

## **THE DIVINE WAY IN DIET**

**by: Dr. J. H. Kellogg**

Israel's Experience with Flesh-food - Convenient Food - Sunlight the Source of All Energy - Heavenly Meat - Why Flesh Shortens Life.

At the close of the two o'clock meeting last Friday, a question was asked with reference to why Christ fed the disciples with fish, and I made a reply, basing my remarks upon this passage (Matt.14:17): "They say unto him, We have here but five loaves, and two fishes. He said, Bring them hither to me. And he commanded the multitude to sit down on the grass, and took the five loaves, and the two fishes, and looking up to heaven, he blessed, and brake, and gave the loaves to his disciples, and the disciples to the multitude. And they did all eat, and were filled: and they took up of the fragments that remained twelve baskets full."

But in Mark it says that he divided the fish also. So there is no doubt that the people were fed with fish as well as with bread. The question is, Does this prove that the Lord, in doing this, sanctioned the use of fish, or that he approved of fish as being the most wholesome food? - I certainly think not; for we find, in 1Cor.10:6, that the apostle, speaking of the experience of the children of Israel in the wilderness, says that they lusted after evil things. We turn to Numbers 11, and we find what the evil thing was. We find that it was flesh; and thus we know that flesh is an evil thing. There is no doubt about that. The Lord has told us, directly and distinctly, that flesh is an evil thing, and that the children of Israel, in lusting after flesh, lusted after an evil thing. And yet when we read the account of what the Lord did for them in the wilderness, we see that the Lord fed them with this very evil thing. The Lord himself did it. Here is what the Lord said to Moses: "Say thou unto the people, Sanctify yourselves against to-morrow, and ye shall eat flesh: for ye have wept in the ears of the Lord, saying, Who shall give us flesh to eat? for it was well with us in Egypt: therefore the Lord will give you flesh, and ye shall eat. Ye shall not eat one day, nor two days, nor five days, neither ten days nor twenty days; but even a whole month."

Now here you see that the Lord himself not only gave the children of Israel one meal, but that he gave them flesh every day for a whole month. And yet the inspired apostle tells us that that very flesh that God gave the children of Israel by a miracle was an evil thing. "And Moses said, The people, among whom I am, are six hundred thousand footmen; and thou hast said, I will give them flesh, that they may eat a whole month."

It would take a tremendous amount of flesh-food to feed six hundred thousand people. There were many more than six hundred thousand people; for there were that many footmen. What an amount of flesh-food would be required to feed all those people! Just think of it! Moses could not understand it; he said: "Shall the flocks and the herds be slain for them, to suffice them? or shall all the fish of the sea be gathered together for them, to suffice them? And the Lord said unto Moses, Is the Lord's hand waxed short? Thou shalt see now whether my word

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shall come to pass unto thee or not. And Moses went out, and told the people the words of the Lord, and gathered the seventy men of the elders of the people, and set them round about the tabernacle." A little farther down we read: "Moses gat him into the camp, he and the elders of Israel. And there went forth a wind from the Lord, and brought quails from the sea, and let them fall by the camp, as it were a day's journey on this side, and as it were a day's journey on the other side, round about the camp, and as it were two cubits high upon the face of the earth."

Many years ago Audubon, the great naturalist, said he saw pigeons flying in such numbers as to darken the sky. He estimated the number to be many millions.

[J. N. Loughborough: The fifth verse of the same chapter shows what the evil things are.]

This is true. Some of the things named the Lord made to be eaten; but the evil thing they lusted after was fish.

The point I want to call your special attention to here, is that God wrought a miracle: "And there went forth a wind from the Lord, and brought quails from the sea, and let them fall by the camp, as it were a day's journey on this side, and as it were a day's journey on the other side, round about the camp, and as it were two cubits high upon the face of the earth. . . . And while the flesh was yet between their teeth, ere it was chewed, . . . the Lord smote the people with a very great plague." Now the Lord brought the quails for the people, and fed them with quails; and yet he sent a plague upon them for eating the very thing he sent. He sent the quails because they wept for them.

So you see the fact that Christ wrought a miracle to make fish for the people who wanted fish, does not prove that fish was the best food for them. If it did, then certainly he would have to say that God was very unjust and very unreasonable, to make the children of Israel sick in eating flesh that he himself created right there, and wrought a miracle that they might have. This flesh was not good for them. Why did God give it to them? - Because they insisted upon having it. He told them that meat was not good for them. He wanted them to see that he was withholding flesh because it was not good for them. The plague was not an arbitrary measure. Certainly, the Lord never made anybody sick. The children of Israel ate flesh every day for a month. They ate so much that it came out of their nostrils. That means that they vomited it.

That is the way plagues come upon us sometimes. I suppose the flesh at a Thanksgiving dinner, and took became poisoned. I remember a case in which a young man gorged himself with flesh at a Thanksgiving dinner, and took cold the next day, and had pneumonia, and died. Unquestionably it was the Thanksgiving dinner that killed him. Gorging on dead turkey, making a cemetery of his stomach, weakened his resistance; so when the germs came upon him, he succumbed at once. The plagues were there in the wilderness. The germs which caused the plagues were there. While the people lived upon manna, they were above the power of these plagues; but when they feasted upon flesh, they succumbed to the

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plagues. While their blood was pure, they were safe; but just as soon as they brought their bodies into a condition of grossness, by eating flesh, the plagues broke out among them. This was simply the result of their own sin. The eating of flesh brought them into a diseased condition, where they could not resist the influences about them. The Lord knew what kind of pestilential germs were there in the wilderness. With three millions of people in a wilderness, how long will they remain healthy?

Even our own modern sanitary appliances do not keep people healthy, when thus crowded together. You saw this illustrated in the experiences during the late war. When the United States brought together 20,000 or 30,000 men from the whole country, - as healthy men as could be found in all the land, - they were not in camp a week before they began to get sick. It is a fact that three or four men died from disease in camp to every one killed by a Spanish bullet.

[Voice: That is so.]

Yes, I know it is so; I have looked up the statistics; and from them you can see -

[S. H. Lane: The proportion was about one to five.]

I attribute this almost wholly to bad diet.

[L. B. Losey: I was in a camp up in Minnesota, a most healthy place; and there was a large amount of typhoid fever and other diseases in the camp. I attributed it largely to the kind of food they ate and the way they ate it.]

Now if that is true with so small a number, and with all our modern appliances, what must it have been back there where there were three million people, just out of Egypt, without any of our modern appliances? What an awful condition there must have been around their camps, without any sewerage and other sanitary appliances! That is why the Lord kept them moving. That was the only way they could maintain any sort of health. The Lord knew all about this condition of things, and the necessities of these three million people, situated as they were in a torrid climate and under conditions most conducive to disease; and he knew that unless there was special provision made to keep them above the power of disease, they must all die. God gave manna; and when they ate that entirely, they were kept free from disease; but when they gorged themselves with meat, even though God sent it, they were soon attacked by plagues.

We are in the wilderness at the present time, and we are going through the worst part of it, too, and shall be from this time to the end. We must come in contact with plagues and germs of all sorts. But God has given us bread from heaven; and that is what I want to talk about. What is the bread from heaven? - Fruits, grains, and nuts.

God has promised to give us food which is convenient for us. What food is most

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convenient? In the first place, what is food? - In a certain sense, air and water are food, as well as what we commonly call food. Bread is food. Anything that supplies the material needs of the body is food. There is a difference in these foods. We have three kinds of foods, - solid, liquid, and gaseous. Solid food is to the body the same as coal is to the engine. Coal in the stove makes heat. Nothing can be a food to the body unless it can burn. It must be something that will combine with oxygen, because it is the combination of these substances with oxygen that makes heat in our bodies, just the same as does coal in the locomotive. The food in the body makes force there, which we manifest through our bodies in the form of muscular strength, the working of our brains, and in other ways. All this energy comes from the food we eat.

The difference between solid foods, such as apples, potatoes, etc., and animals, is that one (the vegetable) is stored energy, and the other is a machine for using the energy. The difference between a horse and an ear of corn is that in the corn is stored up the energy that the horse is to use. If you put corn in the stove, it will burn; and out on the Western prairies, I understand that when corn is worth only fifteen cents a bushel, the people use it for fuel, and it is really cheaper than coal.

[Voice: That is so, and it will burn out a stove much quicker than either wood or coal.]

Yes, because it has such great heat making power. Now, the corn is put into a horse, and the animal gets energy from the corn. The body is a machine, differing from other machines only in that it is the best and most economical machine on earth. The vegetable world furnishes the energy for animals to use. This energy comes from God. It comes down in the sunbeam. Whenever you see a sunbeam slanting through a rift in a cloud, that is a stream of energy coming down from God.

[Sunlight is a germ-killer.]

Yes, it is the greatest germ-killer in the world. Consumption germs can not live fifteen minutes in bright sunlight. This is why we need sunlight in our homes. All germs will succumb to bright sunlight. All the energy in the world comes from the sunlight. For instance, from what does the locomotive get its energy? - It gets it from coal or petroleum. All the steam-engines of the world are run by sunlight. The sunlight falls upon the leaves of the tree, and causes them to take up the carbonic acid from the air, and the roots to bring up material from the earth, make it into vegetable substances. Then these great trees - during the flood, perhaps - were buried in the earth, and became oil-fields and coal-beds; and this energy is taken out in the form of coal and petroleum, and burned. Steam is produced, and in that way our boilers and engines are run.

Now there is a principle in all this. All the steam-engines are run by the sun-light stored up in the earth. You say, How about the water-wheels, and grist-mills, which are run by water-power? - It is just the same thing, because the sun-light falls upon the water, and this causes a vapor to arise. With the air this is carried to the mountains, where, coming in contact with the

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cool air, it condenses, falls in rain and snow, then runs down the valleys and streams and divers. We watch it as it runs down on its way to the ocean, when the same process is repeated. So you see that every particle of energy in this world comes from the sun. The sunbeam is God himself at work.

We need energy all the time, because we are wasting. The body is throwing off as much heat as three feet of steam-pipe. We are continually losing energy in the form of heat and in the work that we do. When I take up a stone, and put it on a wall, I put just as much energy in that stone as I throw off. If you build up a tower out of stones, and that tower should topple over, when those stones fall upon the ground, they send out the same amount of energy that was taken to pile them up.

God has provided, in the order of nature, that the vegetable kingdom should be the means of storing up the energy that is passed down to the earth from the sun. That is God's method of storing energy. Otherwise the sun would strike the earth and glance off. There is nothing on the moon to store up energy, no vegetables there, and so the sun-light goes off without doing any good.

Now the very first lesson that God gave man in the beginning, the very first word that he said to him, so far as we have any record, is on the subject of diet. That was his first lesson. He began by telling him what to eat. "And God said, Behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree, yielding seed; to you it shall be for meat."

So you see there is such a thing as vegetable meat, - seeds, nuts, and fruits, - and that was the food that God gave to man. That is vegetable meat - that is heavenly meat. Now the seeds, nuts, and fruits have energy stored up in them: and they are the natural diet of man.

We do not have to go into any discussion over this. We do not have to study a man's physiology and anatomy, or anything else about him, to find out what he should eat. We find it right here in the Bible. It is a beautiful thing that the zoologists and biologists and anatomists, who study man from a purely scientific standpoint, arrive at the same conclusion. Men who do not believe in the Bible at all, who perhaps have never read the Bible, who do not know that that verse is there in the first chapter of Genesis, study man's hands and teeth, and stomach, and alimentary canal, - his whole anatomy, and they call attention to the fact that a man's structure is wonderfully like that of the ape, the gorilla, the chimpanzee, the ourang-outang; and that those animals eat seeds, nuts, and fruits. From this they conclude that these things must be the natural diet for man. It is not simply a few fanatics that say this, nor a few vegetarians, but it is the most eminent anatomists, the most eminent scientists, of the world. So, considering man from his structure, we must regard him as a fruit- and seed-eating animal.

As I have said, we do not have to go to scientists at all. We find it right there in the first chapter of Genesis.

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[Voice in congregation: Is the potato included in the seeds and fruits?]

No, sir. We can not eat potatoes, unless we cook them first. Adam did not have any cook-stove, and he had no means of cooking; so he could not use potatoes, as they have to be cooked. When we take up the subject of cookery, I will show you why potatoes and other vegetables have to be cooked before being fit for food. The process by which fruit is ripened is exactly what is accomplished in the cook-stove in preparing vegetables for the table. You know you can take a green apple and eat it, and be awfully sick; yet if you take the same kind of an apple and cook it, it will not make you sick. The cooking does what the ripening does, but not so perfectly. It converts the starch of the green apple into dextrin and sugar. That is what the process of digestion does for starch. But I will leave this part of the subject for another time.

Let us consider our proposition a moment longer. There are two classes of living things, - vegetables and animals. These are the two classes of living things. Vegetables are non sentient, living things, while animals are sentient, living things. Animals can feel and think, while vegetables can not; nevertheless, the vegetables are living things. Animals are beings. They are force-consuming machines, while vegetables are simply force, or energy storing things. The vegetable world stores up fuel for the animal world to burn; the vegetable world stores up food for the animal world to use. Let us see what situation a man is in, what a man is doing when he eats an animal, or any animal which eats another animal.

For instance, when a lion eats rabbits, what is the lion doing? - Why, he is doing the very same thing as would be done in feeding a stove with kerosene lamps. The stove is to burn fuel, and the lamp is to burn fuel. They are both force-consumers; and so it is just the same to feed large animals with little animals as it would be to feed a big stove with little stoves. If you put a kerosene lamp in a stove, and there is some oil in it, say half a pint, left from the gallons and gallons of oil which the lamp has burned, the stove will burn the half pint of oil, and then the lamp will remain in the stove as rubbish. But if we keep throwing in lamps, we shall by and by have a good deal of rubbish there, shall we not?

The animal is a machine. Aside from the energy it has in itself, it also has the power of utilizing energy. When you burn fuel in a stove, what will be left behind? - Ashes. What goes out of the chimney? - Smoke. The very same thing happens when you and I take food. If you put corn in a stove, there will be ashes left behind, and the smoke will ascend through the chimney. If you feed that same kind of corn to a horse, there will be ashes and smoke. The nose is the chimney of the horse; and smoke is being poured out all the time, and it is a deadly poison, and the very same kind of poison that goes out through the chimney of the stove. If you take the ashes of the stove, and pour water on them, will the ashes dissolve? - They will, to some extent. The same thing is true of the ashes of the food that the horse eats, - the ashes of the corn. Some of the ashes does not dissolve, and is carried off through the bowels; and some does dissolve, and is carried off through the skin and kidneys; so you have the very same thing as you have in the stove - smoke and ashes. These are poisons, are they not? As you keep on putting that fuel into the stove, after a while the fire becomes choked by the accumulation of the ashes, does it

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not? The ashes have to be cleared away. The animal can, of itself, throw off the ashes. Suppose you disconnect the pipe from the chimney of a stove, and stop up the mouth of the pipe, and shut the stove up tight, what will occur? - The fire will be killed, will it not? It will be smothered by the smoke. Suppose you put something over the top of the chimney of a kerosene lamp, will the lamp burn bright? - No; it will very soon go out. Why? - Because the smoke is poison to the light, and puts it out.

Precisely the same thing is true with our bodies. The fuel put into our bodies is digested. Some of it is assimilated, and some of it becomes poisonous. Some of it, which is soluble, remains in the body for a time, and passes off slowly through the kidneys and skin; other parts of it pass through the bowels, and in that way all is gotten rid of. So when you put fuel into a stove, there is always some ashes, is there not?

In every animal there are three things, - living matter, food and dead matter; in every vegetable there are two, - living matter and nutrient matter; no poisons, or dead matter. The tree takes in food, and converts it into living matter; and in the tree there is always some food that has not yet been converted into living matter. In the animal we have three things, - food that has not been used, - or nutrient matter, living matter, and dead matter. Now did you ever think of that? This dead matter is the ashes.

[A Voice: No matter how highly meat is flavored, or how it is dressed, there is the broken-down tissue, the dead matter.]

That is it. I am talking of the best animal that ever lived, and it is not entirely a question of disease. There is dead matter in the animal, because the animal is like the stove, that leaves ashes behind; or the locomotive, that sends out smoke and cinders and other things; because the animal is a working machine, just the same as the locomotive is.

[A Voice: The arterial blood flows out; and the venous blood, with the impurities, the dregs, is left behind.]

That is it; these things are always left in. The kidneys strain out the poisons from the body; but this is simply an extract of the body, and the body has more or less of it in it all the time. What the liver strains out in the bile is nothing more nor less than extract of the body, and there is always more or less rife in the body.

Now see how much lung poison - carbonic acid poison - there is in the body. If you put a rope around a man's neck, the poison will accumulate sufficiently to kill him in four or five minutes. The body is so full of poisons, and is so near the death point, that it takes only three or four minutes after the lungs cease to carry it off, for the poison to accumulate to a fatal amount.

Well, to come back to the point again: the animal, as we stated, contains three things. I am an animal; and I have, in my body, food, living matter, and dead matter. Now suppose I eat

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vegetables, what do I do? - I add food and living matter to the food and the living matter that are in my body. But suppose I eat an animal, what then? - I add food, living matter, and dead matter, so I add to the dead matter that is already in my body the dead matter that is in the body of the other animal. Now can you see that? [Voices: Yes.] There is no escaping that. When I eat the vegetable, I get pure food, just as the Lord made it for us. God did not put any poisons in the vegetables; there is no dead matter in them. But when I eat the animal, I take the food that is there, and the living matter, also the dead matter; so I add to the dead matter in my body, which is already so near the danger-point, the poisons of the other animal's body.

Now that is the reason the use of flesh shortens life, - because it adds to the accumulation of dead matter in the body; and by and by it overcomes the life-force, and brings death. That is the way death came; for if Adam had not sinned, and had continued to eat the perfect food, he might have lived right on forever. God made man immortal, not mortal. Man is naturally immortal, not naturally mortal. Some of you will say that is a heresy; but if you will consider the matter, I am sure you will agree with me. The only reason man dies is because he sinned. It is only disobedience that brings death; there could not have been any death if there had been no disobedience. That is not to say that man has intrinsic immortality; for God only is immortal; but God gave to man the privilege of being immortal if he would obey him, man always being in the position where, if he disobeyed God for a moment, he was subject to death. He had to depend upon God's continually pouring into him a continual stream of his energy; and so long as that stream kept coming in uninterruptedly, just so long man might live; but the moment man sinned, he interrupted this continuous stream of God's energy, and was subject to death. And the only reason we may hope to live in the future world, is that we shall be forever obedient, because we shall be continually in touch with God, receiving from him power enough and life enough to keep us above the power of death.

Death comes by the accumulation of death within the body. It has accumulated to an extent which makes it impossible for the life to overcome the death-dealing agencies within. Every animal has death within him. The vegetable has living matter and food, but no death in it; but the animal has food - living matter - and death. The dead matter gradually accumulates until the body loses its power to overcome it and eliminate it. If we could throw it all out perfectly, our blood would be pure, and our bodies would be pure, and we would be above the power of disease; but through our inability perfectly to eliminate all the dead matter from our bodies, it gradually accumulates, by the taking on of other dead matter, until the amount of death in the body has reached the point where the body can no longer live.

Now here is a reason for the disuse of flesh-foods that no one can possibly dispute. It puts the matter on a strictly scientific and Scriptural basis, and there is no possible getting away from it. It is not a question whether the animal is a healthy one or not; it is only a question of whether it is an animal or not. There is no better reason for feeding one animal with another animal than there is for feeding a furnace with small stoves, or a stove with pieces of other stoves.

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But I will close, and let you have a breathing-spell before the opening of the next session.

*Address by J. H. Kellogg, M. D., February 26, 1899*

### THE BEST FOOD

by: Dr. J. H. Kellogg

I am not sure that I know what the people want to hear about.

Voice: Talk about something good to eat.

That is the great cry, Give us something good to eat. It is the great cry of the world, and it is right. The Lord says, "Eat that which is good." Now I believe that the Lord has put everything that is good and wholesome, and every satisfying gustatory flavor, in the food that he gave man in the first place, - fruits, grains and nuts.

Now I called your attention the other day to the fact that there was in vegetables one principle, simply, living matter, or food. We might say that there is living matter and food, but we can state it more simply, that there is living matter only, for the food is converted into living matter. We have in the animal two things, living matter and dead matter. In the vegetable we have simply stored life, or stored energy. We do not have stored life in water. It would not do to say that water is life, although it is necessary to life. And we can not say that there is life in air, or that air is life, although it is necessary to life. We have energy in water, but it is dead, so to speak. Take hydrogen and burn it, and it combines with oxygen, and there is an active living process, but when the hydrogen and the oxygen are combined, there is water, and if you have a fire which is an active living process, and you put water on it, it will extinguish the fire. A live human body is like a burning fire, and in this case as well water will put the fire out if there is enough of it, as for instance, when a man falls into the water; but the water is at the same time a necessary means of keeping the fire burning, for it dissolves and carries out the ashes or dead matter of the body. I want to make this thing clear; how the body is like a furnace. When you have a fire, you must have two things, air - oxygen and fuel, and you must have something else, you must have a means of getting rid of the dead matter. Now as the fire burns, there is a living process. The material upon which the fire feeds, the food, in which there is energy, the fuel in which there is energy, is largely transformed into heat. The energy becomes mobile, so to speak, is set in operation, or in motion so that it may be utilized. So eating, digestion, breathing are simply processes by which oxygen comes in contact with the food and burns it and sets the energy which it contains in motion, just as the warmth spreads out and radiates from the stove, and as the light shines out from the lamp. This is life in motion, in activity. It is the energy which has come from the sun in the sunshine, and is now resuscitated and shining out again. It has been in a stored up, or latent state, in the fuel. This same thing is true of the food.

The chimney of the stove carries off the smoke, and how do we get rid of the ashes? It is

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usually by means of a grate. But suppose you have no such means of getting rid of the ashes? The stove will gradually fill up with ashes until finally the fire will be extinguished by the ashes. Now in the body we use the water for the purpose of carrying off the ashes. It circulates the food-fuel through the body, and carries off the ashes; and just as long as the lungs carry off the smoke, and the kidneys, etc., carry off the ashes, the fires of life burn brightly.

We have in the vegetable one thing, living matter. We have no ashes in the vegetable, there is no ashes in the fuel, but when the oxygen combines with the fuel then there are ashes left. There are no ashes in the bread, there is no poison in bread, there is no uric acid in bread, there is no bile in bread, - but when that bread has come into the body and passed through the various vital processes, the oxygen comes in contact with it and it becomes uric acid, and bile, etc. Every particle of food we eat becomes poison, so that we have in the animal just the same thing that we have in the stove. We have living matter, energy, stored in the food, and when this energy is exhausted we have dead matter, or death, as we might say, left behind from the fuel or food. Here again you have the same thing as in the ashes or smoke which is thrown off. In the vegetable we have living matter, in the animal living and dead matter. So if one animal feeds upon the body of another animal, he adds to the poison of his own body the poison of the other body, just the same as though you put one stove in another stove, adding the ashes of the one to the other, or instead of putting the whole stove in, you just put the fire in, emptying the whole thing in, you get the ashes along with the fire; or it is the same as if you were attempting to feed a fire on cinders, going to the ash-heap for your fuel, instead of to the coal bin. If you used no other fuel than that, although there is some fuel in the cinders, you would soon get ashes enough to put out the fire.

Now the question whether the animal is a sick, diseased animal, is of minor importance. A dead animal is a corpse, any way, and it doesn't matter whether it is a sick corpse or a healthy corpse, it is a dead corpse just the same.

I can not see why or how it is that human beings ever came to be willing under any circumstances to make a cemetery of their stomachs.

One of the greatest preachers in the country was visiting me some time ago in Battle Creek. He was giving a lecture in the city, and after the lecture he came up to see me. He said to me, "Doctor, I have been wanting to see you for some time. You work hard, and I want to see what you eat. I have been working very hard, and I find that my work tells on me, and I find that I have got to take care of my eating. Three years ago I used to laugh at your ideas about eating, but recently I have begun to think that it might be well for me to think more about my eating. What did you eat this morning?"

"Well," I said, "this isn't my day to eat" - I had been too busy to stop to eat.

"Well, what did you eat yesterday?"

"Well," I remarked, "yesterday was an 'off' day also, and if I remember rightly I had four apples

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and half a dozen figs."

"But you don't mean to say that you live on that all the while, do you? Do you not eat beefsteak?"

"I have not eaten beefsteak for thirty-five years."

"Is that possible! And yet you are working hard all the time?"

"Yes, I am working just as hard as I possibly can. I get out of myself every day every possible bit of energy, and I do not stop working until I fall asleep, and I take work to bed with me, for it wakes me up to go to bed, and when I fall asleep it is with work, proof sheets, etc., Bible and books scattered on the bed about me. I always take my Bible to bed with me."

"Well," he said, "I wish you would give me your objection to eating beefsteak."

"Well," I said, "I will tell you a story. A lady wrote me the other day from Marietta, O., - it was just before Christmas - that her husband was driving into town and he passed a butcher shop, where there was hung out a lot of ripe rabbits, that were green and blue and yellow and all sorts of colors with putrefaction, and as he looked at them an old farmer came along and said, as he stopped his horse, 'If I ever get low enough down to eat such stuff as that I will shave my head and paint it red like a turkey-buzzard.' And I have often wondered where people got such a turkey-buzzard appetite that they wanted to eat dead carcasses. Why should a man want to make a Potter's field of his stomach anyway, to put into it the dead carcasses of beasts? Now if a lady should find a dead hen on her front porch, she would immediately call a scavenger to carry it away and bury it with the garbage. But if the lady finds a dead hen on her back porch, she takes it, cooks it, and the family bury it in their stomachs."

I noticed his jaw began to drop, and his face got long; just then he sprang to his feet, clinched his fist and brought it down on the table, and said, "Doctor excuse me, but I am a darned fool."

That was a rather strong statement for a clergyman to make. I do not approve of the use of such language; but I am repeating the conversation just as it was. I am not sure whether I excused him or not; but I thought he was excusable for being disgusted with himself under the circumstances. He said:-

"I have been a fool all my life. I never thought of these things, and I have been burying dead things in myself all these years. I will never eat another bit of flesh as long as I live. And I am going to preach these things in my pulpit."

People are waking up all through the country to see that there is a difference between live food and dead food; that God never made these dead things to be eaten. Now life must necessarily be shortened by the use of food that has death in it. God gave us food that had nothing but life in it. That is what we have in fruits, grains, nuts. They have the life that God sends to us in the

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sunbeam, stored up there in those beautiful little packets. Take an apple, and it has life in it, hermetically sealed up. That skin around that apple is absolutely impervious to germs. The apple contains bottled up sunshine, hermetically sealed. See how the apple is made. You know how it started in the blossom, a little cell inside that blossom, the very center of it, has been expanding, and God has been packing the life away inside, and spreading it out all the time. It has never been opened to the air; it has always been growing from within; and the thing has been done so deftly and so beautifully that when it is all complete, there it is, with all that energy which God has stored there, and in perfect condition. Now when you open an apple and get to the inside of it, there are no germs there, not a particle of death in it; there is no instrument of death there, no infection and no disease. And that is true of every fruit and grain, and of every nut, and of all the good things that God has given us to eat. Of course I am now speaking of wholesome fruit, the fruit that you would call perfect, - sound fruit.

On the other hand, here is an animal. Now in every cell and fiber of the soundest animal you can find there is death, because the animal is a consuming fire. And there are cinders and ashes, and smoke, and poisons, and all sorts of most deadly poisons are in the animal's body. When the Indians of South America go out to fight how do they poison their arrows? They dip the points of their arrows in putrefying human flesh. That is the way the arrow is poisoned. A putrefying animal body is just as poisonous as a putrefying human body.

Did you ever know of a butcher getting blood-poisoning? [Yes.] The butcher runs the risk of his life if, while he is cutting off some putrefying beef, ripe beef, he happens to cut his finger. He is in danger of blood-poisoning, - septicemia, - just as a doctor is in danger of blood-poisoning when making a post mortem examination of a dead human body. The butcher gets blood-poisoning from the same cause. He is cutting up corpses, the very same thing that the doctor is doing. A dead ox is just as much a corpse as a dead man; a dead sheep is just as much a cadaver as a dead boy.

The Lord told Noah he might eat flesh, and there is a very interesting circumstance in connection with that fact. In Gen.9:5 we find something I would like to have you all think about, because some of you will be trying to justify yourselves in the use of flesh food, by the suggestion that since the Lord told Noah he might eat meat, you may do the same. Third verse: "Every moving thing that liveth shall be meat for you; even as the green herb have I given you all things." The Lord it seems gave Noah permission to eat two things he had not given to eat before. One thing was to eat animal flesh, and the other green herbs. In Gen.1:29 we read: "And God said, behold, I have given you every herb bearing seed, which is upon the face of all the earth, and every tree, in the which is the fruit of a tree yielding seed; to you it shall be for meat." Now in the ninth chapter the Lord says, "Every living thing that moveth shall be meat for you; even as the green herb," etc.

So you see the Lord extended man's bill of fare, and gave him vegetables. If man is going to eat the ox, he might as well eat the ox in the first place, as second-hand. In other words, the Lord at that time removed all restrictions, and said to man, through Noah, that he could eat everything he had a mind to eat; but he told him in the first place the things best for him to eat,

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and in this chapter he told Noah, Now you may eat anything you please, anything you want to.

One of the early Catholic fathers, more than fifteen hundred years ago, gave a good reason for this, the best reason I have ever heard. It was that all restrictions being removed, man might by his own volition choose the best, not because other things were forbidden; in order that he might develop a higher character, a better character, by choosing the best things, by choosing God's way, because God simply pointed it out as being his way, without any compulsion about it. God said, Here are these things, you may eat flesh meats and green herbs if you want to do so; but here is the original plan, the perfect way. God holds out before us the same opportunity for choice. There is no compulsion.

"Every moving thing that liveth shall be meat for you." Fifth verse (new version): "Your blood of your lives will I require [seek], at the hand of every beast will I require [seek] it." The word used for require in the original Hebrew is "seek"; that is the meaning which the lexicon gives. "Your blood will I seek: at the hand of every beast will I seek it."

Now God has said to man, You may kill and eat these animals if you want to; you may take their lives; but if you do, they will take your life; if you destroy them, they will destroy you. Before that time all these beasts had been in dominion to man; so Adam could say to the lion, Go on this errand, and the lion would go and bring anything to him; or he could say to the bird, Go and do this, and the bird would fly away and do as he bid, and come back to him again. This was a time when all these creatures sang for joy. Think of it, a time when everything could sing. The carnivorous birds do not sing any more; they caw, and croak, and shriek. It is the birds that still live on heaven's diet that can sing. Florence Nightingale knew that. Some of our greatest singers are vegetarians. Some of our greatest musicians are the strictest kind of vegetarians. One of the greatest violinists in this country is a vegetarian, and he sticks to it because of the great benefit it is to him.

A great musician was once asked why he did not eat meat. He picked up his violin and played one of his greatest melodies. After playing it through, he said, "That tells you why; if I ate meat I could not do that." He recognized that he had not that quality of mind and nerve and of vitality when he ate meat that he had at other times.

This question is a practical question. It is a question that ought to come to every single one of us. What is the best food that will make us the best men and the best women, that will give us the greatest strength and vigor, the purest blood, the greatest clearness of mind, and the greatest activity of the nerves?

At the beginning, God gave to man food that had only life in it; but after the flood, he gave him food that had both life and death in it. Then when man began to take animal food, his life was very much shortened. I want to call your attention to a table, that I have in a little book, here, entitled "Shall we Slay to Eat?" It tells how rapidly the race ran down, and lost life, and vigor, and vitality. You will find it on page 114. I will just read the figures to you. For instance, Noah, 950 years; Shem, his son, 600 years; you see his life was shortened three hundred

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years. Shem's great grandson, Salah, 455 years, and his great grandson, Rue, 239 years. His great grandson, 114 years. At the time of David, the average length of life had been reduced to 70 years. The average length of a man's life to-day is only 42 years; that is, only one twentieth of the average length of life before the flood.

The best food will be that that has the most life in it, won't it? How can we find what food has the most life in it? We can easily find that out from the analysis of the food. The best food will be the food that has the highest total nutritive value, provided it is vegetable food. For instance, wheat flour contains 85 per cent. of nutritive value; barley meal, 85 per cent.; oatmeal, 85 per cent.; rye meal, 85 per cent.; and Indian meal, rice, peas, beans, and lentils all have about 86 per cent. of nutritive value. So you see all the grains and all the legumes have 85 or 86 per cent. of nutritive value. They contain only about 15 per cent. of waste matter. All the rest is living matter, capable of being converted into living water in our bodies, and being used in the human body. The potato has only about 25 per cent. of nutritive matter. Which food is best worth eating, then, the potato, or such foods as Indian meal, rice, and cornmeal? Which is the best eating? Why, the Indian meal, or rice, or oatmeal is better than potatoes.

Mushes are not good. I frequently talk to the patients at the sanitarium about the miseries of mush. I believe they are more responsible for indigestion than anything else. It is a great deal better to live on an ordinary diet, as far as digestion is concerned, than to live on mush and milk and sugar. That is one of the worst combinations you can make.

Voice: How about soups made from peas, beans, and the like?

Dr. J. H. Kellogg: I don't approve of them very much, because you swallow the starch without mastication. To-morrow we will have some experiments here to illustrate the question of starch digestion, and I want to show you something about starch.

Voice: Is milk a good food?

Dr. J. H. Kellogg: I suppose you mean cow's milk, and not vegetable milks of any kind. Cow's milk is good, excellent, - for calves. (Laughter) That is right. I can not recommend cow's milk for anything but calves. God made cow's milk for calves. One day I had a whole lot of children around me, at our house. I wanted to make some impression upon them, so that when they went out they would go out different from what they were when they came in. I think it is our duty to try to change everybody that comes in contact with us so that they go away a little different, better than they were before. We must be sure, however, to change them on the right side.

We were talking about diet, and I said we are like what we eat, and if we want to be beautiful, we must eat beautiful things. There are the apples, pears, peaches, plums and cherries. Are not they beautiful? How many of you would like to be beautiful? We are made of what we eat, you know. The Germans say, "As a man eateth, so is he." That is a fact. We are made of what we eat. So if we want to be beautiful, we must eat beautiful things, mustn't we? There are the

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plums, cherries, apples, apricots, and the other beautiful things. Then there are the grains, - how beautiful they are. When we come to flesh foods, it is another thing.

The better the animal, the better he is to eat, of course. If you are going to eat anything, you want the best diet that you can get. That is the idea of the cannibal. The cannibal eats his enemy. Why? Not because he has a hankering for the taste of human flesh. That is not the reason. But he eats his enemy because he is strong, and he thinks that when he eats him, he becomes possessed of his strength, and of his courage. The eating of human flesh by cannibals is with that idea, that by the consuming of his enemy, or eating his enemy, swallowing him, he swallows his qualities, mental and physical, - and not only that, but his property, too. The cannibal believes that the kingdom is within him. He eats the man, and he eats his whole kingdom. Not very many years ago, in the Sandwich Islands, in the courts, one of the natives brought in as a proof that he owned a certain piece of property, the fact that he ate the former owner of that property, and the proof was accepted as conclusive.

Men have a sort of cannibalistic idea in eating the ox. A man says, "I eat beef to be strong," as though we are going to be strong if we eat a strong animal. Now a certain clergyman came up to me one time, and wanted to know what made me so strong. He did not ask me whether I ate strong men, or not, to be strong; but he wanted to find out what he should eat in order that he might be strong. He did not want to eat me because he thought I was pretty strong, - he didn't have any idea of eating me; but he wanted to find out what I ate. If you want to be strong like a strong animal, you must not eat the animal, but you must eat the same things that the strong animal eats. If the animal is strong because he eats the proper natural diet, let us eat the proper diet also, - the diet God gave us.

*A Talk by Dr. J. H. Kellogg - March 2, 1899*

## GOOD AND BAD FOODS

by: Dr. J. H. Kellogg

Milk as Food - Three Kinds of Cooking - Experiments Showing Starch Digestion - Peanut Butter - International Health Association.

I have been asked several questions, and I will try to answer some of them. The other day a good brother asked me if I could recommend the use of milk; and I remarked that milk is good for calves. The fact is, so far as my observation is concerned, that milk is not good for any class of beings but calves, - that babies or adults who are compelled to live on milk will suffer in consequence. The large share of stomach troubles and bowel difficulties of many babes is due to cow's milk. Sometimes this food is the best the child can get; and of course if that is so, the little one has to make the best of it. But it is an unfortunate thing for any person to be obliged to live on cow's milk. The reason for this is that mother's milk, the natural food of the child, forms in the stomach of the child small, soft, flaky curds, which are quickly digested. Cow's

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milk, on the contrary, forms large, tough curds. I once saw a man who nearly lost his life from taking milk. He came home one evening, tired, hungry, and thirsty; and being in a hurry to go to bed, he swallowed three pints of milk. He went to sleep feeling quite comfortable; but about two o'clock he awoke with a strangling sensation. He felt something in his throat, and placing his finger in his throat, he pulled out three yards of milk, - a rope of milk three yards long. It was fortunate that he was strong enough to expel the mass, else it would have remained in his stomach and rotted, inflammation would have set in, and he would have had gastric catarrh, and probably would have died.

Cow's milk is the filthiest thing that comes to our tables. Suppose water had so much filth in it, so much barnyard manure, that you had to strain it through a cloth before you would dare drink it. You would have the water condemned. No one would drink it. But you know what is in the bottom of the milk-pail is simply barnyard filth, a mass of germs. Yet people will strain out a large quantity of manure out of their pail, and then drink the extract from it. We have no use for milk at our house. Our babies do not want it, and we have not used it for a year or two.

When I was down to Staten Island last summer, I met a gentleman who was in terrible bondage. He said: "Doctor, I came to see you about a very peculiar thing. My stomach is out of order, and I can not take anything but milk, and I have to have the milk from a single cow, and I have to give that cow distilled water; and if the cow has anything but distilled water, I can not use her milk; and if I use the milk of any other cow, I have a fearful time; and as I can not carry that cow around with me everywhere I go, I am in bondage. I am simply tied up to that cow, and I want to be delivered from her."

There is nothing that goes on our tables which is more filthy than cows' milk and its products; and the sooner we are delivered from this bondage, the better.

The great difficulty with the vegetarian diet is that, in the first place, people felt the need of something else; and some have endeavored to make up for the quality with quantity, and have partaken of many kinds of mushes, and sugar, and syrups, and various sweets, thereby imagining that they were making an improvement, whereas they were practicing the worst kind of health reform. In fact, it was not health reform at all; but, as Sister White has said, health deform. A man who does that way has not made a reform at all, but has been deforming himself.

Another reason why there was trouble was because of lack of fat in the food; and it was this lack of fat, I think, that gave rise to a great deal of inconvenience and suffering. Persons have become thin, emaciated, and sick, and have died of consumption, just because they did not eat enough fat. It is not necessary for us to eat pork, or cottonseed oil, or rancid olive oil, or oleomargarine, or anything of that sort to get fat. We have the nuts, which may be taken either in their natural or some prepared state. The addition of nuts to the regular dietary of fruits and grains, taken in the proper way, satisfies all the requirements of nature.

I want to dwell especially to-day on two things, - cereal foods and nut foods. I will begin with

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cereal foods. I have here on this tray [presenting tray] bread and butter, zwieback, granose, potatoes, an orange, etc. I want to make some experiments that will not occupy much time.

I will say a little more about mushes. The use of large quantities of mushes is responsible for a large amount of indigestion, especially the indigestion of starch, and this indigestion brings about a great many other maladies. What is the difficulty? Why not take cereal foods in the form of mushes? - Simply because when we take food which is so soft, it is not chewed thoroughly, and the salivary glands are not stimulated to activity. It is only when we eat dry foods that the saliva acts in the proper way, partially digesting the food.

I will now make some experiments. Perhaps you will remember some of these principles as we go along. The process of cooking aids with digestion. First, it converts the starch into dextrin. In the process of converting starch to sugar, there are three steps; first, it is converted into amylopectin, and then into erythropectin, and then into achropectin. Then comes maltose, and lastly comes levulose, or the sweetest of all the sugars. Bread is converted, through successive stages, into maltose, or malt sugar, and then levulose. It is really honey in this state. Remember that there are three dextrans, - the first dextrin, the second dextrin, and the third dextrin, - and two sugars.

In the green apple starch is present; but in the process of ripening, it is converted into the first, second and third dextrans, so that in the apple we have completely digested starch, or sugar. This is what causes the sweetness of the fruit. In the process of digestion the saliva converts the starch into first, second and third dextrin, lastly into maltose, when it becomes soluble, and passes into the intestines to become converted into levulose. Cooking can carry the starch through the first three stages; but it can not convert it into sugar or maltose, the presence of saliva being necessary for this change to take place.

How many kinds of cooking have we? - Three. [A voice: Two - good cooking and bad cooking.] And I suppose "fair to middling"; but we have another classification, - cooking in a kettle, or boiling; cooking in an oven, or baking; and cooking before a fire, or toasting. Then the three kinds of cooking are boiling, baking, and toasting.

Now let us see what happens: There are five different stages in the digestion of starch. The first stage, or conversion into dextrin-1, is produced by kettle-cooking. Baking will produce dextrin-2; while toasting will produce the third variety. This, then (toasting), is the point of thorough cooking. A thing which is boiled is only one third cooked; when baked it is two thirds cooked; and only when toasted can cereal foods be regarded as thoroughly cooked.

This may be illustrated by a few experiments. First, we take a little mush in a glass [performing the experiments], adding to it a few drops of solution of iodine, which changes to a blue color on coming in contact with starch. In another glass we will put some potato, and upon the addition of some of this same iodine solution, we find that both these solutions have taken this blue color. In another glass we place some zwieback, and in another some granose; and while we are waiting, we will note the length of time it takes this granose to swell and fill the entire

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glass. Now upon the addition of this iodine (Lugol) solution, we find that it does not take the blue color that the others have, thus showing that the starch has been converted to dextrin, indicating that it is the last state to which it can be brought by cooking. You see that one is purple, and the other blue. In this granose you will notice that the blue color quickly disappears and it takes a beautiful purple color, quite distinct from this deep-blue, but presently this will disappear.

This shows that the starch has been changed by cooking. This is the principle upon which all our cereal foods - zwieback, granose, crystal wheat, etc. - are made, being carried to the third stage of digestion. I discovered this twenty-five or thirty years ago, and used it as a basis for the manufacture of granola; and the reason we make that is because we want the starch carried to that stage. You may toast bread, and by grinding it in a coffee-mill, produce a granola which is just as good as any, except that you may not relish the flavor quite so well, the fermentation having changed it. If we had time, we would continue the experiments; but we will notice that the orange does not take the blue color upon the addition of the solution, nor does the apple, showing the absence of starch. Bread instantly takes a deep-blue color, as does mush, showing that starch is very abundant. There is no starch in fruits and nuts; consequently those who can not digest starch may get rid of this difficulty by adopting a diet of fruits and grains.

Fruits contain sugars and acids, nuts contain fats and albumins. Therefore we have, in fruits and nuts, all the essential elements of nutrition. Nuts are a perfect substitute for eggs, meat, or any nitrogenous element. The same is true of beans, except that they contain starch, and therefore can not be eaten by those who can not eat starch, as they cause bloating and gas on the stomach. By removing the skins, however, this difficulty may be avoided. There are no food elements in meats that we do not find in nuts, but there are some things we do not find there; for in the meat there is dead matter, and in the nut there is nothing but life.

There is no starch in peanuts. Peanuts are not nuts; they are legumes, and belong to the same class as peas and beans.

Now I want to tell you how to make nut butter. Shell the nuts; take off the skins by putting them in the oven and heating sufficiently to shrink the nuts, when the skin can be rubbed off; then crush them. Nuts do not have to be roasted in order to remove the skins. It is only necessary to dry them. The mistake that is made in making nut butter is in roasting the nuts. They should not be roasted; for roasted nuts, like fried doughnuts, are indigestible. Now the question is, How are you going to make butter out of peanuts without this roasting process? I want to say that other kinds of nuts besides peanuts do not require any roasting. You can make butter out of almonds, walnuts, hazelnuts, and other kinds of nuts, without roasting; but the peanut must be cooked, for it is raw. There is a process by which it can be done without roasting the nuts.

At the sanitarium we do not use peanut butter made from roasted nuts; we do not consider it wholesome. A great many people know from experience that roasted peanut butter is not

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wholesome. I will tell you how you can make nut butter without roasting the nuts. It is a very simple way, and you will not need any machinery at all. Remove the skins, as I have explained; then take the nuts, with an equal quantity of water, and put in a covered dish; set it in the oven, and let them bake for several hours. If the nuts get too dry, add a little water, and cook until the water is evaporated. Rub the cooked nuts through a colander, add a little salt if you like, and you have the most delicious nut butter you ever tasted in your life. It is perfectly digestible, too.

At Battle Creek we are manufacturing a blancher, which we shall be able to furnish in a short time, that anybody can use in removing the skins from peanuts. After cooking them until the kernel will shrink, they can be put in a bag, and rubbed until the skin is removed. I hope that our friends in the South will take up this peanut industry, and raise peanuts, and manufacture products that they can sell to their neighbors. Other people are recognizing that it is a good thing, and people of other countries are taking it up. The manufacture of nut butter is not controlled by any sort of patent. Some years ago I saw that such a thing might be done; but I did not think it was a good thing to do. I thought that it was a thing that the world ought to have; let everybody that wants it have it, and make the best use of it. With nut butter you can get everything you really need. You do not need to buy other nut products unless you want to.

[Voice: Do you consider it unwholesome to eat nuts without blanching?]

No, because the nut was made to be eaten raw. The grains were made to be eaten raw, too. You may be surprised at that. It is only that half-cooked starch that makes trouble. Raw cabbage can be eaten by some when cooked cabbage can not be eaten. So long as the thing has life in it, it will not decay; but when you cook it and kill it, it begins to decay.

By only half cooking the grains, they will ferment in the stomach. They are dead, so they will ferment. But if we take our grains in the form of toasted bread, the starch is in the form to be thoroughly digested, and ready for the immediate completion of the digestive process and absorption. It is in the condition in which we find it in the fruit; in fact, in the form of dextrin.

I do not, however, recommend eating raw grains. Still, I have known patients to get well by eating raw grains. I knew a lady who took a long course of treatment, and finally went home, and ate raw grain, and in three months she was well. That raw grain was better than sticky bread and mushes; but if we will cook it in the form of zwieback, we shall have no difficulty in digesting it. When beans are baked until they are nicely browned, they are in the same situation as zwieback.

*A Talk by Dr. J. H. Kellogg - March 2, 1899*