

Chapter 9

Health Hazards of the Modern Diet

“Next in importance to the divine profusion of water, light and air . . . may be reckoned the universal beneficence of grass. It yields no fruit in Earth or air, yet should its harvest fail for a single year famine would depopulate the world.”

—Senator John James Ingalls, 1872

The closing years of the twentieth century present many challenges to the modern inhabitant of the planet Earth. Certain health concerns and problems are in many ways unique to people living in our time. Changes in social structures, ways of living and working, the natural environment, and available foods and medicines all combine to provide living conditions quite different from those in which our ancestors lived.

Some segments of our society are becoming more conscious of fitness and health. Many are making positive changes in their diets. As the life span of the individual continues to increase, the common perception is that we are healthier than ever before. All of these facts sound encouraging, but let's take a closer look.

The following information is taken from the U.S. Surgeon General's Report on Nutrition and Health, released to the public on July 27, 1988.¹³⁶

Our hearts and arteries aren't doing too well. Fifty-eight million Americans have high blood pressure, including 39 million who are under age 65. About 1.5 million people have heart attacks each year in the United States. One third of them don't survive. Half a million Americans have strokes each year.

The second leading cause of death in the U.S. (after cardiovascular diseases) is cancer. Most of us are related to or know someone who has experienced this dread disease. Every year, about a million new cases are reported, with almost half a million people dying from cancer each year.

About eleven million Americans are said to have diabetes, but almost half of them have not been diagnosed. This disease can kill, either directly or through its many complications.

Approximately 34 million adults in the U.S. are obese. Social and fashion considerations aside, obesity puts one at greater risk for heart disease, high blood pressure, diabetes, some types of cancer and other chronic diseases.

The Surgeon General also reports that up to seventy percent of people between the ages of forty and seventy are affected with some form of diverticular disease, or problems with the intestines. Most of these cases are undiagnosed.

Fifteen to twenty million Americans are affected to some extent by osteoporosis, or “porous bones.” This condition is associated with easily fractured vertebrae and other bones.

What these diseases have in common is that they are all considered age-related conditions, or “degenerative diseases.” They have also been called “The Diseases of Civilization”, as described in the previous chapter. Heart disease, cancer, and diabetes are responsible for the majority of deaths in the United States. While more of us are living to an older age, most of us are not enjoying good health for many of our later years.

Medical science has provided us with many spectacular health benefits. Perhaps the most striking breakthroughs in modern medicine occurred in the 1940s and 1950s with the development of antibiotics and several important vaccines. These “miracle” medicines have dramatically reduced the incidence of infectious diseases in Western countries. Infant mortality has diminished; many more children now survive into adulthood. Infectious diseases which previously posed serious health risks for people of all ages are now treatable and have, in some cases, been nearly eradicated.

Some progress has been made in the detection and diagnosis of the degenerative diseases which are now the most serious threats to our health. A number of treatments are used (surgery, chemotherapy, painkillers, radiation) to interfere with the progression of these diseases, or to treat their symptoms. These treatments are generally not considered cures. The long term prognosis for people suffering from cancer or heart disease is often poor.

In spite of massive governmental and private effort and investment, we still have no cures for the diseases which plague us most. This is not particularly surprising, given the nature of these illnesses.

An infectious disease is the direct consequence of the uncontrolled

growth of germs. There may be a multitude of reasons why those germs are able to grow in the specific tissues they infect, but by limiting the growth of the germs, the infection and the disease it causes can be controlled.

The degenerative diseases are different. They are caused by many factors. Immunity, heredity, infections, environment, lifestyle, and psychological factors are all thought to interact to determine an individual's probability of getting cancer. Many of the same factors have been identified as instrumental in the cause and prevention of heart disease. Because there are no single causes for the chronic degenerative diseases, it is not surprising that no simple medical cures have been found.

This picture, from the traditional point of view, looks rather bleak. But a closer look at the factors which cause these diseases provides a more optimistic view. Except for heredity, all of these disease-causing factors can be altered through the individual's own efforts. These diseases are largely preventable! If this seems unbelievable, consider the following. The incidence of lung cancer, the most deadly of all cancers in this country, is quite low among non-smokers, and even lower among non-smokers living outside of large city areas. There are other risk factors for this disease, such as hazardous occupations and low intake of green vegetables. The incidence of heart disease is frequently associated with diet, exercise, work habits, and psychological variables, all of which can be changed to one's health advantage!

Change is not easy for most of us. We would, perhaps, like to know which specific things we can do to improve our health outlook without radically altering our way of life. For instance, many of us would not be willing to change occupations or places of residence unless we had dramatic proof that our health status would be directly impacted. As stated in the Surgeon General's Report:

"For the two out of three adult Americans who do not smoke and do not drink excessively, one personal choice seems to influence long-term health prospects more than any other:

"What we eat may affect our risk for several of the leading causes of death for Americans, notably, coronary heart disease, stroke, atherosclerosis, diabetes, and some types of cancer. These disorders now account for more than two-thirds of all deaths in the United States."¹³⁶

Given the wide array of degenerative diseases, one might wonder whether enough dietary changes could be made to have a significant effect on our

health. Indeed, many people now feel that almost everything they eat and do is said to be hazardous to their health. But there really is good news: The dietary changes which can minimize our risk of chronic diseases are remarkably similar! In other words, the same basic dietary habits may help protect us from several, and possibly most, of the common degenerative diseases.

There is a general consistency in the dietary recommendations made by various scientific, governmental, and private health agencies. Although there is a great deal to know about nutrition and its relationship to disease, the suggestions made by these groups are relatively simple. They rely heavily on moderation and common sense. Most people are already aware of these recommendations:

- Reduce consumption of fats and cholesterol.
- Increase consumption of vegetables, fruits, and whole grain foods.
- Reduce consumption of refined, simple sugars; increase intake of complex carbohydrates.
- Reduce sodium intake.
- Consume alcohol only in moderation, if at all.
- Achieve and maintain proper body weight.

All of this seems pretty simple. Different agencies include slight variations on more specific recommendations, such as six vs. four daily servings of fruits and vegetables. Each agency recommends including at least one serving of a dark green or orange vegetable every day.¹⁵

The general consensus is for an increased intake of plant foods—whole grains, fruits, vegetables, and legumes, with their abundance of vitamins, minerals, complex carbohydrates and fiber. This is to be accompanied by a reduced reliance on high-fat, no-fiber animal foods, with their high levels of cholesterol and calories.

Nutrition research can now tell us why green foods are important in our diet, and can also identify the specific health benefits which they provide. Dehydrated cereal grass is an excellent and convenient source of these nutritional benefits. Simply increasing the amount of dark green vegetable foods would be a significant upgrade of what is considered the “average” American diet.

The kinds of foods we eat are not the only source of health hazards associated with our diet. Diseases caused by food toxins have been identified throughout history. Some substances which occur naturally in foods can cause us problems. Alkaloids are present in commonly consumed foods and herbs, as are a variety of enzyme inhibitors. Substances such as oxalates and phytates inhibit the absorption of required nutrients. These substances are generally not consumed in quantities sufficient to cause noticeable health problems.

Only in the present century have we been exposed to toxins which are intentionally added to crops and processed foods. Food additives have been around for several decades now, and evaluations of the safety or hazards of their long term use can now be made. Estimates of the hazards of newer food additives rely largely on animal experiments. But about three dozen of the pesticides currently in use have not even been tested for their cancer-causing potential.⁸⁷

The list of toxic chemicals we are exposed to in foods is extremely long. Residues from fertilizers and pesticides are common in fresh and processed foods. A wide variety of preservatives, colorings, and flavor enhancers are present in packaged and prepared foods. These convenient, prepared, beautifully colored and flavor-enhanced foods are often most compatible with our lifestyles and taste preferences. Our food choices are no longer limited by local availability of foods in season, or by rapid spoilage of those foods once they are processed. But, as is always the case, there is a high price to pay for these luxuries.

According to a report released by the National Academy of Science in May, 1987, fifteen of the most commonly consumed American foods contain pesticide residues that constitute nearly 80 percent of the estimated dietary cancer risk for humans.¹³⁸ The scientists writing the report concluded that discrepancies in standards enforced by federal agencies permit more carcinogens in our foods than the law intends. They state that "the rules must be updated and made consistent if the public health is to be effectively protected." Environmentalists claim that these estimates are actually low, because they do not consider the many carcinogens contained in our air and water supplies, which interact with and add to the hazards posed by food contaminants.¹⁴⁶

Over 390,000 TONS of pesticides are used each year in the United States alone. That's over 3 pounds for each person.⁸⁷ Ninety percent of all fungicides, 60% of all herbicides and 30% of all insecticides have been shown

to cause cancer in animals.¹³⁸ The greatest risk, according to the NAS report, comes from pesticide residues found on tomatoes. Next on the list is beef, then potatoes. The remaining most common foods, in order of estimated hazard, are oranges, lettuce, apples, peaches, pork, wheat, soybeans, beans, carrots, chicken, corn, and grapes.

Remember, these are cancer hazards posed only by pesticide residues. This does not take into account the large number of steroid hormones, antibiotics, and ingested contaminants associated with livestock production. Organic produce is not available to most of us. Consumer groups advocate washing conventionally-grown produce with soapy water before eating it. There is not much that can be done about chemical contamination of animal products. Wheat grass and other cereal grasses can be produced without chemical sprays because they are harvested in the early spring before pesticides are “needed.”

Modern farming and food production methods put more than our personal health at risk. Dr. Michael Fox, an environmental activist, calls our industrialized approach to farming agricide, or “the failure of the agricultural food production system to be sustainable—ecologically, economically, and in terms of contributing positively to our health.”¹⁴¹

Intensive fertilization, plowing, and single-crop farming depletes soil nutrients and the volume of topsoils. Agrochemicals now pollute our aquifers, the underground lakes which supply water to many communities. Topsoil, the rich, relatively loose earth which supplies the nutrient and growth medium for our food crops, is being depleted at a rapid rate. This resource builds up over many centuries, and is not quickly replaceable. Agribusinesses are run for maximum short term productivity and profit, with little concern for the effects of farming techniques on the health of the soils or the nutrients contained in the foods.

The availability and distribution of food in the world today is as ironic as it is troubling. While billions of people throughout the world struggle to feed themselves, large numbers of Americans and Europeans struggle to avoid overfeeding themselves. A further irony is that many of the overweight, over-caloried people in the affluent world are themselves poorly nourished.

The effective and equitable supply of adequate food to people around the world will require a mixture of goodwill, economic maneuvering and political expertise. The most important ingredient, perhaps, is the interest and will to effect such changes.

The food preferences of Western affluent nations affect much more than the coronary arteries of the people living in these countries. Although there is currently sufficient grain to feed all people in all nations of the world, our overwhelming preference for meat-centered meals is a drain on the world's resources.^{52,84}

The destruction of millions of acres of tropical rain forest in Central and South America continues in order to provide range land for beef cattle. Who buys that beef? Primarily, American fast food hamburger chain customers.⁵² The destruction of the rain forests dooms countless species of plants and animals, and dramatically increases the level of carbon dioxide in our atmosphere.

The point here is not to alarm those who are already aware of these issues. The point, rather, is to underline the fact that our food choices have long range effects on our health. We who can make choices about the foods we eat must be aware that our choices have an effect on more than our own bodies; these choices ultimately affect the health of our planet and all of its inhabitants.

The many hazards associated with modern foods and "civilized" diets may seem to be too great a problem to overcome. But that pessimistic notion really misses the point we are making. The diseases most prevalent in our modern culture are largely preventable by choices we can make concerning our own diets and lifestyles. And in the big picture, the changes which can improve our own personal health prospects are compatible with dietary patterns which are the most sound ecologically.