

Chapter 8

Is There a Diet Which Is “Natural” For Humans?

Our diets aren't what they used to be, but our bodies are. Scientists say our species (*Homo sapiens*) has been here for about 40,000 years, and that we really have not physically changed much in that time. Human-like primates have been here for about four million years. Yet we have cultivated our food-crops and livestock for only about 10,000 years. Before that time, our ancestors ate what they could forage or hunt. In some parts of the world, the diets of traditional and tribal peoples still resemble those of our ancestors. The diseases which plague these people are very different from the ailments faced by those in the more “developed” countries.

Today, humans are faced with health problems which were previously of minor importance. Because these diseases occur primarily in people of post-reproductive ages, we inherit little resistance to them. Our immune arsenal is not designed to cope with industrialized 20th century diseases nor, perhaps, with some of the dietary practices we indulge in today.

Many physicians and nutritionists feel that Western dietary practices which have developed over the last fifty to a hundred years are responsible for the prevalence of the most deadly diseases we face today.³¹ Heart and artery diseases, some cancers, and diabetes are sometimes called the Diseases of Civilization. They are responsible for most deaths in the industrial countries of the world. They are troubling not only because they are so common, and take such a heavy toll, but because we generally have no effective treatments against them. The best hope we have of reducing the incidence of heart disease and cancer is to prevent them.

These diseases are quite rare in traditional, non-Western cultures and were rare among our ancestors as well. They are also extremely rare in the other primates. The differences between our lives and theirs is not limited, of course, to the foods we eat. Health and disease differences result from dietary,

environmental, work pattern, psycho-social, and other lifestyle/cultural elements. But a large body of evidence suggests that dietary differences are a major reason why we get the Diseases of Civilization and they do not.

The last hundred years has brought a completely new way of living and eating to our part of the world. Although refined sugars and flours were eaten before that time, the per capita consumption of these foods has multiplied many times over in recent decades. The increased use of breaded and fried convenience foods, grain-fed and fattened antibiotic-laden beef, pork and poultry, flavor enhancers, food colorings and preservatives has been accompanied by a drastic reduction in the consumption of unadulterated fruits and vegetables. Although we are living to older ages, many of those older years are often spent in poor health.

We may well wonder, then, if there is a way of eating which our bodies were “designed” to handle—a way of eating which we can adopt to prevent the occurrence of these Diseases of Civilization.

What Did Our Ancestors Eat?

The hunting/gathering diet consumed by all people on earth until the development of agriculture was refined over many thousands, perhaps millions, of years.³² The human gastro-intestinal tract adapted to this type of diet over the same time span. Of course, the specific foods used varied from era to era and from area to area, but research suggests that the same kinds of foods were consistently used in the different populations of early humans.

Vegetarians and carnivores both like to think that their way of eating is most “natural”, claiming that ancestral diets consisted mainly of plant foods or wild animals, respectively. But the archaeological evidence suggests that evolving humans went through a number of dietary phases which included less, then more, then less reliance on animal foods. The human digestive system has the capacity to obtain nutrients from a wide variety of food types.⁵²

The pre-hominids of the Miocene era (25 million years ago) are thought to have eaten a fruit-based diet.³² Hominids emerged between 4.5 and 7.5 million years ago, with diets including slightly more meat, either from scavenging or hunting. As our ancestors became more adept at tool use, meat became more important in their diet.³¹ Many tools were developed for processing game. These hominids often lived in areas where they had access to herds of grazing animals. *Homo erectus* and early *Homo sapiens* are

thought to have had diets containing about half plant foods and half animal foods.³¹

Our Stone Age ancestors had to cope with "lean periods" of food scarcity. Researchers have speculated that early hominids developed a taste for foods which have high fat or sugar contents.^{32,52} These foods provided a concentrated source of calories, allowing the short-term storage of fat reserves to see our active ancestors through those lean times. The "sweet teeth" and "fat teeth", which served our ancestors in times of need, contribute to widespread obesity and consumption of calorie rich/nutrient lean foods in modern Western societies where food is abundantly available.

The use of animal foods again declined before the inception of agriculture. Food consumption shifted to a subsistence pattern, with tools being developed for the gathering and processing of wild plant foods. Hunter/gatherer cultures in existence today have a diet very much like that of these ancestors.

The development of agriculture, about 10,000 years ago, brought dramatic changes to the human diet and way of life.¹³⁷ Population centers stabilized. Meat use declined dramatically, with plant foods comprising as much as ninety percent of the human diet.³¹

With the advent of agriculture, grains and cereals became the staple foods of our ancestors, as they continue to be for most of the world's population. Vegetable protein foods (beans, seeds and grains) replaced animal protein foods. Humans no longer had to depend on seasonal plant foods and roaming herds as their food sources. They stayed in one place and often gathered in large communities. The stage was set for the development of the ancient civilizations from which we trace our cultural roots.

The meat consumed by ancient people was wild game. That meat was considerably lower in fat than the "bred" meats we eat today. Wild game meat typically contains three to five percent fat, while meat from modern cattle can contain up to 30% fat.³¹ Also, the fat in wild game is quite different from that of domestic livestock animals. The wild game meats consumed by our ancestors were considerably higher in protein and lower in fat than the meat consumed today. Of course, wild game contained none of the antibiotics, hormones or other "medicines" found in our modern livestock animals.

Our ancestors consumed complex carbohydrates, as opposed to the simple sugars eaten in large quantities today. If any alcoholic beverages were

consumed, they were fermented, not distilled, and so had lower levels of alcohol than is contained in our modern spirits.

The foods consumed by these hunter/gathering people were extremely high in the nutrients (vitamins, minerals, proteins) that we now consider essential for good health. Potassium intake was greater than sodium intake. Today, in most parts of the world, the reverse is true.³² These diets also contained a significantly lower level of saturated fats than is found in modern diets. It is now generally accepted that high consumption of fats, particularly saturated fats, contributes to the heart and artery diseases which are the most debilitating and deadly to Western populations.

It is also thought that our ancestors retained a relatively high level of physical fitness throughout their lives. Skeletal remains indicate that they retained a high degree of muscular strength into old age, considerably higher than that of a modern Westerner.³²

Some information about dietary adaptations may also be derived from studying the diets of our closest "relatives" in the animal kingdom, the great apes (gorillas and chimpanzees). The diet of the great apes is almost exclusively plant matter, particularly wild green vegetation. These foods contain very large quantities of chlorophyll, beta-carotene, vegetable protein, and, of course, fiber. The large intestines of the great apes is longer than that of humans, and so is better adapted to the digestion of huge quantities of cellulose fibers.

Both humans and apes are well suited to the digestion of hemi-cellulose fibers.⁹² It is thought by some archaeologists that the shorter colon of humans allows them to consume smaller quantities of more concentrated foods while maintaining a relatively large body size, compared to the apes who consume large quantities of lower caloric foods. This adaptation is skewed when humans consume large quantities of high-calorie, high-fat, low-fiber foods. Besides the obvious hazards associated with these foods, they tend to provide a very limited variety of vitamins and minerals.

The Ancestral Diet in the Twentieth Century

More than fifty twentieth century hunter/gatherer societies have been studied by anthropologists. The diets of these people are thought to resemble those consumed by our ancestors, and so might be considered an approximation of the kinds of foods our bodies are best adapted to.

The Kadi San Bushmen of the Kalahari are perhaps the best studied of

the modern hunter/gatherers.¹³⁷ Their diet is somewhat similar to that of some non-human omnivores. Some may find it surprising that so little animal prey is consumed by these people, who subsist mainly on foraged foods.

Modern hunter/gatherers, with the exception of those in Arctic areas, typically consume a diet consisting of 65% vegetation and 35% animal foods. Approximately 20% of their daily calories come from fat. (In Western countries, diets typically derive 40-45% of their calories from fat.) Their diets are also low in salt and refined sugars and include a wide variety of complex carbohydrates, high intake of fiber and moderate calorie consumption.

With respect to the diseases which plague us most, these people are considerably better off than we are. They tend to have stable blood pressures into old age. Few of them are obese; heart attacks, strokes and diabetes are relatively rare. The cancers most common in our culture—cancers of the lungs, colon, breast, and prostate, are virtually non-existent among modern hunter/gatherers.

It cannot be said, however, that those who live a more traditional, hunter/gatherer lifestyle generally enjoy better health than those of us in the West. The infectious diseases, which are much less lethal to us, are still rampant in these “developing” parts of the world. This is due to inferior sanitation and water purification practices, as well as the poor availability of medicines which counteract bacterial and parasitic infections. As a result, these people frequently have diseases rarely encountered in “developed” areas of the world.

The relatively low incidence of degenerative diseases in developing countries is not due only to the fact that individuals in these countries have a shorter life expectancy. The diseases of civilization described earlier are rarely seen, even among the old people, in these areas. In addition, the younger people in non-industrialized areas do not exhibit the early symptoms and tendencies towards those diseases commonly seen in the young people of Western nations.³¹

A large number of studies of traditional African diets suggest that minerals, vitamins and proteins, previously thought to be best obtained from meat and dairy products, can be absorbed in sufficient quantities from nutrient-rich vegetation. It has long been known that the many species of wild green plants consumed in rural regions of Africa are, for those populations, important sources of protein, calcium, vitamin A, vitamin C and iron.³⁶

In the Usambara Mountain region of northern Tanzania, the staple food

consumed at almost every meal is a stiff porridge made from maize meal or another starchy vegetable. In addition, most meals contain at least one side dish, the most common of which is some type of michicha, one of the over 40 wild green plants growing in the area.³⁶

Nutritional wisdom can be found both in modern scientific texts, and in observation of the practices of people who have successfully developed their ways of living and eating over thousands of years. Unfortunately, in many parts of the world, traditional food consumption patterns are being abandoned in favor of the "quick-fix" sweetened, fattened foods of the modern Western nations. As traditional diets and ways of life become more "modernized", the pattern of the Diseases of Civilization in developing nations is shifting to resemble those of industrialized societies.

Is our convenient, processed food supply out of step with our Stone Age physiology? Should we attempt to maintain a diet more like that consumed when our digestive system was still in the formative stages? The truth is that the actual foods regularly eaten by our hunter/gatherer ancestors are not readily available to us today. They ate wild plants and wild animals, which are quite distinct from our domesticated food sources. The stress demands and survival pressures put upon us by our modern world and environment are different from those experienced by our ancestors. For ecological, aesthetic, and practical reasons, it would be undesirable to try to go back to those dietary ways of old.

But we can take steps to emulate the types of foods and nutrients consumed by early humans. Features of the dietary patterns of our hunter/gatherer ancestors are summarized below:

- A wide variety of complex carbohydrates from fruits, wild greens, tubers, and roots were consumed.
- The ratio of animal to plant foods varied from 50/50 to 10/90 animal/plant foods.
- Meats, when eaten, were extremely low in fat.
- Calorie consumption was in proportion to expenditure.

The characteristics of this food consumption pattern demonstrate that the diet of our ancestors had some similarities to the dietary recommendations made by the American Heart Association, the U.S. Surgeon General, and most national and world agencies which make dietary recommendations. Adopting a diet which more closely resembles that of our ancestors may provide health benefits to modern people living in our faster-paced, post-industrial society.