John W. Farquhar, M.D.

The American Way of Life Need Not Be Hazardous to Your Health

Coping with life's seven major risk factors

EVISED EDITION
ver 80,000 copies sold

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REVISED EDITION

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The American Way of Life Need Not Be Hazardous to Your Health

To Christine, Meg, and Jolly,
who made it all possible.

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I claim responsibility for all errors and omissions.

John W. Farquhar

INTRODUCTION TO THE REVISED EDITION

As I prepare the second edition of this book, the awareness of the need for prevention of non-infectious chronic diseases has reached an all-time high. Disease prevention has emerged in the 1980s as a greater national priority than ever before. The $50 million federal allotment in 1978, the date of the first edition of this book, rose to $3 billion in 1984, and many government organizations have become deeply involved in these efforts.

The recent efforts at partial repair, such as coronary artery bypass surgery, constitute a pure growth industry: In 1971 only 10,000 such operations were performed; in 1977 there were about 70,000, and the figure has since climbed to over 170,000 each year, at a cost of over $2 billion a year. Unfortunately, this procedure does not insure permanent health. Often the surgery must be repeated after a few years. Since 1980 another new growth industry has sprung up, "balloon angioplasty," a less expensive alternative to bypass grafts. Unfortunately, however, the narrowed artery now opened by the high pressure balloon has a strong tendency to close down again.

Given the cost and failure rate of these methods, it is inevitable that society will increasingly question the wisdom of total obeisance to the route of post-symptomatic repair. Ill health is not an isolated event; it is the result of an accumulation of abuses, each seemingly inconsequential. Eventually they take their toll. I believe that the individual has to accept responsibility for maintaining his or her own health. No one else can—not a doctor, not a fleet of doctors. In

the way we live our daily lives, we either enhance our health or diminish it.

Often we assume that our life-style is healthy, that everything is "normal," when in fact we are following a path inimical to our health. I hear people say, "I really should lose weight," or "I ought to get more exercise," or "I know I should quit smoking." Yet, free to choose, we often continue along the same hazardous course, living as if our lives were charmed—"It won't happen to me." Our lives are not charmed; rather than forfeit our birthright of good health, we should protect it.

The overwhelming majority of fatal and near-fatal episodes of premature heart attack and stroke are preventable, as are, in all probability, a large percentage of cases of adult-onset diabetes, osteoporosis, and diet-related cancers. This book contains in one volume information on all health habits that are associated with heart attacks, strokes, and other chronic diseases and provides practical, self-directed methods for lowering your risk level in each of these areas. As you read the chapters that follow—on chronic disease, risk assessment, methods of self-directed change, stress management, exercise, nutrition and food patterns, weight control, and smoking—you will see how one aspect of your health affects other aspects as well, and how the prevention of one disease is often the prevention of many diseases. To receive maximum benefit, I suggest that you read the chapters in sequence.

Much of medicine needs to be demystified: For this to happen, high-quality health education is vital. It is my deepest hope that someday the quality of public health education will be so high, and our society so supportive of healthful life-styles, that we will find it simple to retain our natural birthright of good health. Until that time, this book is one man's attempt to work toward that goal. I undertake here to discuss not only what I believe you should know about preventable risks for heart disease, stroke, certain common cancers, and diabetes but also what you can do to bring about permanent life-enhancing changes that will reduce these risks.

We were born healthy and we can die healthy when our days run out. We can keep our lungs clean and our arteries free of plaque as easily as we can keep our minds full of good hope. Why cannot we as a nation reclaim the gift we were given at birth—good health and vigorous bodies—and stand up against passivity? Let us be in charge

of how we live by showing resistance to the quick fixes of modernity. Let us reach out and take what is naturally ours. Let us, for the first time ever, combine true prevention with wise thinking.

John W. Farquhar, M.D.

Stanford, California, 1987

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gently prodded and shaped into a force that could just barely sustain life. Roger was not fully alert or aware of the drama and tension around him. He did not know that the many highly trained health professionals working swiftly about him were processing yet another common entrant into a tunnel from which it can be predicted that only one in four, given his state of shock on entry, would emerge alive at the end of a week.

The initial fear Roger felt, along with his crisis of pain, became the fear of his friends, his family, and those of us who were caring for him. We watched him return to awareness 48 hours after the attack. At this point, Roger had, statistically speaking, passed his first hurdle and thus increased his chances for surviving a week to one in two.

Three weeks after his attack, tubes for intravenous feeding were removed and continuous monitoring ended. Roger was transferred from the fury and precarious balance of the coronary care unit to a quiet ward. His wife's fears eased. In another two weeks, still with a fragile hold on life, Roger was allowed to go home.

To Roger, home meant the comfort and security of his family and his own surroundings. To his family, having Roger home meant adjusting to his needs, watching him regain some of his strength, seeing him occasionally cry. His children had not quite realized how near death he had been. He was still profoundly exhausted and had recurrent sensations of irregular heart poundings. He was bewildered and depressed. He relied on his wife to assist with his frequent medications.

In the three months following his heart attack, Roger re-entered the hospital twice for brief treatments for shortness of breath due to a weakened heart. He also entered a new statistical group: He was now one in two to survive three months. Over the next four weeks his condition stabilized slightly. Even though he was virtually bedridden, Roger and his family maintained their constant hope and belief that life would eventually return to normal.

One afternoon a few weeks later, Ellen came home from grocery shopping and found Roger in immense pain. She drove him directly to the hospital. The chest pain continued for hours; then suddenly it was over. Roger died.

From the time of his initial heart attack until his death, Roger suffered greatly. Even the simplest exertion, such as walking to the bathroom, caused shortness of breath. His ankles were so swollen that he had to wear support bandages. He ate little. He lost interest

in sex. Depression was a continuing problem. He frequently awoke in the night and sat on the edge of the bed gasping for air. These episodes, along with the strange poundings in his chest, created an atmosphere of unspoken anxiety and uncertainty in the family.

HEART DISEASE TODAY

Medical records tell us when Roger experienced his first myocardial infarction (the medical term for a serious heart attack in which an already narrowed artery is blocked and damage to a part of the heart muscle then occurs), and they tell us when he died. But they do not tell us when in Roger's 48 years of life he embarked on a path that led him to premature death.

When was the first hint that he had slipped across the line into a special group of about 248,000 Americans under age 75 who each year die prematurely from heart attacks? Had Roger been luckier, he might have belonged to another group of 600,000 who suffer heart attacks that are not fatal. (These survivors, however, have a high risk of future fatal heart attacks.) Every year an additional 236,000 Americans under age 75 have strokes, 52,000 of which are fatal. Both heart attacks and strokes are due almost entirely to a process called *atherosclerosis*, in which arteries to the brain, heart, and other organs become progressively narrowed by deposits of cholesterol and fibrous tissue.

The dream of an abundant, full life dissolves for all, like Roger, who die prematurely. If we use 75 as the age before which death is defined as premature, heart attack is the largest single cause of premature death in the United States. We are still in the midst of a modern epidemic of heart disease. At least 90 percent of the fatal and near-fatal episodes of premature strokes and heart attacks are preventable. This is truly a staggering percentage, and it carries a vital message to virtually everyone. By the way you live, you greatly determine not only the length of your life but also the quality of your life.

Millions of us have learned that lesson. In the past decade, medical scientists, the media, and the climate of the times have all combined to induce changes in the way we live on a truly encouraging scale. These changes, including a significant drop in cigarette smoking, are very likely responsible for the surprising fact that the heart attack rate has been *decreasing* recently—down 36 percent since the peak of the epidemic in 1965. Much can be done to accelerate this reduction; the best estimate is that we can further reduce the

death rate from heart attack to one-tenth or less of its 1965 peak. The journey will be long and slow for the nation at large; the arrival time will depend on the rate of adoption of healthier life-styles and creation of healthy environments by American society.

HABITS AND LIFE-STYLE

What this book discusses applies to all aspects of our lives—what we eat, how we exercise, how we deal with daily stresses. How we handle these aspects to a large degree dictates our physical and mental well-being. What we are today is the aggregate of genetic factors, the influences of early experiences and learning, and personal habits concerning diet, exercise, smoking, and stress, which constitute our life-style.

What is the impact of our life-patterns on our national health? To the annual total in 1982 of 248,000 premature deaths from heart attacks and strokes, we must add the total impact of cigarette smoking on our health. This includes 90,000 fatalities from lung cancer, about 20,000 fatalities from other types of cancer, 46,000 deaths from emphysema and other chronic lung problems. In addition, we must include about one million individuals who currently suffer from significant degrees of pulmonary crippling. There is also impressive and growing evidence that the incidence of cancer of the breast, colon, and rectum is increased by certain longstanding dietary practices (to be discussed in a later chapter). Therefore, another group of cancers can be added to the list of health problems partly preventable through modified dietary habits, and more than one-third of all cancers are now considered to be diet-related.

ONE MAN'S LIFE-SHORTENING PATH

Early Eating Habits and Cholesterol

From this larger perspective, let us return to Roger's particular case. The shortening of Roger's life began long before his initial heart attack. At birth, Roger was a perfectly healthy baby—well-formed, strong, and vigorous. Roger's mother was concerned that the family's diet be a good one. As Roger was growing up, there was great emphasis on providing adequate protein. Thus, Roger's early childhood diet included an excessive representation of eggs, cheese, whole milk, meat, ice cream, and butter—believed to be healthful and high in needed protein and calcium for a growing child. This is

also a high-cholesterol and high-saturated-fat diet, full of foods that tend to increase deposits of fat in the arteries.

The importance of early childhood diet on blood cholesterol—one of the three major risk factors in heart disease, along with smoking and the level of blood pressure—is demonstrated by Figure 1-1. The levels of blood cholesterol in a group of schoolchildren in Wisconsin were compared to the levels in a group of healthy schoolchildren living in a rural mountain village in Mexico. The Wisconsin children had an average blood cholesterol level of 187, whereas the Mexican children had an average blood cholesterol level of 97—about half that of the Wisconsin children. It is important to note that each group showed a wide range of cholesterol levels (due largely to hereditary factors). What is even more significant is that the blood cholesterol levels of the Mexican children were so much lower that very little overlap existed between the two groups, despite the wide range of levels. This separation between the groups indicates that *between* cultures environmental factors are more important determinants of blood cholesterol levels than are genetic factors; however, *within* any one culture genetic factors are the dominant influence.

The difference in blood cholesterol levels between the Mexican and Wisconsin children was attributed largely to the higher intake of

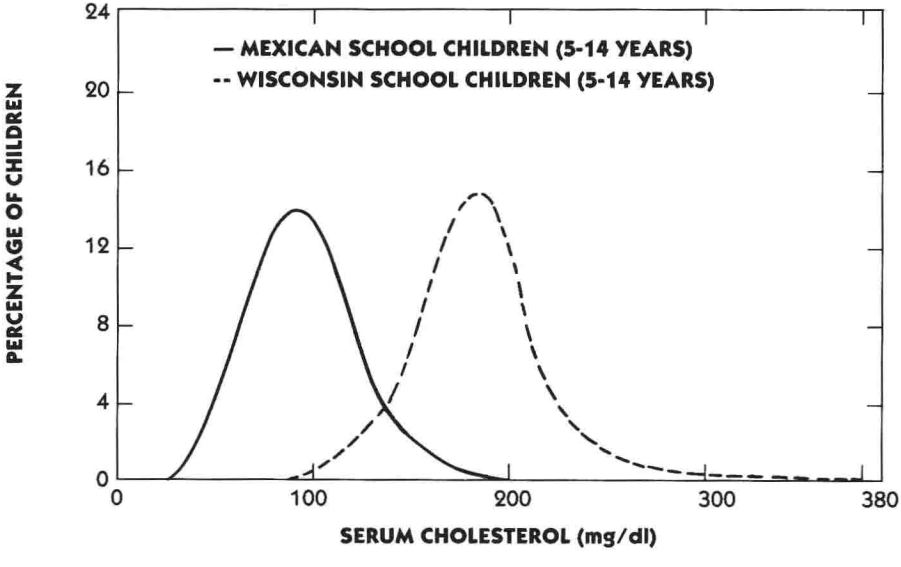


Figure 1-1: Graph showing wide differences in blood cholesterol levels of Mexican and Wisconsin children.

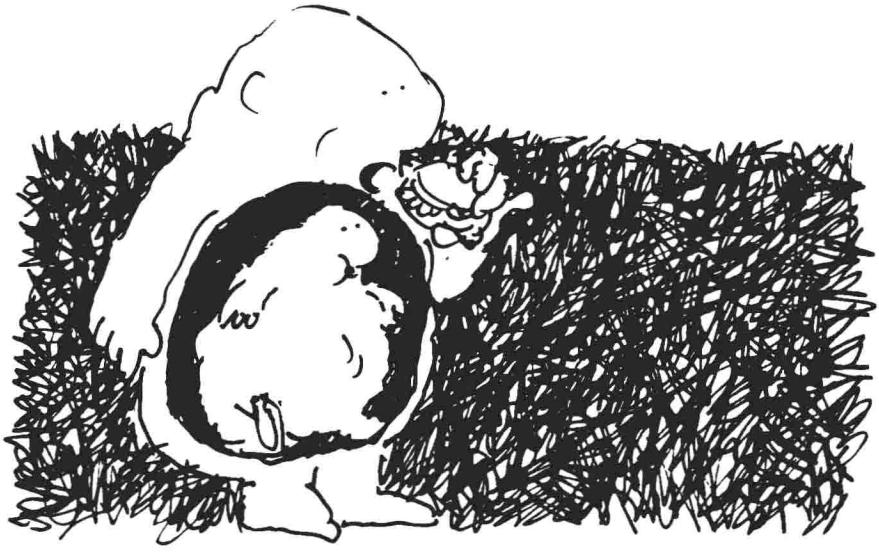
dietary cholesterol and dietary saturated fat from eggs, meat, milk, and cheese by the Wisconsin children. In addition to eating foods low in saturated fat, the Mexican children exercised more, which made them leaner and may also have contributed to the difference in cholesterol levels. Similarly, the Mexican children consumed greater amounts of dietary fiber. This fiber intake or perhaps other dietary factors that we do not yet understand may have helped, too, in keeping the Mexican children's cholesterol levels low.

Studies such as these lead us to believe that the risk factors for atherosclerosis begin in early childhood and develop over many years. These facts also suggest that public health efforts should be directed at the entire population (rather than merely to those in the highest risk categories) in order to lower risk-factor levels in all people and at all ages. Were we to treat only the most risk-prone group—those having special genetic factors that separate them from the majority—we would be ignoring countless individuals who pursue habits that subject them to needless risk. We would be overlooking the fact that body weight, blood cholesterol, and blood pressure tend to increase with age among the so-called normal population in the United States; we would therefore miss our opportunity to prevent problems before they develop. Cardiovascular risk increases in concert with blood cholesterol over a wide range of levels; therefore, at almost all cholesterol levels found in the U.S. population, needless risk is present. In short, the lower the blood cholesterol level the better. The sooner the cholesterol is lowered and the longer it remains low, the more beneficial will be the results.

Roger's "Normal" Childhood

Let's return to Roger again. As he grew up, he ate meat generally twice and frequently three times a day. Like many other Americans his evening meal often included beef. Roger loved ice cream and at least five times a week enjoyed it as a dessert or snack. His mother felt she had not done her job unless a meal contained some form of meat.

The entire family frequently ate bacon, frankfurters, luncheon meat, sausage, and ham—all relatively high in salt as well as saturated fat. As in many other American homes, pickles and potato chips frequently graced the table or were used in lunch bags and for snacks. These, too, are very high in salt. (Everything else being equal, the higher the salt intake the higher the blood pressure. Again, as with levels of blood cholesterol and the intake of choles-



terol and saturated fat, so it is with blood pressure and salt intake: Genetically determined susceptibility affects the response to the dietary factors. Hence, while virtually all people will have a blood pressure rise with increased salt intake, those who are genetically more susceptible will have greater blood pressure increases.)

Not only was Roger a plump baby (which Roger's parents regarded as fine—just "baby fat"), he was also a chubby child. Snacks were provided as pacifiers and as rewards for good behavior. His family environment included easy access to the cookie jar, candy treats, and open bowls of snack foods. Such ready access to sugary snacks created habits that contributed to Roger's weight gain. These habits were difficult to reverse in adult life. Roger was not considered obese, but throughout his childhood he was in the top third of his age group in terms of weight.

According to numerous studies, Americans lead the world in their average degree of overweight. Figure 1-2 (next page) shows the percent of a sample of Americans (males 40-59) considered to be overweight on the basis of their skinfold thickness (which measures the depth of the fat layer) compared to samples of males from six other countries. Again, everything else being equal, the heavier one is, the higher the blood pressure and the higher the amount of cholesterol in the blood. The influence of weight gain or loss is, however, stronger on blood pressure level than it is on cholesterol level.