cared for than any other organ of the body.

There is another reason why it is our sacred duty to care for the body, and that is, -these bodies of ours are so marvelously constructed, -they are such wonders of skill. Any one who has examined the muscles through the microscope must be impressed with the wisdom and the infinite skill displayed in the construction of the human body of little cells, so minute thqt a thousand of them might be arranged in a row, and the row would be only an inch long. By examining the human body you will find it is composed of these

little cells. The body is a community; it has different elements, each being set apart for doing different kinds of work, and all working together in the most perfect harmony.

Now in this wonderful arrangement of the ~~body~~ human body we have an evidence of design,--an evidence of intelligent design. Herbert Spencer says (and I qote him because he is not a theologian); "After we have done our best to solve the secrets of Nature and after we have made all possible allowances for the automatic operation of law, back of it all, there is an Unknowable Intelligence at work." This Intelligence shapes every crystal and every rain-drop, and is at work in every fiber of our bodies. It is an Infinite Intelligence at work that maintains each heart-beat. Your heart and my heart would not make another beat if it were not for that Infinite Intelligence,- if it were not for that intelligence and power ~~("God" we might call it)~~ working in our fibers, causing the lungs to breathe in and out. And so, every function of the human body is working under intelligent direction.

Things are not going by chance. There is no such thing as automatic law; there is no such thing in the universe as a law operating itself. It is the unknowable intelligence of mind. Nobody can understand it,--no one, for instance, can understand gravitation. I once asked a ~~man~~ physician if he believed the Bible. "Well, some parts of it, but," said he, "I don't know about some things in the Bible,--for instance the healing of blind eyes by putting clay upon them. If there was any evidence of any medicinal quality in the clay, I might believe it; otherwise, I can't understand how putting earth upon blind eyes should heal them." "Well," said I, "can you explain to me how medicine does its work?" "Why yes. If you put an astringent upon the eye it con-

strists the bloodvessels and relieves the eye and it is made better." "But that is only putting the difficulty back a step,--How does the medicine contract the bloodvessels?" "Why the medicine acts upon the nerves and nerve-centers, and these as upon the bloodvessels." "Well how does the medicine act upon the ~~nerve-centers~~ nerves and nerve-centers, and how do they know how to act upon the eyes?" "Oh," he said, "nobody can explain then." Of course we can't explain it; when we come to the ultimate facts no one can explain them. I asked a gentleman to explain the reason why my pencil dropped to the ground when I let loose of it. "Why," he said, "that's gravitation." Then I asked him to please explain gravitation." "Why,--it's the law of gravitation explained by Newton, which caused the apple to fall to the ground--it was gravitation that caused the apple to fall when loosened from the twig, he called that force 'gravitation.'" But naming a thing is not explaining it. The physicists explain light in the same way; they tell us that it travels to the earth in about eight minutes, so that when we see the sun rise it has been up about eight minutes, and when we see the lower limb of the sun touch the horizon at night, the sun had set eight minutes before. They also tell us that we may see, away out in the boundless Universe the light of stars which burned up thousands of years ago. I see, in the papers, that a new star has been discovered; it is said to be the fifteenth one that has been discovered within the last two or three years, and there has been a great deal of ado about it. It is only a small, telescopic star, and had not appeared upon any other map,--and it may have been burned up thousands of years ago, while its light is still visible. ~~Light is a slow coach; it takes light eight minutes~~

Light is a slow coach compared with gravitation. If it takes light eight minutes to travel from the sun to the earth, how long would it take for light to travel millions of millions of millions of times as far from the sun as the sun is from us! It takes light ten thousand years, traveling at the rate of 186,000 miles a second to reach us from some stars that have been discovered in the remote regions of the universe. So light, comparatively speaking, is very slow. Now if a star were born away out upon the farthest conceivable limits of the universe so that it would take light 100,000 years to get here, this earth would feel the pull of that new force brought into the universe--the very instant that new star came into existence--although its light would not get here for a hundred thousand years. Gravitation thrills throughout the universe. Every pulsation of the solar system is felt throughout the whole universe, within its limits, may be in an instant of time. That is one of the evidences of infinite force and infinite intelligence, and we cannot comprehend it because it is beyond comprehension.

That same power and intelligence is working in us,--in the wonderful mechanism of our bodies. These bodies are commonplace to us, but they are the most wonderful and admirable things in all the world. They are so commonplace to us that we come to neglect them, or treat them like a toy which a child is delighted with to-day, and to-morrow tears to pieces and throws into tht fire. Now that is about the way we treat our bodies.

And why do we ~~treat our bodies thus~~ do it? There is no reason for it; it is incomparably absurd, the way in which we treat these wonderful bodies of ours in which we have the highest expression of

unknowable intelligence. "God made man in his own image." He can will and create. In this respect he is divine, and in this respect he is an image of him that created him and that made the world. This I say is the greatest of all reasons why it is the duty of every human being to care for his body,--to so relate himself to all the conditions of life and of his environment that he can have the best possible body and the clearest possible brain the strongest muscles, the best physique and the best heart and stomach, so that he can be in every way the best man,--or the woman can be the best woman physically, mentally and morally. I cannot at all agree with the ecclesiastical poet who taught us to sing

"Poor worthless worms are we,"

any more than I can agree with the poet who composed this epitaph,

"Under this sod and under these trees
"Lieth the body of Solomon Pease.
"He is not in this hole, but only his pod;
"He shelled out his soul and went up to God."

Now the idea that the body is a "pod" to be cast out and trodden under foot,--that idea has led a great many people to abuse their bodies as worthless objects. While in Mexico I passed by a church inside of which was a horrible spectacle. The walls and floor were all bespattered with blood,--and sometimes that floor is streaming with blood; and pools of blood are frequently found there. Why ? The devotees of the church go into that room in that church--the poor ignorant people of Mexico who have committed sins (as all human beings do), and ~~there~~ they are taught

to abuse themselves and flagellate themselves with cactuses which have spines to them half an inch long; and they prick their feet with them,--they step on them with their bare feet; and they whip themselves with ~~these~~ thorns of a dreadful character, such are never to be found in this country. They lash themselves with whips having ~~these~~ long nettle points till their blood pours over the floor. They are kept in this room in that church for ten days shut in with a high wall, with only a small morsel to eat each day. They also wear upon their brows crowns of thorns, the thorns thrusting into the flesh. They have an idea that they in this way make their souls very pure; and they have an idea that it is no matter what a man does with his body. Many have this idea.

I think we ought to have a more robust ~~xxxx~~ theory in reference to this matter. Our Sunday school books have taught us wrong ideas The hero of the Sunday school boock is generally a poor hollow-eyed mother, a consumptive or hunchback boy, or a freckled faced girl with red hair hair, -or ir is some one troubled with some awful malady, or some one awfully homely. The idea seems to be that if you would be good you must be homely. (Repeating prayer of little girl that the Lord would "make us very stylish.")

Now the Lord made the first man really very stylish; he was a very stylish man, and the first woman was a very stylish woman. But we have departed from that model, and have become very differen from it. The Lord wants every man to be just as beautiful as he can be; he wants him to be just as healthy as he can be, and just as happy as he can be . I don't think the Lord ever made any one sick in this world. Sickness comes from the devil.

The Lord never made a man or a woman sick, but people often talk as if they thought he did. I remember the case of a poor

girl in the Sanitarium (Repeating story of "Poor Blossom and her 'thorn.'") Now it is this sort of sickness that people often complain of, and for which they charge Providence, which comes from their own wrong-doing, their own abuses. It our own evil habits and propensities that make us sick. It is not useful physiological work which makes us sick. ~~We are more like a machine~~ Worry may make us sick. In that case we are much ~~more~~ like a machine running without oil on the bearings, machines that are encumbered with useless lumber. But after all, in many cases, sickness comes from Christmas dinners, gormandizing and the general abuseof our bodies in the use of many useless and unnecessary things.

Now suppose we should come down to simple ways of living--like our forefathers of a thousand years ago , or our relatives among the lower animals. Suppose we were satisfied with a simple bill of fare like the horse. If a horse can get all the hay and oats he wants, he does not ask for anything else. But what do we want? We want not only the useful things,--the hay and the oats, so to speak, but we want something that is absolutely useless and horrible. We are not satisfied with the delightful things that the earth has given us, but we rush out into the field and seize upon the animals that the Lord meant to have a good time we cut the throat of a sheep and we eat him; we pounce upon him as a lion does upon his prey.

And then we eat decaying things, such as cheese,--ancient, rotting milk -that is no more fit to eat than--what shall I compare it to? I can hardly find a comparison that is bad enough for it. Repeating story of the "unnatural crime .") Well we commit a good many of these unnatural crimes,--for example, I saw a

man swallow a live oyster the other day. Suppose you put yourself in the place of that oyster,--you would think yourself the prey of some huge Minotaur. (Repeating "oyster poem.")

Well, we go on with these abuses, one after another, , abusing our bodies in endless ways, and then charging Providence with the results, when Providence hadn't a thing to do with it. A doctor and a clergyman once met at the bedside of a man who was dying. The clergyman was praying that the family might be reconciled to this strange dispensation of Providence. The doctor who had just been called in smelled something coming up through the cracks of the floor and he opened the cellar door and went down and took a peep into the cellar, and found in it a lot of rotting vegetables and other horrible things which had sent up their poisonous emanations and disease germs through the cracks of the floor. When the doctor came up out of the cellar, he said "This ~~death was~~ sickness is not due to a dispensation of Providence, but to a dispensation of dirt." (Laughter.) The cellar was then cleaned out and the man got well after all .

We go on in this reckless way abusing and squandering our health as though we had an unlimited supply, and when it is lost, we feel sorry that it is gone,--sorry enough, perhaps, to go a thousand miles to find some Sanitarium, and then they expect to atone for all this sinning in just a few days. We don't realize the fact that our constitutions have been damaged; that we have done this o ourselves, and that we have got to pay the debt; we have got to return, in some way, some capital compensation for ~~it~~ what we get; that if we buy health we have got to pay for it ,--we have got to give some capital compensation for it .

During the past, and not at a very remote period, there has been a wrong idea as to the value of the body. The body has been considered worthless,--a thing to be trodden under foot; a thing to be despised. This has been the theological teaching, in part, at least, of the past, and this wrong theological teaching has introduced wrong practices in regard to the body. I am glad to see that our Young Men and Women's Christian Temperance Associations are teaching a more wholesome theology. I find that in our public schools also there are being introduced systems of exercise and teachings in respect to the care of the body which are antagonizing the ideas of the Middle Ages, and we are seeing better ideas and better results, and I hope we shall yet have still more prevalent the ideas so well expressed by Shakspeare, —

"What a piece of work is man!

"How mighty in reasoning!

"How infinite in faculties!

"In form and moving, how express and admirable!

"In action, how like an angel!

"In apprehension, how like a God!

"The beauty of the world, the paragon of animals."

(Applause.)

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TWENTY YEARS' EXPERIENCE IN THE NON-ALCOHOLIC

TREATMENT OF DISEASE.

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On becoming connected with the Battle Creek Sanitarium, an Institution of which I have had charge for the last twenty years, having been connected with the Institution for a year or two previous, I established it as a rule that alcohol should not be relied upon as a therapeutic agent in the treatment of curable cases; that, if used at all, it should only be in those cases which were utterly hopeless, and in which it was, consequently, useless to withhold any agent which would afford even temporary relief to the patient's sufferings. These cases have been so rare that it may be said that alcohol has been absolutely discarded as a therapeutic agent under any and all circumstances in the Institution of which I have had charge for the last 21 years, although it had been previously used, though very sparingly.

The total number of patients treated during this time, of which careful records have been kept, is ..... In addition to these, a considerable number of cases have been treated by myself and my colleagues in the city and surrounding country who have not been inmates of the Institution, and in dispensary practice in

connection with our Medical Mission in Chicago, of which less complete records have been kept. This number aggregates something more than ....thousand.

The majority of cases treated have been persons suffering from chronic disease. As the larger proportion have been sent to the Institution by their attending physicians, it is scarcely necessary to state that they have been cases of more than ordinary gravity, requiring advantages which they could not receive at home.

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treatable

THE CURE OF INCURABLES.

The purpose of this paper is to call attention briefly to the methods by which a very large proportion of cases which are to a great extent abandoned as intractable, and which are incurable under ordinary conditions, and with the methods of treatment ordinarily applicable, and without the aid of special therapeutic measures, and such changes of regimen and environment as will remove exciting and predisposing causes, and establish favorable conditions.

I wish, on the opposite, to disclaim any pretention of extraordinary skill or wisdom in dealing with this or any other class of cases, my purpose being simply to show what can be accomplished in cases which are incurable under ordinary conditions, by focusing, as it were, upon the case, at one time and in one place, all the resources offered by scientific medicine. I have often found cases which have been for long years abandoned as hopelessly ill, to yield readily to a judicious combination of measures which had previously been employed in succession, but which had never been found found available in conjunction. The cure of some of these very chronic cases must be produced on the same principles as that on which a heavy building is raised. A single jackscrew, although powerful and efficient, can accomplish nothing, while a hundred, worked together, easily accomplish what is apparently impossible.

A combination of physiological measures and rational remedies often result in the cure of cases which, from the standpoint of a practioner familiar only with the application of ordinary remedial measures, would be justly regarded as absolutely incurable.

THE CURE OF INCURABLES

Among the disorders which the term incurable is very commonly applied may be enumerated the following: chronic rheumatism, locomoter ataxia, dilatation of the stomach, infectious jaundice, diabetes, Bright's disease, exophthalmic goitre; and cases are not infrequently met in which patients suffering from ~~xxx~~ asthma, hysteria, chlorosis, progressive emaciation, dyspepsia in its various forms, obesity, epilepsy, tuberculous disease of the lungs, insomnia, melancholia, migraine, tic douloureux, functional pelvic disorders of women, and the protean disorders included under the general term, uric acid diathesis, have so stubbornly resisted all measures of treatment which have been applied, that they have been pronounced incurable by one practioner after another, and the case has come to be recorded as practically hopeless.

It is not the purpose of this paper to enter upon an exhaustive consideration of either the pathology or the therapeutics of the various maladies named, but to present simply a brief outline of the general and particular methods by which stubborn and so-called hopeless cases belonging to the various classes named, have been successfully treated, together with ~~x~~ briefly stated, illustrative cases.

The general principles which the writer has followed for something more than twenty years in the treatment of chronic ills, may be stated as follows:

First. The chronic invalid is, as a rule, sick as the result of some fault of constitution, of environment, or of habits of life. In undertaking a course of treatment for his relief, First, attention must be given to the removal, so far as possible, of every immediate or remote cause of his malady. ~~xxxxxxxxxxxxxx~~

Second. The cure of chronic maladies is to be accomplished not by any process of antidoting, nor by what might be termed therapeutic juggling in the use of tonics, stimulants, alteratives, sedatives, cholagogues, laxatives, diarretics, nor by medicine magic of any sort, but by control of the regimen, systematic training, education, and employment of such physiological agencies as scientific hydrotherapy, electrotherapy, active and passive exercise skillfully and systematically employed, change of environment or climate in some cases, and the adoption of every measure calculated to establish normal conditions to every bodily function, not neglecting such attention to the pateitn's mental and moral states as may be required.

Third. The chronic invalid is sick, not in one part only, but universally. What he needs is not simply an improvement in the condition of his stomach, liver, nerves, or of any other single organ, no matter how conspicuous the symptoms may be in this particular part, but a general tissue regulation and reconstruction. He needs to be born again physically, so to speak, and no permanent improvement can be secured by any process which stops short of the complete rebuilding of the entire body.

Fourth. Those means are most effective in the treatment of chronic disorders of those classes, which most profoundly and favorably affect tissue change and repair. It must be remembered, however, that no remedies are of real or permanent value except those which secure an actual improvement in bodily structure. The long list of tonics, stimulants, rejuvenants of various sorts, the administration of which is followed by an immediate quickening of vital activity, and a feeling of comfort and well-being, are almost without

exception, delusive, and unless employed merely as temporary expedients, are highly injurious, and in no way conducive to actual recovery, as they only hide the actual condition of the patient, giving him the impression that he is better, whereas he is really no better, but rather worse.

Tonics or stimulants do not produce an actual increase of strength or vigor, but only render it possible to get out of the exhausted nerve centers, or other organs, a little more work without giving them an increased ability for work, still further lessening the body's store of energy, and so making the patient really worse instead of better. Tonics and stimulants are used, but, as intimated, only as temprary expedients, and in the rational treatment of chronic disorders they must accordingly play but a very insignificant role. What the chronic invalid wants is not simply to be made to feel better, but to be made actually better.

The wonderful developments which have been made in bacteriological and physiological chemistry within the last few years, and the important facts to which Bouchard and Glenard have called attention within the last eight or ten years, in showing the intimate relation existing between various forms of visceral displacement and the various nervous and other chronic disorders, and the widespread mischief resulting from the formation of various poisons within the alimentary canal, and their distribution throughout the body, as seen in functional disturbances of various sorts, and even tissue degenerations, giving rise to various forms of paralysis and organic disease of the kidneys, liver, and other organs, has thrown a great flood of light upon the pathogeny of a great number of disorders, and has opened

up new paths in therapeutics, which lead to most complete success in cases which had previously necessarily proved utterly refractory to therapeutic measures which we now know were necessarily futile, because misdirected.

For more than twenty years I have devoted myself almost exclusively to the treatment of chronic ailments and a great majority of patients have been persons who have been long ill, and most cases have resisted the use of medicinal and other ordinary medical means. With a few exceptions, my patients have been sent to me by physicians who themselves recognized the futility of methods of treatment accessible to their patients at home, and the necessity of more thoroughgoing measures. Not infrequently physicians write me, as did one of considerable eminence as a specialist in nervous disorders, who, in his letter introducing his patient, remarked, "I have had this patient under treatment for nine years. I have been giving him all the tonic known to materia medica, but he is no better; he gets steadily worse, and I have made up my mind that he requires a course of physiological stimulation." This is the situation of the average chronic invalid; the requires, not artificial but physiological stimulation. This sort of stimulation comes from the relief of overburdened organs and the facilitation of all the vital processes by careful regulation of habits and the application of such therapeutic measures as will aid ~~eliminative~~ eliminative, recuperative, and other vital processes. How this may be accomplished in the various classes of chronic cases, it is the purpose of this paper to briefly outline and illustrate.

I have accordingly selected a few typical classes of cases which are generally regarded as either incurable or so intractable that little or no encouragement can be properly given the patient, and will proceed to outline briefly the special therapeutic measures and regimen which I find successful in dealing with each particular case.

BRIGHT'S DISEASE.--

There is no disease in which more satisfactory results can be obtained than in the treatment of this disease formerly regarded as so hopeless. Of course it is not to be expected that a patient suffering from Bright's disease will be made absolutely sound,--that is that that portion of the kidney structure whixh has been actually destroyed can be reproduced. Nevertheless, every morbid symptom may be made to disappear in quite a large proportion of cases, and the patient can be established in a routine of diet and regimen by the careful following of which he may enjoy excellent health, and even long life.

In the treatment of this disease, it must be remembered that in at least a large proportion of chronic cases of this disease, the disorder is the result of long continued irritation of the kidneys by toxic substances absorbed from the alimentary canal, having been received with the food, or developed in the stomach and intestines by abnormal fermentations.

The relation of stomach and intestinal fermentations and decompositions through the action of microbes to disorders of the kidney and to so-called uriric poisoning, has been very clearly pointed out by Bouchard in his wonderful work on "The Auto Intoxi-

cations," as well as by his pupil, ... who has carried still farther the interesting researches begun by his mater. It must also be bourne in mind that the kidneys are in a crippled condition, hence able to do less work than healthy kidneys, and that they are in a condition very susceptible to irritation, hence especially liable to injury from irritants of any sort, either received from without or developed within the body, or from disturbances of the circulation resulting from exposure to cold. In keeping these facts in mind, the general plan of treatment pursued with this disease is as follows.--

1. Absolute rest in cases of acute Bright's disease, and during acute exacerbations of the disease in chronic cases. Exhaustion from muscular effort at all times, must be carefully avoided on account of the danger of overwork to the kidneys in the elimination of fatigue poisons.

2. An aseptic dietary, whichmeans the absolute disuse of flesh foods, especially fish, oysters, shell fish of all kinds which readily undergo decomposition in the alimentary canal producing toxins and ptomains which require eliminationthrough the kidneys, and hence may increase the work to an enormous degree.

Bouchard called attention to the fact that the fecal matters of persons eating meat have a toxicity several times greater than that of a person living upon a non-flesh diet. In experiments which I made a few years ago, I found that flesh diet increased the toxicity of the urine four fold. In this case the amount of urine was also increased fourfold.

In a case investigated by Bouchard, in which there was clear

evidence of intestinal infection the urine was found to contain fifty times the normal amount of toxic substances. Kidneys exposed to such an influence as this must necessarily be irritated and imperiled to a high degree. In extreme cases it is necessary to confine the patient to the simplest and least toxic of foods. A milk diet is sometimes advantageous. Gilbert and Dominici showed that an exclusive milk dietary in two days reduced from 67,000 milligrams to 16,000 drams per milligram to 1350. I have found, however, that in many cases ordinary milk does not agree well with patients especially incases of dilatation of the stomach. The reason of this has been shown by Bouchard to be that the dilated stomach is likely to retain fragments of hardened casein until decomposition is set up. In such cases I found kumyzoon, an improved kumys, of great advantage. Kumyzoon is made by the addition of a pure culture of yeast from sugar, without the kane sugar. The milk is then charged with the CO_2, and the resulting fermentation is practically non-alcoholic.

De Backer, in a remarkable work entitled, "Les Ferments Therapeutique" (The Therapeutic Ferment) has shown that yeast cells possess the property of phagocytosis, which explains the special value of kumyzoon as a means of securing intestinal asepsis.

Frutis, nuts, and farinaceous preparations can ordinarily be employed with excellent advantage upon these cases, though during an acute attack I find a diet exclusively confined to milk, buttermilk, or kumyzoon most serviceable. Mustard, pper, and condiments of all kinds must be avoided, as also tobacco, alcoholic and tea and coffee. Cheese and other decomposing foods must, of course, be excluded from an aseptic dietary.

3. The patent must dress in woolen at all seasons of the year and should carefully avoid chilling the surface. His habits must be temperate in every respect. Sectual excesses are, in the highest degree damaging, and every form of physical exhaustin must be avoided, as likely to precipitate at any moment an acute exacerbation of the disease.

Case 1. Mr. C. a young man aged twenty years, a fireman employed at the Sanitarium, took cold and in a short time developed acute Bright's disease in a very severe form, the whole body being swollen with edema almost beyond recognition.

4. Drugs are of little or kno nowalue in these cases. Diuretics are, in the highest degree detrimental, as well as mineral waters of all sorts, as they overtax and cause a crippled condition of the kidneys which need rest and relief rather than additional burdens. . The patient was ordered to drink from two to four pints of distilled water daily. Hot and cold baths should be carefully avoided. The patient takes tepid baths two or three times a week; is each day subjected to vigorous friction of the skin, either with a dry flesh brush or with moist salt. Care must be taken in the administration of massage, especially at the beginning of the course of treatment, as otherwise an excessive amount of muscle poisons will be suddenly thrown into the circulation. Centripetal friction and superficial kneading or fulling, are the most suitable measures. Swedish movements, breathing exercises, very light ~~mk~~ calesthenics, and light apparatus work in the gymnasium are indicated. It is important, however, that the exercise should be based upon a careful determina-

tion of the total strength of each group of muscles by the dynamometer, (See Paper by the author entitled "A New Dynamometer," etc.) together with a careful determination of the uretoxic coefficient. The latter determination is carefully made in every case at the beginning of treatment and at frequent intervals while the patient is under observation.

The uretoxic coefficient is determined by injecting the urine of the patient into a vein of a rabbit's ear until death is produced, then comparing the amount of urine required to kill the rabbit, the weight of the rabbit, the weight of the patient, with the total quantity of urine produced in twenty-four hours by the patient. The normal coefficient is .46. A low coefficient indicates that the kidneys are not able to do the normal amount of work in the elimination of poisons, and shows at once the necessity for strictest adherence to asepsis in diet and careful attention to all the precautionary measures whereby the development of poisons in the aminentary canal may be limited, while proper methods are used to increase the activity of the organs without overstimulating them. This is best done by means of the warm anema with the retention of as large a quantity of water as possible, copious water drinking, the use of the wet girdle or umschlag, massage of the legs, fomentations over the region of the kidneys and abdominal massage.

Case 1. A lady aged sixty-two years. Examination showed diminished quantity of urea and enormous amount of albumen. When heated in a test tube, with acid, the urine is almost solid. This patient had suffered from chronic malarial poisoning for the

quinia, having continued this for a good while. It was found that the administration of quinia always produces a great increase in the proportion of albumen in the urine. The malarial paroxysms which still continued in full force, were finally subdued by means of hydrotherapeutic applications and after a few weeks the albumen almost entirely disappeared. The patient returned home after five or six months enjoying excellent health. The extreme anemia had entirely disappeared together with all the malarial symptoms. The patient gained in flesh, had plenty of color in cheeks and lips, and has remained in good health ever since, now some six years.

Case 2. A man aged eighteen, suffering from acute Bright's disease with general dropsy. His friends thought the attack to be due to an overdose of turpentine administered by a physician while the young man was suffering from an attack of typhoid fever. the urine showed an enormous quantity of albumen. At the end of three months the albumen had entirely disappeared and the young man has remained in good health ever since, now some fourteen years.

Case three. A Young man aged fourteen years, fireman at the Sanitarium suffered an acute attack of Bright's disease, the cause of which is not apparent. There was general dropsy in an extreme degree, an almost complete loss of vision, from retinitis albuminurica. After three or four months treatment in accordance with the principles above outlined, the albumen had entirely disappeared and the patient has remained well ever since,--some thirteen years.

Case 4. A young man aged eighteen years, residence Ontario, had suffered from Bright's disease for something more than one year. The amount of albumen present in the urine was excessivvely great. The patient was very weak, emaciated and dropsical. At the end of two months he had made excellent improvement, was able to walk without inconvenience two or three miles, and considered himself almost entirely well. He went on a two days visit to Chicago, tramped about the city all day, and ate several "square meals" as he called them. On returning, after a day or two he complained that he was not quite so well. He was confined to his bed in forty eight hours and in a week he was dead, in spite of all that could be done for him, evidently the result of dietitic and other foolish digressions while in Chicago.

Case 5. Mrs. J.H.W., aged seventy, for many years was a smoker, andalso adicted to the use of alcoholic liquors; had suffered from Bright's disease for twelve years. Examination of the urine showed four and a half per cent of albumen. The albumen was gradually reduced to one and one-half per cent and finally disappeared entirely at the end of the two weeks' treatment.

Case 5. Mr. P. of Ohio, aged seventeen, had suffered from Bright's disease for two years. Examination of the urine showed twenty-five percent of albumen. In less than a month under treatment, the albumen had been reduced to three per cent, and is still diminishing at the date of the last report.

(here introduce Miss Ross' manuscript.)

DIABETES. Although this malady is quite too often pronounced incurable, susceptible only of a very moderate degree of control, a careful study and management of a large number of cases shows it to be possible to effect a cure in 50 or 60% of cases in which sugar in considerable amount is found in the urine. In diabetes there may be either an over-production of sugar, through excessive acidity of the liver, or a lessened oxidation of this carbonaceous element, the system failing to burn up the sugar circulating in the blood. There are three things to be accomplished --

1. Cut off the supply of sugar.
2. Diminish its production in the body.
3. Increase the oxidation of sugar.

Before beginning the treatment in the case of diabetes the exact amount of sugar per day is determined, together with the coefficient of nitrogen oxidation, and the urea toxic coefficient.

The simple form of diabetes is readily controlled by the restriction of the dietary and general increase of oxidation process by means of vigorous exercise, massage, Swedish movements, cool shower baths followed by brisk rubbing, and Scotch douch, the inhalation of oxygen and the administering of oxygen by enema.

In the severe forms of diabetes great care must be taken to determine whether there is increased or diminished oxidation of proteids. The coefficient of nitrogen oxidation is determined by the following method: The total nitrogen of the urine is ascertained by quantatitive estimation, another determination of the amount of uric acid and xanthian basis representing the unoxidized nitrogen is made; dividing the unoxidized nitrogen by the total nitrogen gives the percentage of unoxidized nitrogen, subtract this from 100 and it gives us the percentage of

oxidized nitrogen, or the coefficient of nitrogen oxidation. By subtraction of the unoxidized nitrogen from the total nitrogen we get the total nitrogen oxidation, the comparison of this amount with the normal shows at once whether there is an increased or diminished oxidation of proteids. Increased nitrogen oxidation indicates an excessive amount of organic waste, a condition in which cachexia and diabetic coma are likely to develop suddenly. The urine is very frequently acid from the presence of diaceturia acid, which shows the characteristic color of chloride of iron. In this form of the disease the patient must rest in bed, even massage and other passive movements are avoided, with the exception of careful joint movements and centripetal friction -- warm baths tepid sponging, tonic applications of electricity are administered, the diet consisting chiefly of kumyzoon or buttermilk and well emulsified vegetable fats in the form of bromose or nuttose, well cooked preparations from nuts.

In diabetes with dimisished oxidzation, which constitutes 10 or 12% of all cases of diabetes, there is generally some marked disturbance of digestion occurring at intervals with an increase of sugar in the urine. Such cases require inhalation of oxygen, oxygen enemas, cool spray or shower, with friction, massage, static electricity, breathing exercise, manual Swedish movements -- all violent exercise such as bicycle riding and vigorous gymnastic exercises must be avoided.

An exclusive meat diet is dangerous in all forms of diabetes, and especially in grave cases. In cases of diminished oxidization of proteids there is special danger, from the fact that the system is not prepared to relieve itself of tissue poisons, so that the addition of toxic elements (always present in the flesh of dead animals, might be sufficient to precipitate a crisis in an attack of coma.

By careful management I have frequently seen sugar reduced from 8 to 10 oz. in 24 hours to only a few grammes within a few weeks. In cases in which the amount of sugar is not more than 100 to 200 grammes in 24 hours, the sugar may confidently be expected to disappear in two or three months if the patient's co-operation is thoroughly secured. Restriction to a diet absolutely free from starch is not required, as the system requires a certain amount of carbonate hydrates. The gluten of wheat either pure or with the greater portion of of the starch removed is an invaluable food in this disease. But unfortunately the gluten flours which are sold in great quantities, and most of the gluten preparations offered in this country are fradulent in character, containing practically no less starch than is found in ordinary white flour. The various preparations of nuts and acid fruits are useful in these cases. I am making some extended experiments with Soja beans as a diabetic food. This bean is a native of China and Japan, contains only 11% of starch and an equal amount of sugar, with 25% of proteid matter in the form of true albuminoids and 19 per cent of a very digestible animal fat.

The following patients illustrate what can be accomplished in these cases:

a.

EXOPHTHALMIC GOITRE.--This disease formerly so obscure is now pretty generally conceded to be a disease of the sympathetic nervous system involving the thyroid gland, the disturbance of the heart and the undue prominence of the eyes, being simply especially conspicuous features of a malady in which there is a disturbance of the whole body. Prof. Thompson, one of the leading physicians of New York City, recently expressed at the meeting of the Academy of Medicine, his belief that this malady chiefly depends upon the production within the alimentary canal of excessive quantities of ptomaines and toxins. He found that a milk diet persevered in for some months is almost a specific for this disease. He believed its efficiency to be due to the suppression of vicious fermentation in the stomach and intestines. The writer's experience agrees fully with this view of the disease, which ~~is~~ has almost uniformly yielded to the application of rational measures of treatment.

Case 1. One of the first cases which I find upon my record is that of a young woman aged nineteen years, a resident of Michigan, in whom I observed all the characteristic features of this disease, the first symptoms having appeared the year previous. A non-flesh dietary, strict attention to intestinal asepsis with the application of galvanism to the cervical and abdominal sympathetic, hot applications to the spine, tepid baths and massage, effected a cure in the course of three or four months' treatment. The patient remained well for a number of years, when a relapse occurred, from which, however, she recovered under

renewal of the same treatment, and with this exception the patient has remained well for the last ten or a dozen years.

Case 2. Miss R. aged 22 years, exhibiting the ~~xxxxxxx~~ symptoms of exophthalmic goiter in the person of advanced age. ~~xx~~ The first symptoms of disease had appeared three years before. The patient had tried climatic change and all the usual remedies, had had the advantage of the best medical advice to be secured in Chicago, but steadily grew worse. Absolute rest in bed and aseptic dietary and the employment of the other measures suggested in connection with, the report of the preceding case resulted in a perfect cure within six months. The patient has since married and has two children; remained in perfect health.

INFECTIOUS JAUNDICE.-- This disease is frequently mistaken for gall stones, a malady which generally requires surgical treatment. Researches of Dujardin-Beaumetz and others have shown this malady to be due to infection of the liver, the result of extension of catarrhal inflammation of the stomach or chronic gastritis, first to the duodenum and then to the biliary passages. The measures of treatment which have been found successful are

1. A strictly aseptic diet and careful suppression of all the irritating articles of food, especially condiments, coarse vegetable products, cheese, butter, and in severe cases, even fermented breads.

In cases of dilatation of the stomach, a ~~xxxxxxxxxxxxxxxxxxxx~~ condition very common in this disease, lavage of the stomach

must be administered from one to three times a week, fomentations over the stomach two or three times ~~xxxxxx~~ daily, the wet girdle worn constantly and changed every four hours, worn over the bowels, the Turkish or electric light bath for elimination, the latter being found especially valuable as a means of relieving intolerable itching, the wet sheet pack, hot enema twice a day, copious water drinking, are the measures found most effectual in this disease.

Case 1. Mrs.----, of Boston, Mass., aged 46 years. Jaundice had been present for more than two years. Successive attacks have occurred with so great frequency that the skin had at no time presented its natural appearance since the first attack. The urine contained bile in great quantity. Fecal matters were ~~xxxxx~~ clay colored. ~~Oxxxx

d.

involving the liver. By the aid of a few months' treatment, however, this patient made an excellent recovery. He gained, while under treatment, forty six pounds in weight, after a few weeks' treatment returning home well. He still remains well.

LOCOMOTOR ATAXIA.--Notwithstanding the various specifics which have been offered for this disease, it is still generally regarded as an incurable malady, nevertheless I have seen cases entirely recover under appropriate treatment, I find rational measures of treatment so efficient that as a rule I have no hesitation in encouraging a patient that he may expect a very great degree of improvement, even though he may not get entirely well.

Case. 1. Mr. a, of Rhode Island, aged 37 years. The first symptoms of locomotor ataxia appeared six years previously, beginning at the inside of the left hand, traveling up the arm and down the trunk, shooting pains, crises , ataxic symptoms, girdling sensations, impairment of sight gradually appeared. At the time the patient was examined the knee jerk was absent. The patient could not stand with his eyes shut; could not walk without a cane, difficulty in passing urine, both primary and secondary pupilary reflexes were absent, the plantar reflex exaggerated and also sensibility to heat and cold. Patient remained in the Sanitarium under treatment at the hands of my colleague Dr. Riley for three years. Improvement began almost at once. When he left he had gained ten pounds in weight, there was a decided improvement in vision,

he had discarded his cane, had little difficulty in passing urine, and was in every respect greatly improved.

Case 2. Mr. A, aged 46 years, entered the Sanitarium for treatment in 1903. First noticed ataxic symptoms the year previous; had shooting pains, crises, girdle sensation, incontinence of urine, impairment of vision, ~~xxxxx~~ restriction of the visual field and other characteristic symptoms were present at the time of examination. The patella and skin reflexes were absent. The patient found great difficulty in walking even with the aid of a cane. The patient was under treatment ten weeks, during which time he made very great improvement. The pains which had been exceedingly troublesome had practically disappeared, the patient having had but one severe attack after beginning treatment. He is able to walk two miles without weariness, sleeps soundly, digestion improved, and ~~xxxx~~ he has made a gain of twelve pounds in weight. The patient continued to improve after returning home. On placing himself under treatment again the following summer still further improvement was made.

Case 3. Mr. A, of Illinois, aged 43 years. In this case as in the preceding the patient gave a history of syphilis three years previously; knee jerk was absent; the patient suffered greatly from ataxic pains and from other characteristic symptoms. The patient walked in the dark with very great difficulty and could not stand with the eyes closed; At the end of six months this patient returned to his home in good health. When seen twelve years later his ataxic symptoms had not returned, but the knee jerk was still absent. Many other similar cases might be ~~mentioned~~ mentioned.

f.

In the treatment of this class of cases it must be constantly kept in mind that the degenerative process which lies at the foundation of the disease may be the result of a morbid influence of a toxin upon the nutritive processes, hence the patient is subjected to moderate elimination. The electric light bath is found especially useful in these cases, also the galvanic bath, local and central application of galvanism, static electricity, sinusoidal electrical current, massage, manual and mechanical Swedish movements, revulsive applications to the spine, suspension, fomentations over the region of the abdomen, the wet girdle and other hydro-therapeutic measures together with especial care in the regulation of the diet with reference to asepsis and the improvement of the digestion. It is the writer's belief that if the cases could be placed under the proper treatment and regimen at an early period in the disease the majority of the cases could be cured.

6 CHRONIC RHEUMATISM.--The observation of a very large number of cases of this disease has led me to agree fully with Prof. Bouchard in the belief that this disease owes its origin to the absorption of morbid intestinal fermentations resulting in the production of ptomaines, through the absorption of which the nutritive processes are perverted. Bouchard found dilatation of the stomach in nearly every case of chronic rheumatism examined by him. I have not failed to find stomach dilatation in all cases of this disease which have come under my care within the last half dozen years since my attention was called to the relation of dilatation of the stomach to this disease.

The general plan of treatment followed is this: These patients are generally poorly nourished and often anemic, a generous but aseptic diet is hence required. Careful attention is given to regulation of dietary to meet the conditions of the stomach as determined by a test meal and a careful chemical and bacteriological examination of the stomach fluid. xx

Associated with the dilatation of the stomach, prolapse of the abdominal viscera is frequently observed. These conditions are combated by abdominal massage. General massage carefully directed to the joints and surrounding tissues is xxxx daily applied. When there is much pain or sensitiveness about the joints the massage must first be derivative in character. Later, vigorous application to the joints themselves combined with fomentations and heating processes, and still later joint movements are employed, galvanism, sinusoidal xxx electrical current, the application of static electricity are of especial service in relieving local pain and swelling. Chronic intestinal catarrhxx frequently accompanies rheumatic symptoms. This is generally relieved by an aseptic dietary; sometimes requires in addition, the daily hot enema, either with or without gallic acid in proportion of a dram to a quart of water. Fomentations to the abdomen once or twice daily with the wet girdle or umschlag at night, and such general tonic measures as the electric or galvanic bath, short applications of the electric light bath and tonic baths are also employed. It is a mistake to resort to vigorous elimination in these cases. I have frequently received patients who had experienced great damage by hot baths of various sorts

at popular mineral spring establishments and like resorts. It is not an uncommon thing for patients suffering from this disease to be so thoroughly crippled as to be unable to help themselves about, to be so far restored that they can walk about with ease and engage in the ordinary duties of life. But, of course, it is not to be expected that in extreme cases the structural bone changes which have occurred will entirely disappear.

Case 1. Mrs. H, entered the Sanitarium in Sept. 1880; was almost completely disabled by rheumatism which affected nearly all the large joints. She had suffered from the disease from eight to ten years. Acute exascerbations were very frequent. At the end of four years the patient returned home relieved from pain, able to walk long distances without difficulty, and when seen last year she was still enjoying excellent health.

Case 2. Mrs. B, of St. Louis, Mo., aged 47 years. The patient was so completely disabled by rheumatism that she was confined to her bed. Both limbs were flexed, the joints being almost immovable. Her elbow was flexed; the large joints of both arms were also stiffened. The patient had been in this condition for several years. By persevering effort she recovered the use of her limbs sufficiently for walking, was enabled to place her hands above her head. She scarcely considered herself longer an invalid, although there was still marked evidence of the disease from which she had formerly suffered.

DYSPEPSIA.--Under this head is included a large variety of functional ailments affecting the stomach,

which for centuries have been treated in a more or less routine manner, and unfortunately these maladies, to a large extent, are still thus treated. In a careful study of the conditions of the stomach as shown by after examination of the fluid obtained after a test meal in nearly six thousand cases, I have been able to classify the functional disorders of the stomach, as regards the disturbance of the chemical processes of digestion in twenty six distinct classes, each of which presents special therapeutic indications. A careful chemical and bacteriological examination of the stomach fluid obtained after a test meal is the only means by which definite and exact indications may be obtained for the treatment of functional disorders of digestion. By the aid of this mode of investigation the disorders of digestion, which had seemed to be a terra incognita, a prescription for diet, treatment and regimen can be made with perhaps greater exactness than in any other class of disorders.

The facts obtained by such an examination, and which are necessary for intelligent treatment of the disorders of digestion are

1. The quantity and quality of the gastric juice secreted by the stomach.

2. The quantity and quality of the work done in the digestion of proteids.

3. The activity of salivary digestion in the stomach.

4. The relative rate of disturbance of the digested food from the stomach.

3. The presence or absence of abnormal fermentations in the stomach, and the character of the ferments present.

The location and size of the stomach must be determined by physical examination.

I have not space in this paper to undertake an exact description of the technique of the methods employed for determining these important facts named. It is perhaps sufficient to say that we now possess exact methods by which the data referred to can be determined so that the prescription of diet, ~~xxxxxxxxxxxx~~ ~~xxxxx~~ dietetic and other measures in cases of indigestion need no longer be a matter of speculation or empiricism.

The quality of the gastric juice is determined by exact chemical quantitative investigations, as also the activity of the stomach in the digestion of proteids and starch. By these quantitative estimations a mathematical basis for exact coefficient of the work of the stomach can be worked out. It is now possible to determine with the utmost precision the amount of fluid present in the stomach at a given time.

I have also devised a method by which it is possible to determine with a very considerable degree of accuracy the exact dimensions of the stomach. The method consists of first introducing into the stomach a portion of acidulated water; then after a few moments withdrawing from the stomach a portion of its contents. Placing this ~~xxxxxx~~ aside, distilled water is then poured into the stomach until it is completely filled, careful note being taken of the amount passed into the stomach. As much as possible of the water introduced is then withdrawn through a

tube and its acidity determined. By a comparison of the acidity of the portion of the fluid first obtained from the stomach with that of the second portion, and the quantity introduced, it is easy to determine the volume of the stomach. I find the following formula convenient:--

Letting A represent the acidity of the first portion of fluid obtained, A' the acidity of the second portion, and B the quantity of distilled water introduced, the cubic capacity of the stomach by x, we construct the following formula:--

$$\frac{A' \times B}{A - A'} = x$$

Letting C represent the quantity of fluid first withdrawn from the stomach A is to A' as C is to x, which equals the formula $\frac{A' \times C}{A} = x$

In extensive studies upon dogs and human beings by means of experimental test meals, and especially in the study of salivary digestion, I have observed many facts of practical importance in the treatment of disorders of digestion, and have been able to confirm the observations of Roberts, Mosso, Chittenden, and others. A few of these facts which I find of the most practical use may be stated as follows:--

1. The activity of the salivary digestion in the stomach depends first, upon the thorough cooking of farinaceous foods; (a) Upon the thorough cooking of foods; (b) Of thorough mastication of food substances; (c) Upon the dryness of the food substances whereby salivary secretion is stimulated. (d) Upon

the degree of acidity of the stomach contents and the rapidity with which the stomach contents become acid after the beginning of a meal. In hypopepsia the ~~coefficient~~ salivary coefficient is low, in hyperpepsia, high.

2. When proteid digestion in the stomach is deficient in quantity or quality it is not because of a deficiency of pepsin, or other organic ferments, but because of the absence or deficiency of free hydrochloric acid,--it is because of a deficiency of the formation of hydrochloric acid.

3. In many cases in which there is no quantitative defect in proteid digestion there is a formation, in considerable quantity, of toxic proteid substances, resembling proteosis or the products of normal digestion chemically, but of no nutritive value.

4. Free acids, with the exception of the weak acids of edible fruits, when taken into the stomach, increase functional disturbance in hyperpepsia, and do not lessen the disorder of hyperpepsia or hypopepsia. Oxalic acid is particularly injurious in this respect.

5. Microbes are not present in the normal digestion of sterile food substances, and cannot be regarded as useful in the digestive process.

6. Tea, and coffee interfere with the digestion of both starch and proteids.

7. Alcohol in all forms interferes with the digestion of proteids.

8. Mustard, pepper, pepper sauce and other so-called condiments do not increase the activity of proteid digestion, nor the secretion of normal gastric juice.

SANITARIUM PARLOR LECTURES.

The Weather.

By J.H.Kellogg, M.D., Oct. 1,/96.

---- X ----

Good evening, Ladies and Gentlemen: I will give you a short talk this evening about The Weather. The weather is a subject which I think is talked about more than any other. The constant remarks that people make when they meet is about the weather,--"A very fine day to-day," or, "A very bad day to-day." "Terrible weather, isn't it?" "Awful weather we had last week." I think there is more complaint about the weather than about any other thing,--unless it be about our stomachs and livers. I think possibly people complain as much about their stomachs and livers as of anything,--and yet people charge even that to the weather, whereas the weather does not have much to do with it. People often talk about a "bilious climate, when their "biliousness" has nothing at all to do with the weather. A so-called "bilious climate" is to be found at the dinner table, rather than out of doors. We hear a great deal about bilious climates of the South, but I think the biliousness of the South is to be found in the bad cookery,--the fried foods and the great amount of pork used, in the soda biscuit--in the general want of hygienic living.

At this season of the year, I think people usually get their minds upon the weather, notwithstanding the old adage, "Never mind the weather." People are now looking for bad days; cold days and frosty nights are coming pretty soon; bad weather coming about Christmas time. A lady has just told me that she is

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going back to Texas, because it is going to be so cold this fall. She hadn't heard that we have a second edition of summer here in the latter part of September and October. But the weather we generally have in the fall, about this time of year, is about the worst we have, because we dont have anything here very bad in the shape of tornadoes and storms, but we do have cold weather bye and bye. We are beginning to have frosty nights already, and about Thanksgiving time we will begin to have real cold weather no now and then; about Christmas we will begin toget a little flurry of snow occasionally, but by January I think we will have snow enough for sleighing, altchugh we had lawn and bicycle parties here last Christmas.

But the fear that people have of cold,-- fearing that they will get their fingers nipped or their noses touched with frost is one of the most mistaken notions in the world. I dont know of any complaint in the world which is so dangerous and which leads to so many avils as the fear of cold weather. Now the majority of people do not seem to understand that cold weather is natures no method of toning up the system. In cold weather we have an especial advantage,, no matter how much bad air we have in the spring, summer and fall, in the winter we have pure air. There is nothing so important as pure air,--zero air. That air will quiet the germs; they can't get round in that temperature; they are frozen out by it . When the ground freezes up, and the brooks and ponds freeze over and the pools are frozen up, and the temperature is down below zero, there is no fermentation, no decay, no putrefaction and no growth of germs, and the consequence is, the air is absolutely pure. How can you imagine anything purer

than the air coming off from pure white snow-fields hundreds and thousands of miles in extent, and if any germs start out on their journey to this country, they will get wiped out long before they get here. So we find that the winter time, cold weather, cold regions, are the means of a general toning up, which begins about this season of the year. The leaves fall a little earlier, because they get ripe and fall, the same as apples and other fruits do. The leaves get ripe and then nature nips them off. You will notice that the end of the stem of the leaf, next to the tree, is rounded off, and there is a little point by which the ripening leaf is hanging; it hangs there until the last moment,-- you will see the leaves hanging down, and they swing in the wind, and they remain there oscillating, and bye and bye the wind comes a little stronger than usual and pulls them off; you will see them hanging there by a little thread, and nature contracts the end of the stem until the leaf is ready to fall.

This fall of the leaves is an indication that nature has stopped its external work on the tree, and is gathering in all its resources to stand the winter. The leaves are a source of evaporation of moisture.. The leaves have gotten ripe, and there is no further use for them, and so they are dropped off and then the plant stores up a large amount of starchy nutriment in its roots. By and by the sap starts in the spring. This nutriment that has been taken in, is digested and dissolved and converted into sap and carried up into the tree, making new leaves and new layers of bark and wood, and so the tree grows. About three or four weeks ago, plants began to get ready for cold weather. At the first cold blast, the plants begin to thicken up their bark; they stop growing,--they cease the growing process

and begin to harden their skin and get ready for winter.

Now the same thing that happens to the plant happens to the animal. The horse's fur thickens as cold weather comes on; the dog's fur thickens then, and the same is true of the sheep and all the little animals. Birds shed their feathers before cold weather comes on, and then they get a good new coat of feathers and then they are all ready for winter. Every bird, animal and plant that is accustomed to cold weather gets ready for winter. Now this getting ready for cold weather is a constitutional change, it is a constitutional renovation which is of very great importance. This putting on a winter constitution is worth everything to a man, because a winter constitution is amore resisting one than that of any other season,--it is a tougher and a hardier constitution--a more enduring constitution.

Now in warm weather we don't have much resistance; we feel sort of relaxed, but when cold weather comes, nature puts on this winter constitution and our vital resistance us tremendously increased. So we don't have malaria in the winter time; we don't have typhoid fever in the winter time; we don't have any zymotic diseases in the winter time; we don't have diarrhoea, dysentery, cholera and yellow fever in the winter time,--we don't have these diseases which are produced by germs disseminated in the air in the warm seasons. So there are two reasons why the cold season is favorable, one of which is, that in cold weather we have more resisting power, and the other is that the germs of disease are covered and frozen up in cold weather. During the cold season we are also free from small pox and similar diseases which are due to confinement in houses.

But I want to call your attention to this cold weather constitution. Take, if you please, a plant grown in a tropical region, and has never been grown in a cold region,--bring, for instance, a magnolia tree up from Chattannooga or Louisville or New Orleans or some other part of our Southern States and plant it on our lawn here, and it would die the first winter, because the magnolia has not been accustomed to put on a winter constitution. But we have a species of laurels which belong to the same family I believe, but which has been accustomed to spend a winter in the north, and so it has learned to put on its winter constitution, and so when planted in a cold climate toughen their bark, shut up their pores and prepare for cold weather. But the magnolia has not been accustomed to this cold climate and the consequence is that it will die off the first winter after it has been planted here. It must be accustomed to the climate in order to prepare for winter. Now if we had some means by which we could train the magnolia to put on a winter constitution and train it to be vigorous and to live out doors, exposing its roots to low temperatures,--if we had some way by which we could train the magnolia tree to prepare for winter, we might develop the processof putting on a winter constitution in the course of a number of generations, and thus it might become hardy and grow in this climate The same might be said of other tropical plants.

The same thing is true of our bodies: If we have been accustomed to live in a tropical region, we feel cold weather very keenly unless our constitutions have been trained to resist it. Take a person always accustomed to living in the South and

bring him here, and he thinks the winter weather is very severe; but when a person has always lived in the North he puts on his winter constitution; he acquires the ability to live on a higher level; his heart beats a little stronger; his blood is a little purer; his tissues have a firmer fiber, and he has acquired a hardihood that he could not get any other way. Twenty years ago doctors, when they found their patients suffering from consumption sent them south,--to Florida,--and Florida has been the graveyard of hundreds and thousands of consumptives. Consumptives used to go down to Florida for their health, but they found Florida an easy place and a quick place to die in,--they die pretty quick there, and they die easily there. They don't take cold there, and they are delivered from many unpleasant features of a cold climate, but they die easily and quickly because of the relaxation produced by the warm climate which lessens their vital resistance, and the disease makes greater headway among them there than at home. Doctors have now become accustomed to send their consumptive patients to a cold climate so as to give them the benefit of cold air. One of the most renowned places for consumptives and where there is a large number cured than at any other place, is in Europe,---the patient, living out doors most of the time. They go out onto the bridges and get the cold, pure air; they wade in the deep snow, and live much of the time out on the porch with the snow falling about them; they must live in cold air all the time. The effect of cold air is to develop vital resistance, so that the patient can fight the germs and withstand their attacks; their tissues become harder, firmer, and tougher,, so that the germs cannot prey on them as they had done before, and thus the

patient acquires the ability to throw off disease. That is the reason patients have been sent to Colorado recently, instead of Florida. They have pure, cool air and sunny days there, with cold nights, and every now and then nature brings a blizzard along and sends the temperature down ten, fifteen, and sometimes forty degrees below zero but that is only for a day or two, and then comes the sunshine again, and then they can be out of doors nearly all the time, and that is a great advantage.

People in the North have been in the habit of going south to spend the winter, especially for the last twenty years. I don't know of a greater mistake that they could make, than this, of turning away from cold weather. Why, Jack Frost is the best friend we have; he kills the germs and purifies the air and condenses the air, so we can take in ten to fifteen per cent. more oxygen than we could otherwise do; it makes our fires burn brighter in the grate, and in the same way makes our vital fires burn brighter, and tones up the whole system with oxygen,--and then to run away from all this and go down South where germs are rampant all the year, where the sources of disease are prevalent everywhere--it seems to me, that when we have done this, we have made a very poor choice. But people are now learning to confess that cold weather is not the enemy but the friend to health, and that we must have this cold hygienic air in order to have good vital resistance. That is the reason people living in cold regions are so much hardier than in tropical regions,--South America, India, etc. You will find a more enduring people than these in China and Japan, where they have weather that is considerably colder, -and we find this to be true all over the earth,--that the

strongest people, the most vigorous people living in the temperate zones. The largest people, and the best developed people are those who live in such climates as that of North Germany and Patagonia. In the cold regions of the northern and southern hemispheres are found the largest, tallest and most vigorous men in the world. The reason for this is, that after the warm seasons, winter comes along as a tonic and stimulus, and we acquire in the winter a certain vital resistance that we had lost in the summertime. We sort of run down in the summer, but we build up in the winter.

I consider this fact one of very great value to the invalid. During my experience I have noticed that all patients who stay here in the winter and fall long enough to get this constitutional change get the greatest possible results from their treatment. The best results from treatment are most apparent when this winter constitution is put on--when there is a gradual development of this constitutional change by the gradual approach of cold weather, after a season of treatment during the warm months. During the warm months there is an opportunity for tissue change, and for a getting ready and building up. Then cold weather stimulates, ~~and~~ the blood supply, and the repair processes and the tissue renovation become wonderfully active, so that the process of building up the new man goes on more rapidly in the cold season than at any other season of the year. That is the time when we find in our bodies the greatest resistance to disease, and the greatest improvement under treatment.

I hope these facts will be remembered by our friends who go and sit down by a fire in a great roaring stove,--as Jean Paul

calls it, "that red Moloch of a hot stove which burns up the children," I used to have to sit beside one of them, when at school. So many people hover over the warm stove or register, and the consequence is, they don't put on this vital constitution. They hover over the stove and toast their feet over the register, and the consequence is, they are cold all the time. It is the worst thing to do. When one is cold, it is better to do as the lumberman does when his feet are cold,--he pulls off his boots and stockings and rubs his feet with snow,--and he does not freeze his feet by so doing, but the powerful reaction which sets in warms his feet. So when we get a reaction by similar means, we are stimulated and the vital elements of the body are quickened to activity, and the man acquires more strength and more resistance and of course greater ability to bear the cold .

Some years ago I met a gentleman who was riding on a load of wood which had been loaded onto his wagon. It was cold, and I was all muffled up with furs, thick overcoat, etc., and I thought it was pretty cold weather, and I wished I had something to cover up my nose, as well as the rest of my body, for it was cold; it was snowing, and I looked at this man three or four times, so as to be sure that I was correct. He was sitting on the pile of wood driving without mittens or gloves, and with just an ordinary hat and coat; he had no overcoat and nothing to protect his ears or hands,--and yet he didn't look cold. This was so remarkable that I stopped the man and asked him if he wasn't cold. "No," said he, "I'm not cold." "Why," said I, "I notice you don't wear gloves,--aren't your hands cold ?" "Oh, no," he said; "I have no use for gloves,--I never wear them." "And your ears

are not protected," I said;" are'n't your ears cold ?" "No, my ears are not cold. I never wear anything over my ears. Why do I need anything over my ears? I might as well have something over my nose as my ears." He had lived out of doors, and thus had acquired the ability to keep warm, and his nose and ears could keep warm as well as therest of his face and body. He had acquired resistance to cold so thoroughly that he didn't need so much artificial protection. We cannot get the protection that we require, against cold,if we live in-doors. Now the resistance which this man had acquired ~~against cold~~ meant something more than merely resistance against cold; it also meant resistance against disease . He was a more enduring man than he could have been if he had been brought up like a hothouse plant, as most of us are. In our greenhouse we have flowers which are always kept in a warm place . Now let these plants get a temperature that is a little freezing tem perature and they are killed; if they are exposed to a temperature a little below what they are accustomed to, they will die. That is the reason they are stunted. They have been coddled and petted, so to speak, until they have become weak and feeble, and have very little resisting power. Now a plant that has been accustomed to living out of doors will endure these changes of temperature and when there is contact of cold air it does not do the plant any harm; it rather stimulates it. It is wonderful what vital activity there is in plants which have been accustomed to cold. Travelers tell us that in the Artic regions where they have only about six weeks sunshine , that it will be warm to-day and the ground bare and snow will be on the ground tomorrow, and the next day the snow will

be melted, and the next day the flowers will be springing up, and within three or four days they will be in full blossom, and in three or four weeks flowers come to maturity. Grass springs up and grows high where the week before the ground was all brown and barren, and in that short summer which they have in those regions they say it seems like a miracle, the way in which vegetation Will develop there in two or three weeks, producing enough for vegetarian animals to thrive upon the rest of the year. This is because plants have acquired a greater vigor, and a greater ability for vital activity by its exposure to cold than those of warmer climates. It endures the cild, and when it has a chance, it develops the liveliest vital activity , which is the result of its reserve force.

As I said before, I think this fact is of very great value to the invalid, and it agrees with our whole philosophy of treatment here. Some of you perhaps remember when you came here, that you had previously asked your doctor what you needed, and he said it was nutritive treatment. Now this treatment begins with 1, then 2, 3, 4, and 5,. Then perhaps after you get through with these numbers you go into the tonic treatment which goes through the same gradations,-- and it may be that some of you have almost reached the top of the ladder-- though I dare say you havent got so far as 5 yet. Now after you have taken all these different steps and treatment you will find that in the nutritive treatment there was a progressive advance, and also in tonic treatment; that there was a progressive advance from warm water to warm applications of various kinds,-- from very small applications of water to more extensive applications, and from warm applications to a little colder applications-- until you came to 5 ; that when you cameto

tonic treatment you see that it is an advance-- that No. 1 of tonic treatment was an advance upon nutritive treatment; that baths are administered at a lower temperature at first, and afterwards with greater force and more general application, so that when you get to No. 5 it requires a vigorous application to enable you to really appreciate it and enjoy it.

Now the purpose of this progressive treatment is to gradually develop the patient's reactive powers. The great trouble we have in the treatment of chronic patients, is, that they do not respond to treatment, as the doctors say. I presume your doctor has told you at home that you did not respond to medicine,-- how many of you have had that experience- - hands up .(Several hands raised.) Now the doctor used to give you medicine and you did sometimes respond to it; that is the way the doctor undertakes to cure you . Thus he plays upon this harp of a thousand strings, by a thousand different means. The different remedies that he applies are intended to touch these different strings, and to touch the different strings in different wags-- to give them a hard touch or a soft touch, a high touch or a low touch, all these tonics etc being used for the purpose of producing a reaction, causing the body to do something and setting up vital activities in the body. Our whole treatment is for this purpose,-- only we employ medicinal measures, and rational methods instead of drugs, and I presume your doctor does the same, for most physicians have learned that durgs are not the best means for the development of the vital powers of the body. Our whole treatment is with a view to enable you to regain your reactive power,-- because you once have that power, but you gradually lost it. And there are a great mmany ways which indicate

that one is losing this power, and among other things, you don't have so good an appetite as you had. This is because your sensibilities are becoming benumbed; all your vital activities are coming to be at a low ebb. You also noticed that you don't take that interest in life that you once did, and you don't enjoy life as you once did; you don't have so much zest in life, and don't have so good a time in the world as you once did. The very same thing is true in reference to treatment: when an application of treatment is made you have not so much power to react. Suppose such a man is given a shower bath; he would have a hard headache. This shows that he don't react well; it shows that the temperature of the water was a little too low, or that the application was a little too strong, or that ~~you~~ he hadn't had a proper preparation for the bath, so that the application was too strong and ~~you~~ he could not react. That is what we are troubled with here, and thatis what we are trying to combat, and trying to secure a constant reaction; otherwise there is no gastric juice secreted and no proper digestion, no more than if you put your food into a pocket in your coat.

Now by these various means, we are trying all the time to train the patient so as to increase his power to react, and to develop the reactive ability of the patient. We know when a patient has made great progress in the development of health by the fact that his reactive power is increased,--by the fact that he can enjoy a colder shower-bath. If you feel that you really enjoy a cold bath in the morning, this shows that your reactive power has been developed to a great degree, and, unless you have some

local trouble you have pretty nearly reached the top of the ladder you have reached a point where you are on the high road to health and are far advanced along that road .

All these remedies agree together,--our treatment, the cold air, the cold weather--we have the weather to help us in our work of training the patient to react well; we have the weather with us, instead of being against us, as many have supposed, while engaged in this work of training. We have the cold air of winter to help us , because cold air is a cold bath. Every time a wave of cold air strikes us , there is a reaction and it does you good in the same manner that massage or electricity and bathing do. I believe in cold air, and I have my rooms thoroughly ventilated, and I have my window open so that the cold air can blow upon me all winter long, and I sometimes wake up and find the icicles hanging around my bed, and find snow flakes lying thick upon the bed coverings, and I find a joy in it. I sometimes find the snow half an inch thick on the cover of my bed, and I never slept sweeter in my life than I have under such circumstances.

There are very few people who cannot be brought to the point where they can enjoy cold air. There are very few who cannot be benefited by it. The season of cold air is the best time to get well, because it is by this means, as I have said, that nature assists us in the best training that we can give by means of applications of cold water, applications of electricity and various other applications. Themoment you put your head out of doors nature begins to stimulate you in the matter of reaction and the development of the vital powers.

Now I have thought it well to make these few remarks because there is such a prevalent idea that cold is a dangerous thing. But you say, "Is there not danger of my taking cold in a cold atmosphere?" Not , if you are accustomed to cold weather,--unless you are careless--for even in summer one may take cold unless proper care is taken; for instance, one may exercise, or work vigorously, and then, in a state of perspiration, you may sit down under the shade of a tree, or in some other place where the wind is blowing upon you, and thus you may take cold . But if you are in proper training in cold weather,--taking cold baths, etc., you need have no fear of taking cold . Take a cold bath every day and dry off, rubbing on a little oil, and you will be free from colds. But a feeble invalid cannot take a cold bath every day; he must be trained up to taking cold baths. I wish we could keep every single patient in this Institution until they could enjoy a cold bath of water at a temperature of 60" and react right away , and feel better after the bath than before it . If we could bring our patients up to that point, we would send them away, vigorous and enduring, and much farther advanved on the road to complete and perfect recovery than they generally are when they leave the Institutio . But our patients do not usually appreciate the necessity of long continued training and giving nature a chance to grow and develop them into something enduring and strong. We must have a growth and development,--a radical change--and that requires time. In order to avoid taking colds after baths, when going into the bathroom every patient ought to have a bath-robe, which can be made of a Turkish sheet by making a few folds and stitching the points

together, and this can be done without much expense. Every patient should have a bathrobe, and you can sell them when you are done with them and are ready to go away,--you can sell them for almost as much as you gave for them. After taking a bath, the best way is to put on such a bath-robe after taking the bath and lie down for a time and read a paper or a book, or do a little dictating or something of that sort, and have the reaction perfect and complete. The Turkish sheet absorbs the moisture, and in the course of twenty or thirty minutes you will feel delightful. You should have a bath-robe to put on after the bath so thatif you get into a bath room and are exposed to a draft of air you will be protected,-- and you must have a draft of air because you must have pure air, and in order to have pure air you must have the old air moving out and the new air moving in; so you must have some air currents but they wont do you any harm when once you get accustomed to them. At the close of your bath you should have it a little cool; never come from a hot bath without being well cooled off afterwards. In taking a cold bath you should take the water just about as cold as you can bear it. The first time, it will be a little distressing; the next time it will be less so. One can train himself to take the water very cold and there will be no inconvenience, and you should learn to do so, but your bath must be such that there must be no headache after it; headache indicates that the application has been too severe,-- the water has been too cold. If you are suffering from sciatica or similar troubles you must look out for a cold shower bath, or a cold application which will be likely to set up a pain in that sore point. If you are suffering from chronic rheumatism, Bright's disease etc., look out for cold baths, because a cold bath drives too much blood

into the interior of the body, and if there is some disabled organ-- a crippled kidney for example, or some other internal organ which is in a serious condition-- it will not do to receive such an application. So, in severe neuralgia, in rheumatism and in Bright's disease, cold applications are inadmissable. Almost every other class of patients, how ever, can be gradually trained up to enjoy real good cold water.

I must say also, that persons who are aged,-- who have hardened arteries-- must avoid cold water in taking their baths, because it drives too much blood into these brittle organs of the brain; they are not elastic, and they will not streeth enough. Children also cannot take very cold applications of water; and very feeble invalids cannot take very cold applications, but must be gradually trained up to it. They will shiver some. There is really some thing healthy in shivering I told a gentleman so and that it would make him warmer, and he said, "I have found that out; I always find that I am warmer after a shiver in a bath." That is precisely true. When one is shivering, nature sets every muscle in his body into activity, and this activity is the very means by which you get warm. So when you take a cold bath and find yourself shivering, that is simply the universal exercise of the muscles and it will warm you up and do you as much good as if you had had a run. But you must not have a second or third shiver, because if you do, you wont react well from it. One chill almost everybody will react to, but the second or third wont do, because the reaction depends upon the nerve centers, and if you have drawn upon the nerve centers to react once, then the power to react is partially exhausted, and after a time, by repeating the chills

the reactive power is exhausted, and you must wait until that reactive power is recuperated before you expose the body to another chill, because there will be a failure of the nevre centers to react , and there will be some internal congestion which would be unpleasant. I thank you for your attention-- I think it is bed time. Applause.

Unsorted

Dr. Kellogg's Reminiscences
Miss Ross

Address before
Med. Missionary
College Class
Oct. 15/96

MEDICAL MISSIONARY COLLEGE EXERCISES.

At the Sanitarium Chapel, Oct. 15/96.

Address of J.H. Kellogg, M.D., President.

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This is a very extraordinary occasion. I was thinking, this morning, as I came in and noticed this large company of medical missionary students sitting here (and I suppose the company seemed larger to me from this fact), it occurred to me that this is the only occasion of the kind that has ever occurred in the history of the world,--except once before--an occasion on which so large a number of medical missionary students, men and women who are preparing to go out as medical missionaries, were gathered together in one body. Eld. Olsen was reading to us this morning, of the time when the Savior sent out seventy medical missionaries, disciples who had been studying at his feet for many months before, perhaps, on the hillsides of Galilee; and now, we have gathered here, a company nearly as large; there were seventy medical missionaries present upon that occasion, but, while we do not number quite seventy, I think we are full sixty in number,--and perhaps more than that. Our number will perhaps be, before the close of the year, between sixty and seventy.

Now we have gathered here for the very same purpose,--to begin and to follow the same kind of work which those disciples were to pursue under our great Master, the Lord Jesus Christ himself, and I sincerely hope that in the work which we begin here to-day we shall find ourselves studying under the same master who taught them. ("Amen.")

I was thinking,too, as I looked about and saw all these young men and women here,--I was thinking, What has brought this large number together here ? Here are young men from the Islands of the Sea, from Australia, from England, and from various parts of this and other countries. What has brought to this small city in Michigan this large number of young men and women from so many different places ? I dare say, as you look over your experience during the last few years, perhaps each one of you may be able to trace a very diversified course,--a very crooked path--by which you have been led here; that, as you look back, you will recognize the fact that it has been through a train of special providences that you have finally been landed here in Battle Creek. Now I judge that the influences that wrought prominently in bringing you here may perhaps be centered in three ideas.---

1. The missionary idea. It is at least to be believed that every young man and every young woman who has come here to enter this school has been brought here through a true, genuine, missionary purpose,--that is, the purpose to do others good; with no selfish motive,— that it was no other than a true philanthropic and missionary purpose that brought each one of you here. If any other motive has been in your heart or mind in coming here to enter this school, certainly your work here will not be a success. For this school is a missionary school,--it is a missionary school first of all, and no young man and no young woman has a right to be in this school, who is not, in his or her heart,a missionary. Any one present who has in his heart a doubt as to whethhe is going to be a thoroughgoing missionary,--as to whether

he is going to devote his life to missionary work,--such an one, I conceive, has no right to be here; this is not the proper place for him. There are other medical schools where such a young man can find his appropriate place. Certainly this is not the place for him, for this is, first of all, a missionary school.

2. Now the second idea which I judge must have been in your minds in coming here, is the fact that you could obtain here a special kind of preparation for missionary work; in other words, that you could obtain here, in addition to missionary instruction and preparation, medical instruction and preparation, and that the purpose of this medical instruction should be the utilization of the knowledge gained for the physical benefit of others in connection with truly evangelical missionary work.

3. Another idea which I hope was in the mind of each one of you in coming here, is the fact that you would find illustrated and taught here some things which you would not find in any other missionary school or medical school; that you would find certain principles of reform that are, to a considerable degree, at least, characteristic of this place,--principles that not to be found taught in precisely the same way or in so systematic or lucid a manner as you may find exemplified and taught here, in the first place.

This school is not simply a medical school; it is not simply a medical missionary school,--it is a reform school. It is a scho in which it is hoped that those who come here may be reformed, to

to some degree; and it is hoped that those who come here will acquire, later, a knowledge that will enable them to go out into the world as reformers. I confess I feel a special interest in this last idea . This Institution has stood for a little more than thirty years, for certain principles of reform. When this Institution was started as a little water-cure, thirty years ago this summer, it was simply a little wooden building and one or two little cottages connected with it, At that time the principles now taught and practiced here were by no means in repute; they were looked down upon with contempt. At that time, a doctor who used water as a remedy for disease was considered a quack. Why it was some fifteen years ago, when an attempt was made to turn myself and colleagues out of the medical society, because I I recommended the use of water in fevers,--because, for instance, I recommended the use of cold applications for a patient suffering with pneumonia;— because I recommended the use of water in a variety of ways in sickness. For this reason I was considered by many in the profession as a heretic and a quack, and it was only by a strong fight that I preserved my medical standing,--it was only by a single vote that I retained it ; but finally all these charges against me were looked upon as unsound and puerile and hence were not sustained. I am glad to say, in addition, that within a year of that time, the same medical society that tried to expel me undertook to repair the injury by electing me President of the society, and invited me to give a course of instruction in the use of water. So the strife,at that time, was a strife of prdnciples and the triumph was a triumph of principles.

Now within the last thirty years there has been a complete revolution, not only in Calhoun County and in Battle Creek, but a revolution in the United States and in the entire world in the practice of medicine . What is known as "Rational Medicine" was almost entirely unknown thirty years ago,--and one of the charges brought against me fifteen years ago (more recently than that,--twelve years ago) was, that I was trying to start a new school of medicine known as "Rational Medicine;" that I had originated a new term and was founding a new school of medicine to be known as "Rational Medicine." I should have been glad to have done so, but it was then too late. Dr. Jacob Bigelow, more than half a century ago, and Dr. Oliver Wendell Holmes about that time, originated the term "Rational Medicine" and taught the principles upon which it is founded . The idea is now growing up that disease is not a thing to be antidoted; that it is not to be thrown out of the body by violent means, but that it is a wrong action of the body,and that it is to be cured by training the patient into a state of health in a case of chronic disease by helping nature so that the disease may become acute instead of chronic.

This is a matter of great congratulation; it is a reason for great congratulation upon the part of those who have been interested in this work for so many years. I see gray-headed men sitting at my right who were pioneers in this work. I see men who were here twenty-five years ago, connected with this work. I did not have the pleasure or the honor of being a pioneer in this work for I was not old enough, but I was interested in it when a small boy. Some thirty years ago when at the dedication of this In-

stitution, I was sitting under what is now a large tree. When I sat under it I could reach round it with my fingers; I measured it the other day, and it is large enough to require both my arms to reach around it. I have taken infinite pleasure and satisfaction and encouragement in watching this work, having been acquainted with it from its very beginning. And now this Institution has taken its place in advance of others; it is not looked down upon with contempt, for the principles for which the Institution stood thirty years ago have triumphed in the world, and to-day you can see the success of the Institution as it reaches its arms all over the earth through thirteen representatives, larger or smaller sanitariums in different parts of the earth. We see that this work has engirdled the whole earth, and we find representatives of it in scores of different places.

Now this triumph is not a triumph of this Institution except so far as its principles have triumphed. At the same time, I do not attribute the triumph of these principles to the work of the Institution wholly,--by no means. I believe that providence is using agencies to scatter them widely in different parts of the earth. Scientific men in Europe have been doing more in this direction than we have done here. Men who did not know that they were working in behalf of these principles and reforms have wrought most nobly in behalf of them. By devoting their whole lives to patient study, men have brought facts and principles, have cleared up things which have been dark and mysterious,--things which we could not understand twenty-five years ago. Why the principles which are now shining out so clearly that even who runs may read them, were, twenty-five years ago, very hard ~~ha~~ to explain and de-

fend; they were mysterious things that we could not make clear to everybody. It was impossible to give the absolute scientific data which was necessary to be given in order to establish some of the principles for which the Institution stood twenty-five or thirty years ago. But now we have a broad and solid platform of scientific fact, the result of discovery and research, upon which are based every one of our principles, so that, with any accomplished and intelligent physician, it is only necessary to call his attention to this or that principle, for him to recognize it as one which he knows and has been taught, and which is well established and taught in every scientific textbook.

These principles are gaining ground in the world. We are no longer peculiar in teaching things, as to which we were peculiar in teaching twenty-five or thirty years ago; the same things which we teach are now taught by scientific men generally. Scientific men can now be found in every part of the country teaching the very same principles which we teach here. At the present time, not one principle in relation to diet, in relation to dress, or in relation to any of the great reforms which relate to the preservation of health and strength of body which are taught here, and for which this Institution has stood for thirty years,--there is not a single one of these principles which does not find somewhere a scientific man of renown, of reputation, to stand up for it--not standing up for all of them but each standing up for some one of them--one standing up for one, and another for another principle.

And here in this Institution we find these principles all in a nutshell, all arranged and demonstrated ~~and demonstrated~~

as to their potency and value. We have here an opportunity of seeing them demonstrated in rescuing men from the brink of the grave. When coming over here a few moments ago, a person stopped me, and said, "Doctor, you don't know me," and I didn't recognize him, for a moment, but when he said, "I am the 'Cyclone Washer' man'" I recognized him at once. Said he, "I was almost dead last winter when you operated upon me for the kidney; I was just looking into the grave then, but now I am strong and well,-- I never was stronger in my life." This gave me more faith in my principles. He said he was almost dead and came very near dying. I told him he might have died if he hadn't found something here that saved him. He was in the situation of a man whose head is under water with others working hard to hold his head above water; he might have died, but there was a strong power holding him up. It was not my power that saved him, but it was the result of the application of our principles to ~~that~~ his case that saved him. He would have died under ordinary circumstances, but the practical application of correct principles, by the blessing of God, delivered the man from almost certain death and restored to him life and health. We see this illustrated here every day,-- not through personal wisdom or skill; it is not through individual wisdom or ability, but we see illustrated here, the wisdom, the power and the potency of the principles upon which this Institution is based..

Now I hope it is your desire to become acquainted with these principles; to know what they accomplish; to become thoroughly versed in them, so as to be able to go out as apostles of these

principles,--I hope that this spirit and this idea is the spirit and the idea that has brought you here. And if any of you have come here without a sufficient knowledge of these principles,so that you do not properly appreciate them, I hope that God will put ~~it~~ into every one of your hearts the spirit of a true reformer. I am praying to God every day to put that spirit into my heart. Why my friends, what is there in this world that is worth standing for if it is not a principle?

Some years ago, we had a gathering here to dedicate our new addition. We first built the little wooden building; then we erected a larger building; then we built an addition on the south; then on the north; then on the top; then in the rear,--and now we have put another addition in the rear, and I don't think we will make any more additions. We have made additions everywhere except at the bottom, and there is no more room for additions,so I think we will have to stop. But these additions have marked our progress; at each one of these there was a gathering, and at one of these gatherings some of the leading lawyers and ~~citizens~~ and merchants and citizens came in, and one of the leading lawyers, in a speech,"congratulated Dr. Kellogg on the great success of this enterprise,"-said he, "Dr. Kellogg is a very fortunate man to have lived long enough to see this work grow up and achieve such great success." While he was speaking I began to feel small, and I continued to feel smaller and smaller and smaller every minute until I wished that I could get through a hole somewhere and get out of sight. When opportunity offered, I arose and said, "My friends, I want you to understand that I take no credit for the success of this work; I consider myself fortunate only in

one thing, and that was, that when a boy I got aboard a splendid principle,--a principle that was bound to succeed, and I have kept on board ever since, and now this principle is triumphing, and I am going along with it. My friends that is the best success in the world,--and whatever success I have had, and whatever success I expect to have , I know will come by sticking right to principle. It is only in doing that that we succeed. If we work independent of principle, and by ourselves, we will eventually reach disaster; but if we will stand by our principles and stand for ~~God~~ them, God will make the work a success,--he will carry it to success and to honor, and if we cling to it, we will go there with it .

Now, as I said before, I hope that God will put into the heart of every one of these students the spirit of ~~true~~ a true and genuine reformer,--and not simply for to-day or to-morrow, but all the time, every day and everywhere, so that every one with whom we come in contact will feel that he has met some one that has a desire to lift him up and to change his course of life, if he is taking a wromg course.. As I passed by a billiard room in a hotel the other day, I glanced through the door and I saw a man pushing a billiard ball; he struck a ball, and that struck another ball, and then the two balls started off in different directions. Then I said to myself, "That represents human life: When we come in contact with a human being we touch him and influence him so that he is a little different from what he was before, and he takes a little different course because of our contact with him, and we take a little different course from his contact with us."

Let us think, then, that whenever we come in contact with any one, we come in touch with them and influence them , and let us see that influence shall be on the right side . You are looking forward to the time when you are going to be missionaries and do missionary work, but if we are ever going to be missionaries, let us be missionaries now, every day of our lives .

There are so many things that should be said, and so many things that cannot be said at this time, that I hardly know what to say and what to leave unsaid; but there are a few things that must be said on this occasion. I want to say a word particularly in reference to the general plan of this school. A year ago, when this school was opened, it was an experiment. A missionary college had never been undertaken before. The idea of a medical missionary college is not a new one, however. Almost exactly 200 years ago the idea of a medical missionary college was first projected. Gen. Codrington, of the West India Islands, seeing the need that medical missionaries should be educated , at his death left an annual sum of $10,000 to be used for the support of a medical missionary college,--for the support of a college where students would be trained in evangelical work and missionary work, and at the same time be trained in medical work. That was the first time this idea of a medical missionary college was projected. But, unfortunately, this project was never carried out. I don't know what became of the money; it was appropriated in some way, but it was never used for the establishment of a medical missionary college. But the medical missionary idea was very soon afterward taken up, and more than a century ago, the German Moravians sent

out the first missionaries into Persia. Some time later, the first Protestant missionaries were sent from Denmark to India, to Madras. I think the fact is not generally known, that when Dr. Carey went to India he was not a doctor of medicine but a doctor of divinity. When he went to India he took Dr. Thomas with him; they went out together, Dr. Thomas going out as a missionary and surgeon. They labored for six long years before they had any evidence that their work was accomplishing anything. And then they had a carpenter employed about the house who fell and broke his arm. Dr. Thomas bound up his arm and tended him during his illness and took that opportunity to whisper the words of the Gospel into his ears, and he became a thorough convert to Christianity. Some time later, he was baptized in the Ganges. There was present a great crowd of ladies and gentlemen of Hindoos and Brahmins who were gathered on the banks of the river, and the ceremony made a great impression upon them. That was the beginning of the success of Carey and Thomas in India, and the work has since grown greatly there and in other lands; but this was the inspiration that started it.

It was in 1841 that the first attempt was made in the line of educating medical missionaries ; this was begun in Edinburgh. Dr. Parker, a medical missionary and surgeon, who had been a missionary in Canton, having charge of a hospital which he had established himself without expense to the society under which he labored, and this , in addition to supporting himself. The medical missionary is generally able to support himself, if he has a chance. Dr. Parker occupied himself, when in Edinburgh, in interesting others in medical missionary work, and there was a public meeting there, and he addressed it, and the interest ~~in medical~~

became so great that a society was organized for the purpose of encouraging medical missionary work,--of raising funds for the support of medical missionaries and encouraging young men and women to study medicine with the idea of going out as missionaries. Seven years passed before there was any person at work under the supervision of this society or had been instrumental in getting others into the work. But this society did not undertake to give medical instruction. It had for its object only the encouragement of young men and women who contemplated being missionaries in foreign lands to take up and and finish their medical studies in other schools.

Some years ago, Dr. Dowkontt, who was a student in the institute connected with this school, having obtained a medical education, established an international institute in New York. This was a place in which young men and women were gathered together and inspired and encouraged to enter the mission field when they had finished their medical education in other schools. Dr. Dowkontt has not had very great success in this work. Although he has consecrated his life and energies in this direction, he has never succeeded in organizing a medical missionary college. So this school, when organized last year, was really the first medical missionary college ever organized in this world. I have given you a little sketch of this subject, because I have heard some questions have been asked in reference to this statement, which was made last year, and I wanted you to understand the facts about it. The other efforts in this direction have not been colleges, but simply associations for the purpose of encouraging young men and women in missionary work after obtaining a medical education.

Last year, as I have stated, this work was an experiment, and I fear that there were some of our students who entered this work with fear and trembling; but we now have such great reason for encouragement that we invite our students to take hold of this work with courage. I am sure it required more faith on the part of students entering this school last year than it did this year to enter the work, because then we had seen a medical college only on paper; you had not then had an opportunity to see the college at its work, as you have now,--and even now there must be some faith exercised, for the reason that this school is only growing and developing with the class, instead of starting out a full-fledged college well prepared to receive students in all the different classes. This school started out with ~~classes~~ different classes, affording facilities for the classes as they advance. That is the plan upon which the school is begun, and the same plan upon which the Johns Hopkins school began. That school gathers the best class of students, as it is the design of the school not to receive students simply to graduate them, but during the four years' instruction, to give them an opportunity to become thoroughly familiar, not only with the knowledge which medical students ordinarily acquire, but to furnish them with medical and reformatory practice and ideas such as are represented in this work; ~~that~~ they are to be taught in missionary as well as medical work. It is expected that all these students will go out from here to propagate the principles of reform which are taught here, as well as to heal the sick. They are to teach people to remain well, and how to take carr of their health, as well as to cure them., and give them necessary asstance and support.

Now a word in reference to the general plan of our work of instruction here : Our school is somewhat different from the majority of medical schools. When I was a medical student, it was the custom of the students to speak of attending medical lectures , when they spoke of attending a medical college; and if you will read the biographies of medical men, you will generally find that they attended medical lectures at such a college or school, because the instruction consisted in medical lectures . There were didactic lectures, and clinical lectures, but the student had nothing at all to do but to sit upon a bench and hear what was said by the lecturer. There was formerly a custom in England of "walking the hospitals," as it was called, by medical ~~cal~~ students, the students following the professors from bedside to bedside, walking the hospitals in this manner during certain days of the week, or during certain months of the year.

At the present time, however, medical education is carried on in a different way. A large part of our work, particularly during the first two years,, is laboratory work, and the student is himself required to make the investigations and studies which twenty-five years ago were only made, and were only possible to be made, by a few experts. At the present time the medical student has the opportunity of doing the very work which the expert did twenty-five years ago. A medical student in this school may enter the laboratory as an expert,and do actual work in the analysis of the organic fluids of the body, and the study of digestion by the use of the microscope; in the study of bacteriology,and in the pursuit of bacteriological investigation. So the student here has

the opportunity of becoming an original investigator and a practical laboratory expert . This is an opportunity which is not afforded in any other medical school, and yet it is an opportunity which is so important for the man who has to go out by and by and stand all alone in the center of a dense population in a foreign land, with no one to consult with, and where he must stand upon his own foundation, where he must rely upon his own judgment, upon his own skill, upon the knowledge which is in his own brain, and the skill which his hands have acquired.

Another peculiarity of our work here, which is somewhat different from that in other medical schools, and which is, I think, a step of progress, is, in the plan of study. Sometime ago I was talking in reference to their plan of work with Prof. Kelly, a professor in Johns Hopkins Hospital, who is interested in our work here. Some time ago I received a letter from his physician asking about how to feed patients in the Hospital; he wanted an outline for a bill of fare for the hospital patients. I felt complimented by that; he did not ask me how to perform a surgical operation, or any form of manipulation, or certain medicines to prescribe for a patient, but but he wanted to know how to feed a patient. A gentleman told me the other day that I was getting a reputation as a surgeon. I told him I didn't want a reputation as a surgeon; that I would rather be known as a man who treats ~~stomachs~~ sick stomachs. I have given more study to that subject than to surgery, and I was glad that Dr. Kelly had respect enough for our views of diet to send for our bills of fare; I was glad to afford all the helps I could in that direction.

Mem. on "Quiz"

I saw in that, another evidence of the growth and the success and the triumph of the revolutionary ideas which this Institution represented twenty-five or thirty years ago. It is not attributable to my knowledge or my wisdom but to the success of this work,--for whatever I know, whatever I have learned, I have learned from the principles upon which this work is founded,--and not from any observations, conclusions or investigations of my own. I was talking with Dr. Kelly, as I stated, with reference to their plan of work, and he said, "One thing is peculiar to our school, and that is, we don't have any lectures at all in our school. Our medical work is conducted entirely by textbook study and laboratory work." I asked him why they pursued this course. He said it was because it was so much more thorough than the lecture method; that the professor who delivered the lectures had a good chance to display his eloquence in his lectures and to show how much he could cram into his head in any ~~where~~--this is pleasant for him and for the student. One professor at Ann Arbor was caught examinining the "Quiz Compend" while preparing a lecture. He said to the one who found him thus employed, "You've caught me, but I have to go into this Quiz Compend every day." So the professor fills his head every day and pours it out upon the student,--most of it, for of course there is a residuum left behind. But when he has done his best, the professor cannot get ahead of the textbook, for the textbook is the standard. The textbook has the whole thing boiled down, systematized, arranged and expressed in the most concise and systematic style, and stated in the clearest manner. And there is the place

for the real student to get the knowledge which is going to stand by him. It is pleasant for the lecturer to display his eloquence and learning, and for the student to listen to him, but, after all if the student would ~~spend~~ put that same time which he spends in listening to lectures into hard study and practice,--if he will get his knowledge from the textbooks, he will get more knowledge than by listening to the lecturer. I find it very useful to study textbooks in this way : I take my textbook and read down the page, find the central idea and write it out. Then I read down the page until I find another central idea, and then I write that down, and so on. Sometimes I make a list of notes of these things which I have read, and, as I am sometimes afraid I might lose the list, I write on the margin of the book, so that all I have to do is to run my eye down the margins of these pages and catch these notes; I then put down the ideas which thus crystallize in my mind. I have certain pegs in my mind on which I hang the things which have crystallized in my mind,--each idea upon its proper peg. So the student may make himself master of what he has studied,--the fact of writing it out impresses it upon his mind. By proceeding in this way, you will get a whole chapter onto a half page, and upon glancing this half-page over you will get the whole subject of the chapter into your mind, as you have it all before you. You can then slip it into your pocket and review it afterwards without memoranda. When you wish to review the whole subject, you can take up these notes and review them, and you will readily recollect the ideas which cluster about them. I find thatin this way, one can accomplish much more by the use of a textbook than he could by listening to an extemporaneous

talk which must be more or less verbose and prolix; not so lucid and concise as you can get in a textbook. Then suppose the teacher prepares the subject and reads it to us, as clear as a textbook,--we cannot retain it--it generally goes into one ear and out at the other. Sound-pictures are not so thoroughly impressed in the brain as sight pictures. What we see, we can look at closely and intensely, but a sound enters the ear and then passes by the ear, as you may say., and is gone; we have no time to listen to it, because the teacher is saying something else; whereas, in the study of a subject, you can look at it two or three times if you desire to do so, and thus impress it upon your mind . Well, I talked this matter over with Prof. Kelly, and I saw that this idea was a very important one, and I saw that the subject of textbook study had been considered very carefully at the Johns Hopkins University, which they have undertaken to put at the top,--- to make it the top school in the United States--a graduate school; a school in which no student can be admitted unless he has an M.D., an A.B., a B.S., or some other degree equal to it , and it is quite necessary that the student, on entering this school should have the training that enables him to get a knowledge of the textbooks. "Well," students say, " that is a good deal harder work than listening to lecturers." Of course it is; but, although it is hard, it does much more good . It is easy to sit and listen to a subject as it is presented to you by the lecturer, but it is only what we get by hard labor that we retain. It is the same with the brain as with the muscles,-one does not get strong muscles without hard work; one cannot get strong muscles without doing hard work, and continuous work, and the same is true of the

brain. The man whose muscles are developed by laborious exercise will retain that strength for months and years. The man who gets his knowledge by putting hard study and brain work upon his text-books will retain it; whereas, knowledge made easy for him is not retained by the student; it slips away from him very easily.

Now, as I have said, this is the general plan of the school,—it is textbook study. It is important that students should understand this, so that they will not consider that they are receiving inferior instruction because it is not given them by eloquent lecturers. You can readily see that it is impossible to bring the medical experts of the world here bodily; but this is the thing we can do,--we can send over into Germany and get the best expert on one subject and bring him here in his book in which he has crystallized his medical thought and experience, and the things that he is willing to put before the world for examination and criticism. In like manner we can gather another expert's medical and surgical experience, and thus we can get all the knowledge that any student or set of students can possibly acquire in this world. These experts can all be brought here in their crystallized knowledge and experience as collected in their textbooks, in which we find all that it is necessary for the medical student to know.

So you see that it is not necessary to have a very learned or eloquent faculty for our school; It is not necessary to have a faculty composed of men of graat distinction and reputation (I am speaking of myself and not of my colleagues); it is not necessary that we should have a large list of great names for a faculty, in order that you may ~~get a~~ be able to get a medical education.

Dr. Kerr, of Canton, the successor of Dr. Parker who was the second missionary to China, Dr. Kerr stepping into his shoes, has, for more than thirty years conducted a medical college, he himself being the whole faculty; and he has translated the different ~~medical~~ treatises on medical science into the Chinese labguage. He has taught his students at his own expense, having a class of twenty or thirty medical men. And he has brought up and educated some medical men who have equaled the most skilled and experienced physicians in the world. He has one operator there who is one of the most expert operators upon the eye in the world. One of these men, the doctor says, exceeds himself in skill in removing cataracts, and has removed more of them than any other physician in the world.; he has ~~had~~ performed more than 40,000 operations. So you see it does not require a great number of teachers to make a competent medical faculty, sd long as we have at our command the medical knowledge which is contained in books,--and at this time we have a splendid series of textbooks upon every possible phase of medical ~~practice~~ science and practice.

This was not true, twenty years ago. But, at the present time, we have text-books and text-books and text-books, so we can have our choice of fifteen or twenty treatises on each subject, each one so excellent that it is hard to make a choice. Why, twenty years ago there was only one "Practice of Surgery;" there was only one "Practice of Medicine," only one "Anatomy" (Gray's Anatomy") when I studied medicine, there was only one "Chemistry;" and "Flint's Practice" was the only Practice that was worth anything, and the work on "Surgery" by an English surgeon was the only work of the kind worth anything at that time. But now, as I said, you have, on

every medical subject a dozen or more splendid textbooks. Then we have quite a valuable library from which students can obtain knowledge of great value. I am making these remarks for the benefit of our new students who do not, as yet, understand the methods and character of the school.

There are certain practical advantages in this school which students would dowell to appreciate. Sometimes students come to me and say, "Doctor, don't you think it would be better for me if I would devote my entire time to study. I am receiving money from some one and am paying my board, and while doing so, hadn't I better take up some study such as French or German, or something else, ~~to~~ along with my medical study?" Now one of the greatest of all the advantages of this school is the fact that, while the student is getting his theoretical knowledge, he has an opportunity for practical experience,--to become acquainted with the sick and with their diseases ~~treatment~~. Some twenty years ago, I went to quite an eminent physician and I said to him, "Doctor, I want to become thoroughly familiar with a certain subject,--whom shall I study with ?" Said he, "You don't want to go and study with any one. What you want to do, is to see cases,--" he says, "You must see cases; you must get your eyes trained, and get yourself trained in taking diagnoses by seeing cases." That is exactly what the student needs; he needs to become thoroughly familiar with disease. When you come to study medicine you will find more than a thousand ~~diseases~~ different diseases,--there are more than a thousand different diseases put down in the list of maladies... You are familiar with some half dozen of these diseases,--such as chicken pox, mumps, etc.--but when you get into the subject

at large, you will find there are a thousand different things to learn about disease. Each one of these diseases is as different from ~~the other~~ any other disease as one animal is different from another, and you must learn the characteristics and the course of a disease from its beginning, and all the great varieties of symptoms connected with it. Think what that amounts to,--a thousand different diseases and perhaps twenty or thirty different symptoms to each disease. This is like studying botany,--studying a thousand different flowers --studying the petals, stamens, etc., of each flower, its plants, its seeds, and the manner in which it grows. All this great mass of facts must be acquired, and it is impossible to learn all this from a book. The student must have the opportunity of seeing the things which he is studying. You cannot learn botany from a book; you must see the plant how it grows, and its different phases of growth. The same is true of disease; you must see disease in all its different phases. Now here you have an opportunity to do this. The ordinary ward hospital student sees different cases, but he gets them mingled so much that at length he can't distinguish one from the other,--he can't tell which is which. That was the way I found it. When I first went into a hospital ward I found there forty or fifty different cases, and when I got through, the symptoms of one disease were all tangled up with the symptoms of another disease, or other diseases, and I had only a confused idea of what I was trying to learn.

Now, suppose instead of this, the medical student has the opportunity to stand by the bedside of his patient, to nurse him

and to administer his treatment; suppose, for instance, it was a stomach disease : Instead of sitting down and reading about "Dilatation of the Stomach," "Prolapse of the Stomach," or "Floating Kidney," and looking at the picture of it,--suppose that instead of that, the student has the opportunity of looking at the prolapsed stomach or floating kidney, and of putting it back where it belongs; suppose he does this day after day, until he has trained the erring stomach or kidney to stay where it belongs. In this way he knows all about it,--he gets his fingers and his touch trained; he gets such a picture in his mind that he can never forget it. In this manner he gets to be a skilled medical man, instead of a mere "book doctor." We sometimes hear about becoming "doctors,"--theoretical doctors--and you know there is an idea among such that a doctor must kill before he can cure. One of these doctors once boasted that he had spoiled a peck of eyes before he had learned to save eyes! That is a fearful thing. Medical instruction is now so complete that it is not necessary for young physicians to have that experience,--and yet many medical men slip through their studies in such a manner that they learn to cure in this manner. I am sorry there are so many laymen present this morning, for we medical men like to have a sort of Free Masonry in this matter...

The best medical schools are those in which you can get medical experience,--and here you have this opportunity. During the four years of your study here, you have the opportunity of becoming practically familiar with disease and its symptoms and the details of training the sick man into health,--not practicing medi-

cine in the ordinary way, which means , giving the patient a doses of some kind of medicine to take; the next day, calling to see whether he has taken his medicine ~~or not~~ regularly, etc. There is a great deal of this kind of routine practice, but you are to go down deeper into the matter; you are to go down into the very foundation of the methods of curing people,--not simply of helping people, or relieving people--but of actually eradicating their maladies and training people up into health. It is getting to be the leading idea of a physician that he is a care-taker as well as a physician; that the real purpose of the physician is to take care of the patient,--to show him how to work himself up into health, and how to take care of himself afterward.

Experience, then, is one of the most important parts of your course, and it is impossible for you to miss that, without missing something which is absolutely essential to your success when you go out into some foreign field,--which I hope some of you at least will desire to do--and I trust you all desire to do so. It is necessary that you should obtain a thorough medical training, for, in your field of missionary labor you may ~~find~~ have to make yourself ~~the~~ a center of medical knowledge and training, in which you will have to train your own nurses, and you ought to be able to instruct them thoroughly in everything that pertains to their work. You may find it necessary to establish a medical college somewhere where you will have an opportunity to give others a medical education. But you must have this medical education yourself, in order to impart it; you cannot give others what you have not received yourself. You cannot possibly help anybody else to know what you

yourself are not prepared to teach them. I am thankful that I was obliged to work in the bathroom the first thing, when I commenced work here. There is such a thing as commencing too high in our medical studies, for by so doing we don't get it all. I remember of meeting a medical gentleman, who was, two or three years later elected Surgeon General of the U.S. Army, and for the last twenty years he has held that position,--it was some years ago (so long ago that I can't identify him; he is not a Surgeon General now) he was here with his wife. She was a neurasthenic invalid, and was here to be treated. One day I had to cut off a leg, and I had to decide how to cut it off; so I asked the doctor in and told him what I intended to do, and asked his advice about it. To my surprise, he said he couldn't give me any advice about it. I thought surely he could give me some advice in the matter, as he had been a surgeon in the army during two years of the war, but when I asked him, he said, "To tell you the truth, doctor, when I entered the medical school I entered it so high that I never learned how to do that work, and I couldn't give you any practical experience in regard to it." He said that he had never amputated a leg in his life. Now you don't want to enter a school so high that you cannot have any experience. And here you have an opportunity to begin at the beginning,--and opportunity to go to the bottom, and while you are getting a medical education, you will, at the same time, get that training of hand and mind which you need in the perception of of disease, dislocated organs and deformed bodies, so that you will know what you are doing. You would be surprised if you stood by me in my work, to see how many physicians have had no thorough di-

agnosis of their cases. Many patients have had prolapsed stomachs and floating kidneys, but this has never been discovered, because their doctors have had no proper training in this direction.

The training which you will get in the art of massage is invaluable; the keen touch which you will acquire in this work is a kind of training which you cannot get in any other way. The opportunities afforded you in the application of water, administering electric light baths,etc.---the opportunities you will have for learning by actual experience and practice, the physiological effects of water, especially, are beyond estimate. Several months ago a patient came to me and said, "Doctor, I have a fearful headache." "How did you get it," I asked. "I don't know, she said, "but every day, after my bath, I have an awful headache. Then I asked her, "What was your bath?" She said she had had a cold shower-bath whenever she had these headaches. Now why did she have the headache? Because her shower bath was about 5° too cold,--the temperature was a little too low. By raising the temperature of her bath 5° the headache entirely disappeared. The water was a little too cold, so it produced too strong a reaction, which caused ~~produced~~ the headache, but the doctor didn't know that, and so the patient had to pass on in that way taking her bath 5° too cold, and having a bad headache every day. Now you have an opportunity, in giving bath-treatment to see just the effects of water upon your patients,--you have a great deal better opportunity for this than the doctor does. It is an unfortunate thing for a doctor to enter a medical school so high up that he

does not have that experience. The bathroom students were on a sort of "strike" when I entered, and so I went into the bathroom, took off my coat and rolled up my sleeves and went to giving baths after finishing my office work. On giving baths, I instituted a series of experiments in the use of water, and after reckoning them up I find there were about 20,000,--and I have not through with all of them yet, but I hope some time to get through those experiments which I commenced twenty years ago so as to feel that I know all about water and its effects upon the human body. Now, as I have said, you have an opportunity to get that experience which an ordinary medical student does not have on going into a medical institution to study. ~~ordinarily~~ The student who takes a medical course and does not have the opportunity for actual experience which you have in this school, will be crippled all his life .

So I hope there will none of you feel that the time which you spend in practical experience is misspent; I hope you will feel that it is the best part of the time that you put in; this is the practical application of the things that you learn. This year you will study physiology, and then, when you come to take up therapeutics under Dr. Paulson, I trust your practical experience will become more interesting and valuable to you.

I must say just a word in reference to the responsibilities of the Christian physician. It seems to me that in starting out in this medical work, we ought to realize that we are undertaking the most responsible work that it is possible for a human being to to undertake. There is no profession, there is no calling in life

in which the responsibility can possibly be so great as in this profession. Somebody who has made a close study of human nature has said that the lawyer sees the worst side of a man, the minister sees the best side of a man, while the doctor sees the inside of a man. The doctor has the opportunity to see a man as he is. Now the medical missionary, in a certain sense and in a certain way, has to do the duties of the Christian preacher, the missionary, the minister--he has, to some extent, those duties to perform, because he must be an evangelist, a Christian worker, as well as a physician. Then he has to come into medical contact with his patients also. So, when you have upon a man put the responsibilities of the evangelist and the physician, you have him loaded with a responsibility greater than any other man is ever asked to carry in any other profession or calling.

But these responsibilities are no greater than the opportunities which are afforded of using them. There is certainly no man that has such an opportunity for usefulness as the missionary Physician. The opportunity that the missionary physician has is limited only by his capacity, by his industry, and by his humility and consecration. Of course men differ in capacity. One man has capacity for one thing, and another for another; but the fact that you are here for this purpose, is evidence, I trust, that the Lord has sent you here, and evidence that you all have some capacity for Christian missionary work.

Industry is important also, and this is something that you can regulate yourselves. Patient industry is required to get out of

your opportunities for study all that it is possible to get out of it. There is an almost unlimited opportunity before you. When you get into the various branches of study, you will find that there is more in each one of them than you could possibly have imagined. When you were at school and had finished your "Arithmetic," or "Algebra," or other studies, you felt as though you had mastered those subjects,--that you had finished them; but when you come to study Histology, for instance, you will find, after finishing this subject, that you have only gotten an introduction to it. The same may be said of Anatomy; you will see, as you proceed in this study, a great field of knowledge always opening before you. So, in regard to the study of Chemistry; after finishing this study, you will feel that you have only gotten an introduction to it. It is impossible for any of you who enter this school to be so industrious that you will do all the work that you need to do.

The standard to which you are asked to come up, is, comparatively a low one, being only the a,b,c's or fundamental principles of medical knowledge; so there is a great ocean of knowledge beyond you, when you have reached this standard, and of which you will get glimpses, and which you will see spreading out around you, as you see the horizon extending around and above you. It is like climbing a mountain: As you approach the top you can get a better view of the landscape than you had ever ~~dreamed of~~ had before,--there is more country before you than you had ever dreamed of. So in your studies,--the higher you go up the farther you can look over the hitherto unexplored region.

Humility is one of the attributes, the practice of which will show how we may become useful. When Dr. Livingstone went to

to Africa, he did not go there as a physician, but simply as a missionary to the poor savages in the forests; he went there to give them a knowledge of the blessings of Christian civilization. He extended his work farther and farther into the interior until he became a great explorer, and thus he opened up a whole continent,--he was so humble that God helped him in his work and enabled him to open up that great continent to Christian civilization. Now Dr. Livingstone ,all alone, with the help of God, accomplished what the greatest army could not have done. All alone and single-handed he subdued those savages by his kindness and not by his might. By his Christian forbearance and patience he won their hearts so that he could travel in safety wherever he wished. One of the most pathetic spectacles that was ever witnessed was seen by Stanley when he met the procession of savages who had been travelling hundreds of miles carrying upon their shoulders the dead body of Livingstone. He died all alone among the savages, who were so endeared to him by his Christian spirit that they carried his dead body, at their own expense, hundreds of miles, until, in an almost starving condition, they met Stanley; they were then so weak that they were hardly able to bear up the dead body of their master. Now that is a most striking example of what Christian humility and forbearance will do in sustaining and controlling the savage heart.

There was another Christian missionary that went out to India simply as a medical missionary,--as any of you may do,--and away off in the interior of India he found a ruler who became interested in his work. This ruler's wife was sick and the missionary was called to treat her. When he treated her, he sat down in a chair;there was

a poor slave girl present, but there was a curtain between him and the slave girl, and the sick woman was off in the interior of the building so that he could not speak to her or hear her voice. So he spoke to the slave girl inside the curtain and the slave girl spoke to the woman, and by that indirect method of treatment he was able to cure her. The ruler then became so interested in the work of the missionary that he wanted him to be his Court Physician with a salary. His reply was, "I will be your Court Physician if you will allow me to be still a medical missionary and go right on with my work." Here was a temptation placed before him to abandon his missionary work, but he did not yield to it. The ruler gave his permission, and the missionary has since been not only the Court Physician but has continued his work, organizing schools, and , as Court Physician , he actually rules over nine millions of people. See what a wonderful thing he has done. He has upon his shoulders a greater responsibility than any other man upon earth, at this time. There is no man in this world that has, singlehanded and alone, with God only to help him, to carry such a responsibility. Think of it ! Nine millions of people ! About one-seventh as many people as there are in the United States,--he has entire medical charge of that great population. Some of our largest States would have to be put together to make so large a population. He does not have senate or cabinet. He is laboring simply himself alone with God .

Now you see what a medical missionary starts out to be, and what may be done. The medical missionary starts out to heal the sick; and, if you are true to your principles, you see how God may

open opportunities before you,--and they may be greater than you have ever dreamed of or estimated.

Now a word in reference to some of the difficulties which you may have to encounter,--some of the pitfalls of medical students: I have noted down some of the things which I think are most likely to get in the way of your success as medical missionaries, and I have put down at the head of the list "Backsliding." Now the temptation to backslide is always great when a number of young people associate together in any school, whether it is a medical school, a missionary school, or a literary school,--or even a missionary medical school. Now one source of backsliding will be, that the "medical spirit" will get to dominate. There is a spirit which is often dominant among medical experts,--there is a sort of "medical college spirit" prevalent in these school which is likely to get among medical students. Medical students are notorious for wanting to play tricks of various sorts which nobody else would think of. I knew of one such case in Ann Arbor in which a medical student nearly lost his life. The students had learned that phosphorus was more soluble than ether, and they persuaded this young man that it would be a beautiful thing for him to personate a ghost by smearing phosphorus all over his hair nad his hands and face,--hide behind a corner, and when people were passing by, to apply it at the right moment and rush out upon them, and it would make quite a sensation. So the young man adopted that plan of playing a trick upon the passers by and there was a great deal more of a sensation than he expected. As phosphorus sets air on fire, deep holes were burned into his head, and he was more frightened than were those whom he intended

to frighten. Now we have had here, frequent illustrations of something of this kind of amusement. I was very sorry to learn that there were two or three little things last year that indicated that some of the "medical college spirit" had gotten in among us, but I hope that this year we will be able to go through on the highest possible level; that we will go through another year without descending to these which are puerile and boyish, and which are beneath the dignity of the Christian medical student. Let us not have any of these things. Let our school be a school where the Lord Jesus Christ can be present every day ("Amen."); where we can feel that the Lord Jesus himself is the teacher; where the spirit of the Lord Jesus can be in all our exercises, in all our laboratory work; where we can feel safe because we feel that God is with us, and because we are working as though we knew that the Lord Jesus was looking right down upon us. How can we work in any other way when we know we are educating to be ambassadors for Christ. If we expect to have Christ with us in our field of labor, we must have him in our preparation for the work before us.

Backsliding among students comes from a desire to "have some fun,--" to have some sport. I think this is the open door through which the devil leads students to backslide--the desire to "have fun." But I don't think it is necessary for us to have what this world calls "fun." There is a very slight dividing line between "fun" and folly; they go together, and when a man goes out just to "have a good time," the first thing he knows, he will have a very foolish time. But we ~~can have~~ must have enjoyment, and recreation,--and we can have real Christian recreation and good times; we can have refreshment and renovation of ~~spirit~~

body and spirit without having any of that foolishness which is commonly called "sport," and "fun." Let us eliminate that; let us see if we cannot have healthy recreation, wholesome recreation and rational enjoyment without having anything which is derogatory to the dignity of the real, true, Christian gentleman, and the real, true, Christian missionary.

Backsliding sometimes comes in trifling talk. When many young people get together, it is so easy to have some very foolish talk. I think we improved upon that a little last year. I think it is possible for us to take a little higher level ~~in that respect~~ this year than we did last, in the matter of our personal intercourse, profiting, in this respect by our experience last year. Some students have told me that they did not have the Lord in their hearts as they did on entering the school, because they had given way to trifling talk, to jesting and foolishness, thus idling away time and drifting away from the Lord. Now we want the Lord to be with us and to be in our hearts. We must have the Lord with us,--we must have the Lord with us <u>all the time</u>. I am more and more impressed with this idea. We can see, especially if we go down to Chicago, how easy it is for a man to go to the bottom before he knows it,--it is astonishing how rapidly a man goes down when he lets go of God--it is not safe to do it.

Another word in reference to the pitfalls that we are likely to encounter;— and there are a good many of them: I think I must say that one of the most dangerous things to which the medical student is exposed, is conceit. Now that is a hard word to use; but just as soon as a medical student ceases to see God in science,--just as soon as he ceases to see God in everything that he does,

he begins to be conceited. He thinks, "I know so much more than I did; I know so much more than this or that man does," and so on till he begins to think he knows it all. He learns physiology, for example, and he can test the circulation and the movements of the heart, and he is elated and becomes conceited: Thus the study of medicine many times leads the student to think he knows more than others, and is a little better than others; he walks with a little swagger in his gait, and thinks he is somebody. We don't want that feeling; we want to think we are nothing,--that we are nobody without Jesus Christ; and we want to see that our knowledge is likely to be no help to us at all unless we can see God in it all, and unless we are learning with a view to the uplifting of humanity and for the benefit of God's cause. We cannot do this unless we keep our eyes fixed upon the great Author of all these things. If we do not do this, medical study leads us directly into skepticism; if we cease to see God in all the vital processes of the body we become skeptical right away,--we begin to think the "universal application of law" is all that there is, and then we really come to worship law instead of God, and that is a sort of idolatry,--and this is the case, I think, with medical men, generally.

Another danger confronts the medical student, and that is, selfishness. There are many things which will come, and we will have a great many opportunities to exhibit a selfish spirit. While preparing to be missionaries to the heathen, let us be missionaries toward one another; if we are going to be missionaries to the heathen, we must be missionaries to missionaries. I have fre-

quently said to myself, and I am inclined to say it more often at the present time, that I must be a missionary to missionaries; and we must all be missionary to missionaries; we must be willing to make sacrifices for one another. Let us put away criticism of one another. Let us talk about one another's good qualities instead of our bad qualities. If you see an evil trait in another , don't mention it, but let us tell how we admire a good spirit, and how we are down upon those who are all the while harping upon the faults of others.. Let us get the victory over this spirit of criticism,--criticism of teachers and criticism of schools--a spirit that leads to grumbling and complaining and faultfinding and discomfort, and that leads to backsliding. I don't think we have any occasion for faultfinding; I don't think there is one of us but what has a great deal better things than he deserves; there are none of us but what the Lord has given him greater advantages and opportunities that we deserve.

A word or two more about these pitfalls and dangers : I am sorry I have to say this word, but I must say it,--and that is , We want to be careful of the influences that we allow ourselves to be ~~surrounded by~~ led by. There are many different influences here. Here are different influences inside of the Sanitarium and outside of the Sanitarium and influences at home. Keep your eye fixed upon the thing you started out for. Keep your eye fixed upon the ideas which you have adopted. You have confidence in certain things; now determine that you will hold fast to those things. You will find that many things will come up, that will shake ypur confidence in your ~~chosen profession~~ calling. different plans will be brought up,and this or that thing will be sug-

gested, and if you yield to these influences you will become unhappy and discontented; but, if you have made up your mind as to what you are going to put your confidence in, place your foot there and stand there all the time, no matter what it is, nor who it is that brings to bear upon you a contrary influence, and I am sure you will be the better for it .

Now I must say a word in reference to the importance of Bible study: Medical missionary students, of all classes of students, should not neglect Bible study--daily Bible study and daily prayer. Some of our students told me, last year, that they got so far from the Lord that they feared that they could not get back, and they said that this was caused by neglect of Bible study, ~~and~~ prayer. They would say, "I have to study my histology, my biology, etc., and I must work hard at this; I have no time for Bible study to-day,--I will take it up to-morrow." Now I do not think there is any necessity for neglecting Bible study a single day. There is nothing that should be allowed to cause us to neglect looking into the word of God and looking into our own hearts for a single day. I am sure my colleagues will agree with me, that the first and most important thing for the medical ~~student~~ missionary student is to keep fast hold of the Lord, ("Amen.") and you cannot do that without daily Bible study.

A word as to discouragements: ~~I know~~ New students have a good many discouragements. I would not undertake to disguise from you the fact that the first year of study is a very hard and stony and a very thorny road; you will find it harder to meet and endure its difficulties than any you have ever met before; you will find harder problems here than you find in your algebra or

trigonometry. It is something different from what you have ever had before,--and it is difficult because it is new; there are such a number of new words that it will seem absolutely confusing, and it will seem as if you could never get through with it, and it will seem, as you advance, that there are still great mountains to climb,--and there are. But, after a few weeks it will begin to clear up, and if you have the fortitude and the endurance to get through the first year, it will then be a little easier sailing. Nevertheless, all sophomores as well as juniors and freshmen, can look over to many mountains ahead, ~~as well as juniors and freshmen~~, and there is plenty of work for ~~you~~ all of you to do.

I want to say just another word, and then I must finish my remarks--which I realize are too lengthy. I want to say a word with reference to the obligations of the students to the school. I think our students who have come back for the second year of instruction have more confidence in the school and the opportunities it affords, than they did when they entered for the first year. Some of you may think you have not had sufficient opportunities, but when you place yourselves beside the average of other medical schools, I dare say you will find that you have had as good opportunities as they have had,--and I trust the knowledge that you have obtained will not suffer by the comparison. I dare say you will find that you have done more work during the last year than the average student. I believe our class has done, for the first year, better work than the average medical student in the same time. You have more incentives for work than the ordinary medical student,--and you have had better opportunities.

Now I hope you all feel that this is your school. I don't want

any one here who feels that this is the school of the College Board, or the school of the Medical Missionary Board or the school of the denomination; I hope you will all feel that it is your school. And if this school ever succeeds, it will be because of your work and not because of the work of the teachers,--because the teachers might work ever so hard, if you do not work, the school will not succeed. The reputation of a school is made by its graduates; and this school will not have any reputation until the world sees what kind of students it can produce. When you go out into your field of labor you are to finish the work of the school, and it cannot be known what the work of the school is until that work is completed. Three years more will be required before you complete your work here; then, when you go out into the world and do your work, there will be an opportunity for the public to measure your work and that of the school. So I hope you all have a determination to stand by the school,--to stand by the school and support it. Support your teachers by your cooperation, --for teachers need a little encouragement once in a while, as well as the students. I trust, then, that you will support the school by your influence, and your determination to make it a school of the most thoroughgoing medical men and women. If you do that,--if you do your part --I am sure the Board will undertake to see that you have all the opportunities for improvement that you need. What opportunities are not afforded here, will be supplemented by opportunities in Chicago. We have excellent opportunities there, and the way is all open there for every advantage that you can possibly need.