

Why Macrobiotics Recommends Grains

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When I lectured on the macrobiotic dietary approach to teachers, nurses, doctors, and medical students at the University of California at Berkeley's School of Nutrition, one of the questions was why macrobiotics recommends so much grain (carbohydrate). (Actually, only two questions were asked; the other was, how does the macrobiotic diet supply enough vitamin B12?)

I answered that, judging from their shapes, our thirty-two teeth consist of twenty for grains, eight for vegetables, and four for meats. Therefore, it is natural to eat foods in this proportion. Another reason I mentioned was the social and economic point of view. In other words, grain is the cheapest and most abundant source of calories, and only grains can prevent world hunger. However, I was not able to give sound nutritional or medical reasoning as to why we recommend grain. Not only was I unable to do this, but to my knowledge no macrobiotic person has ever explained why we should eat mostly grain — that is to say, 50 to 60 percent of the diet. Even Ohsawa didn't give an answer for this.

It was my big joy and surprise when the *U.S. Dietary Goals*, published by the Senate Select Committee on Nutrition in 1977, stated its first goal as follows: "Increase carbohydrate consumption to account for approximately 55 to 60 percent of the energy intake." The report explains the reason for this statement as follows.

First, a diet high in complex carbohydrates may reduce the risk of heart disease. "Most population groups with a low incidence of coronary heart disease consume from 65 to 85 percent of their

total energy in the form of carbohydrates derived from whole grains and tubers." (*Present Knowledge in Nutrition*, by Drs. William E. and Sonja J. Connor, The Nutrition Foundation, 1976.) *Dietary Goals* continues:

In their report, Drs. Connor conclude that high carbohydrate diets are quite appropriate for both normal individuals and for most of those with hyperlipidemia (high levels of fat in the blood), provided that the carbohydrate is largely derived from grains and tubers. The use of high (complex) carbohydrates by civilized man has an historical basis, is economically sound, and shows a clear indication of causing less rather than more disease, especially in the coronary heart disease-hyperlipidemia area.

The Connors also report that the high complex carbohydrate diet is important in the treatment of diabetes because it reduces the threat of atherosclerosis and hyperlipidemia, which are common to diabetes, by lowering cholesterol and saturated fat levels. The Connors note that some diabetics find a carbohydrate diet also results in improved glucose tolerances; in others, insulin requirements have been stabilized.

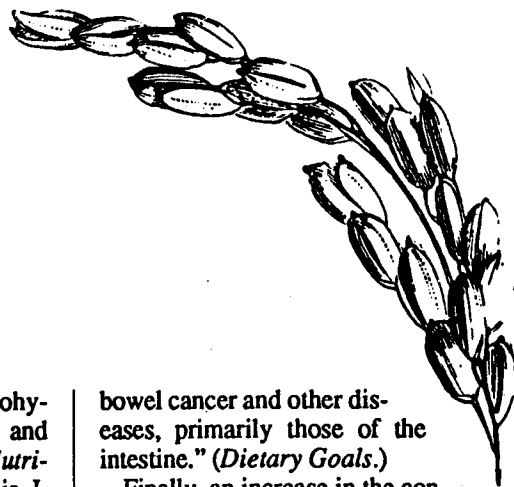
Another reason to increase carbohydrate intake is that it increases fiber consumption. "Dr. Denis P. Burkitt, among the first advocates of the high-fiber diet, has postulated that an increase in fiber consumption, preferably natural fiber rather than fiber added to refined products such as white bread, will markedly reduce the incidence of

bowel cancer and other diseases, primarily those of the intestine." (*Dietary Goals*.)

Finally, an increase in the consumption of complex carbohydrates is likely to ease the problem of weight control. Professor Olaf Mickelson of Michigan State University reports in *General Foods World*, July 1985:

Contrary to what most people think, bread in large amounts is an ideal food in a weight-reducing regimen. Recent work in our laboratory indicates that slightly overweight young men lost weight in a painless and practically effortless manner when they included twelve slices of bread per day in their program. That bread was eaten with their meals. As a result, they became satiated before they consumed their usual quota of calories. The subjects were admonished to restrict those foods that were concentrated sources of energy; otherwise, they were free to eat as much as they desired. In eight weeks, the average weight loss for each subject was 12.7 pounds.

The U.S. Senate's recommendation of high carbohydrate consumption is based on statistics; however, it lacks scientific explanation. The best nutritional explanation of this is in *Live Longer Now*, Nathan Pritikin's bestseller. According to this book, the explanation is like this. In order to live, we need a certain amount of calories every day which are supplied by the consumption of protein, fat, and/or carbohydrate. Within this, we cannot depend too much on protein because it produces poisons. The next element eliminated at first was carbohydrate, because all



carbohydrates are made of simple sugar, which will give a bad effect when eaten in quantity. Therefore, nutritionists formerly recommended high fats for the source of energy. Then, Ancel Keys's revolutionary theory came. He found during a fifteen-year study of 281 businessmen that high cholesterol and high blood pressure were the main differences between those who died of heart disease and those who did not. Keys later conducted a massive study involving more than twelve thousand people from seven different countries. Here, Dr. Keys found that fats in the blood also correlated with high incidence of heart disease as well as high cholesterol in the blood.

Then scientists studied primitive peoples such as the Bantus, New Guineans, and Ecuadorians. The result was always the same. Low fat/low cholesterol meant a low incidence of heart disease. Furthermore, in order to prove that this was not the result of a natural immunity to heart disease in those people, Keys studied the Japanese population in three different environments, as reported in *Live longer Now* (Keys, A., et al., *Lessons From Serum Cholesterol Studies in Japan, Hawaii, and Los Angeles*, Ann. Int. Med., 48:83-94, 1958). "It was found that the Japanese group in Japan had a very low incidence of heart disease. The Japanese group in Hawaii, on the other hand, had a significantly higher incidence of heart disease, while the Japanese group in Los Angeles evidenced a rate of heart disease equal to that suffered by Americans." By this study it is revealed that protection from heart disease among Japanese is not by natural immunity but from their diet.

During the twenty years between 1950 and 1970, many laboratory experiments were conducted to find out if diet could cause heart disease in animals. In 1959 a diet very much like what many Americans eat every day – about 42 percent fat and about one fiftieth of an ounce of cholesterol per day – was found to produce heart trouble in monkeys. Since that time the experiment has been repeated many times on different animals by many researchers. The results were always identical – that is, high fat and high cholesterol produce heart disease. At one time, unsaturated fats were considered beneficial to

heart disease, but experiments showed that they were no better than saturated fats (Friedman, M., et al., *JAMA* 193:882, 1965; Bierenbaum, M., et al., *Circulation* 42:943, 1970).

Thus the study of heart disease eliminated the high-fat diet. The only way left to supply enough energy is with a high-carbohydrate diet. However, a diet high in carbohydrates has been avoided by diabetics due to the belief that consumption of carbohydrates might cause a patient to pass into a diabetic coma, a condition suffered when they consume sugar. Ironically, the high carbohydrate diet is recommendable not only to heart disease patients but to diabetics as well. I. M. Rabinowitch in 1935, Wolf and Priess in 1956, and W. E. Connor in 1963 studied a low-fat (high-carbohydrate) dietary treatment of diabetics. They all found that patients fared far better on low-fat diets than on other diabetes-control regimens (*Live Longer Now*, p. 55).

In reality, what scientists learned was that there is a vital difference between complex carbohydrates and simple carbohydrates. "Simple carbohydrates in the diet convert to fats; they increase blood fats and certain diabetic symptoms. On the other hand, complex carbohydrates have just the opposite effect." (*Live Longer Now*, p. 56.)

According to Pritikin, a diet of simple carbohydrates increases both fat and cholesterol. Thus what is not good for diabetes is also not good for heart disease. He writes (p. 59), "Experience with low-fat diets and evidence of the lack of diabetes in primitive groups of people who have essentially low-fat diets have brought forth the low-fat, high-carbohydrate diet as the only viable means for preventing and treating diabetes in most cases. The carbohydrates in such a diet must of necessity exclude the simple carbohydrates – table sugar, honey, molasses, and so forth. . . ."

From the macrobiotic point of view, food is the foundation of life and life is a manifestation of food. Therefore, the mechanism of evolution can be explained from the standpoint of foods. About 4.5 billion years ago the earth was covered by water (inorganic elements), some of which was then

converted (about 3.5 billion years ago) to carbohydrate, fat, or protein – that is to say, organic matter. About 3 billion years ago, bacteria appeared in the water; probably lightning was the cause of this transmutation from organic matter to bacteria. These bacteria were the first living things (plant life) on the earth.

From these simple plants, photosynthetic plankton arose. Some of these vegetable plankton became more active (yang) due to the weather becoming colder (which is yin). In the cold weather, the yin vegetable world would die out and the yang would survive. Therefore, living organisms which fed on such yang plankton naturally became more yang. When vegetal plankton becomes yang, it transmutes to animal plankton; this happened about 1.5 billion years ago. About a billion years ago, sponges (animal life) and shellfish (500 million years ago) followed. It was about 400 million years ago that other fishes appeared. When the great land masses appeared, about 300 million years ago, some plants stayed there and became land plants. Some fish adapted to both ocean and land environments and became amphibians. About 250 million years ago, ferns and mosses were abundant; reptiles arose, followed by insects. At this time (about 200 million years ago) the climate was very warm and dinosaurs and giant ferns predominated. Next, as the climate began swinging back to the cold side again, ferns began dying out and were replaced by early gymnosperms (plants whose seeds are exposed) about 150 million years ago. Animals which can feed on these foods – birds and mammals – appeared. Then about 100 million years ago, angiosperms (plants whose seeds are enclosed in an ovary) arose, making a more yang food for animals. Some more yang animals preyed on others. Thus carnivorous mammals started. Others fled to the trees to escape. This was the origin, about 75 million years ago, of the fruitarian primates. Then, about 50 million years ago, owing mainly to the thinning out of the trees, many primates had to leave the trees. This was the origin of apes and monkeys. (These animals, although they continued to get their food from the trees, were able to live either on

land or in the trees.)

The rise of herbs began about 25 million years ago. Fruitarian apes found grains and began eating them. They began standing up about 10 million years ago. In my opinion, eating grains made the apes stand up, and caused the development of their brains. As a result of standing up, their hands were freed from the function of supporting the body and manual dexterity developed. This was the origin, about 5 million years ago, of homo faber – the tool maker. Then about 1 million years ago they discovered fire, and this is the origin of homo sapiens – man.

It took hundreds of thousands of years from the appearance of the first man to develop the man of agriculture. *The Encyclopedia Britannica* states, "For hundreds of thousands of years, during the Paleolithic Period, or Old Stone Age, primitive men lived on natural resources, both animal and vegetable. Paleolithic man was differentiated from other animals by little more than the fact that his lesser physical strength and natural weapons were compensated for by the tools and weapons that his greater mental development enabled him to provide." In my opinion, this was the result of his eating grains. The *Britannica* continues:

The recession of the ice cap at the end of the last glaciation brought a different climate to the region at approximately 10,000 B.C. The challenge of this change in environment resulted in an enormous step forward, in that man began to seek to control his environment – that is, he began to cultivate plants and domesticate animals. Having taken this step, he was no longer forced to follow the seasonal migration of animals or growth of grains but could produce his own food supply within reach of his home. Settlement is dependent on a food supply controlled by means of agriculture and stock herding, and from the first village settlements developed the first town and, ultimately, civilization.

Babylonia, Egypt, Greece, and Rome were all based on the growing of wheat, barley, and millet. The ancient cultures of India, China, and Japan were based on the rice crop. The pre-Columbian

people of the Inca, Maya, and Aztec civilizations in the New World depended on Indian corn (maize) for their daily bread. Therefore, some civilizations created myths which consider grain as their life-giving god or goddess, and some created codes of foods based on grains. The Mormon religion states, "All grain is ordained for the use of man and of beasts, to be staff of life, not only for man but for the beasts of the field, and the fowls of heaven, and all wild animals that run or creep on the earth." (Chapter 25, *A Marvelous Work and a Wonder*, LeGrand Richards, Deseret Book Co., 1969.)

According to the Gegu Ceremony Book (written in 804 A.D.), the twenty-first emperor of Japan, Emperor Yuryaku, constructed the Ise Shrine (in 457 A.D.) which enshrined the goddess Amaterasu, the highest goddess of the Japanese Shinto religion. One night, Emperor Yuryaku dreamed an appearance of Goddess Amaterasu who told him, "I am appreciative of you enshrining me, but you made a bad mistake neglecting Toyouke No Okami, the Rice God, whom I admire most. Please bring him here soon." Surprised, Emperor Yuryaku started constructing a shrine for Toyouke No Okami the next day. This shrine is called Gegu (guest shrine) and the shrine for Amaterasu is called Naigu (the domestic shrine). Japanese mythology also tells that Amaterasu Ohmikami made a declaration saying the people of Japan should eat rice as their main food. This goddess's declaration was one of the most important commandments of Japan. However, this has been forgotten except by a few such as George Ohsawa.

In conclusion, macrobiotics recommends grains as a main food (50 to 60 percent of foods normally eaten) for the following reasons:

1. Man evolved from unicellular organisms to present homo sapiens through a change of foods. At the present stage, man's principal food is grains because the proportion of our dentition indicates: 5/8 grains; 1/4 vegetables; and 1/8 animal foods.

2. The potassium/sodium ratio of grain is very close to that of the body cells – 10 to 1 – so it is an ideal basic

material for body maintenance and building.

3. Carbohydrates contained in whole grains are complex carbohydrates, which change to glucose very slowly. Therefore, eating grains does not upset our sugar metabolism.

4. A high protein diet (exceeding about 16 percent of caloric intake) causes a negative mineral balance, mainly calcium loss, and therefore acidifies the body fluid. Thus, protein cannot be our main food. According to recent research, fats (either saturated or unsaturated) cause atherosclerosis, and therefore heart disease and diabetes. Thus fat, even though it is the highest energy source within human foods, cannot be a main food. Complex carbohydrates should be the main source of our calories.

5. Nutritionally speaking, whole grains – one-seeded fruits – contain mainly carbohydrates, some fats, some proteins, and minerals and vitamins. Many nutritionists recommend complex carbohydrates as the best food for man.

6. Economically speaking, grains are the cheapest source of calories and other nutrients. Grains are also compact and dry, so they store well without spoiling.

7. Grains are the most abundantly grown foods in the world. Only grain can sustain the entire population of the world, if eaten in a whole (unrefined) form. Grain is the highest calorie producer from a given area of land compared with other foods. Approximately twenty to thirty people can live from one acre of land if they consume their nutrients from grains; by contrast, one cow needs ten to fifteen acres for a year of grazing and will yield 300 or 400 pounds of meat. Since the average individual who is a meat eater consumes at least 250 pounds per year (a conservative estimate), it is quite apparent that the use of meat as a principal food does not make good sense. It fosters land shortage, as there is just not enough land to feed a world of carnivores. What is bound to result, as history proves, is conflict. Many a war in the past has been fought over land, and the

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prospect for the future is not bright. War is inevitable due to the shortage of food in the future on this planet unless we consume grains as the main food. (About 50 percent of our foods consumed should be grains and legumes.)

The Chinese character *wa* (和) translates in English to 'peace' or 'harmony.' This is a combination of two letters; 禾 is cereal plants, and 口 is mouth. Therefore, this character suggests that eating grains is peace. There are many peace movements nowadays. However, one who does not live on whole grains may lead such a movement by mere sentimental action.

8. Grains – particularly wheat, rice, and corn – have been used down through the centuries as the basis for diet. Their value for nutrition and taste has been tested and proven by millions of people over thousands of years of time.

9. According to Oriental philosophy (or the order of the universe), yang depends on yin (and yang attracts yin). Therefore, yang animals (man included) should depend on the plant world for sustenance. Among plants, grains are the most yang (compact, dry, rich in sodium, etc.) and are the best food for man in the vegetable kingdom for maintaining a yang condition. This is a very good reason grain is recommended for man.

10. Lastly, we know by our experience and that of thousands of others that grains as a main food satisfy our hunger and our taste. They are a great, tasty food. Not only that, but they improve our health without exception if eaten unrefined, cooked properly, and consumed moderately.

For these reasons we recommend grains as our main food. □

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