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EAT TO

LIVE

**THE AMAZING NUTRIENT-RICH PROGRAM
FOR FAST AND SUSTAINED WEIGHT LOSS**

JOEL FUHRMAN, M.D.

"A medical breakthrough. . . There is no question
in my mind that it will work for you."

—MEHMET OZ, M.D.

**LOSE 20 LBS.
OR MORE
IN 6 WEEKS**

EAT TO LIVE

**The Amazing Nutrient- Rich Program for Fast and Sustained
Weight Loss**

Revised Edition

JOEL FUHRMAN, M.D.



Little, Brown and Company
New York Boston London

*To my mother, Isabel,
for all her love and sacrifice
and
in memory of my father, Seymour,
for instilling in me an interest in superior nutrition*

This book is not intended as a substitute for medical advice from a physician. A physician should be consulted if one is on medication or if there are any symptoms that may require diagnosis or medical attention. This book was current as of October 2010, and as new information becomes available through research, experience, or changes to product contents, some of the data in this book may become invalid. You should seek the most up to date information on your medical care and treatment from your physician or health care professional.

Foreword

Although the United States is the most powerful nation on earth, the one area in which this country does not excel is health. And the future is not bright. Almost a third of our young children are obese, and many do not exercise. No matter how much information becomes available about the dangers of a sedentary lifestyle and a diet heavily dependent on processed foods, we don't change our ways. Ideally, Americans should be able to translate financial well-being into habits that lead to longer and better lives, untroubled by expensive and chronic medical illnesses. Yet, in the United States, as well as western Europe, Russia, and many other affluent countries, the majority of adults are overweight and undernourished. While high-quality nutrition is readily available throughout the United States, the American public, rich and poor, is drawn to eating unhealthy food. Indeed, the list of top calorie sources for Americans includes many items I do not consider "real" foods, including milk, cola, margarine, white bread, sugar, and pasteurized processed American cheese.

Though smoking has received a lot of attention for the dangers it poses to public health, and cigarettes have been heavily lobbied against, obesity is a more important predictor of chronic ailments and quality of life than any other public scourge. In a recent survey of 9,500 Americans, 36 percent were overweight and 23 percent were obese, yet only 19 percent were daily smokers and 6 percent heavy drinkers. Several reasons for this epidemic of obesity in modern life have been offered. There is the pervasive role of advertising in Western society, the loss of family and social cohesiveness, the adoption of a sedentary lifestyle, and the lack of time to prepare fresh foods. In 1978, 18 percent of calories were eaten away from home; the figure is now 36 percent. In 1970, Americans ate 6 billion fast-food meals. By 2000, the figure was 110 billion.

Poor nutrition can also result in less productivity at work and school, hyperactivity among children and adolescents, and mood swings, all of which heighten feelings of stress, isolation, and insecurity. Even basic quality-of-life concerns such as constipation are affected, resulting in Americans spending \$600 million annually on laxatives.

With time, the ravages of obesity predispose the typical American adult to depression, diabetes, and hypertension and increase the risks of death in all ages and in almost every ethnic and gender group. The U.S. Surgeon General has reported that 300,000 deaths annually are caused by or related to obesity. The incidence of diabetes alone has risen by a third since 1990, and treatment costs \$100 billion a year. The illnesses caused by obesity also lead to more lost workdays than any other single ailment and increase pharmaceutical and hospital expenditures to palliate untreatable degenerative conditions.

Government policy has had limited power to stem the tide of obesity, yet our nation's leaders have supported formal reports calling for a national effort to raise awareness of the dangers of being overweight. As a part of the Healthy People 2010 initiative, the federal government has proposed several steps to reduce chronic diseases associated with diet and weight through the promotion of better health and nutritional habits. It has set dietary guidelines and has encouraged physical exercise, but these efforts have not managed to change

the minds, or strengthen the hearts, of most Americans. It is clear to the public that a minor change in one's eating habits will hardly transform one's life so readily. So the public turns to magic cures, pills, supplements, drinks, and diet plans that simply don't work or are unsafe. After a few failures, they give up hope.

Unlike for many diseases, the cure for obesity is known. Studies with thousands of participants have demonstrated that the combination of a dramatic change in eating habits and daily exercise results in weight loss, including a 60 percent reduction in the chance of developing chronic ailments, such as diabetes. Disseminating detailed information on these barriers is relatively easy, yet the plethora of diet books and remedies has created a complex and contradictory array of choices for those who are desperate to lose weight. With the publication of Dr. Joel Fuhrman's book, outlining a perfectly rational, straightforward, and sustainable diet, I believe we are witnessing a medical breakthrough. If you give this diet your complete commitment, there is no question in my mind that it will work for you.

In creating this plan, Dr. Fuhrman, a world expert in nutrition and obesity research, has gone beyond the dietary guidelines set up by the National Institutes of Health and the American Heart Association. Importantly, *Eat to Live* takes these nationally endorsed standards a quantum step further. Whereas conventional standards are designed for mass consumption and offer modest adjustments to our present eating habits, Dr. Fuhrman's recommendations are designed for those seeking breakthrough results. I have referred my patients to Dr. Fuhrman and have seen firsthand how his powerful methods excite and motivate people, and have witnessed wonderful results for both weight reduction and health restoration.

I am a cardiovascular surgeon infatuated with the challenge and promise of "high-tech" medicine and surgery. Nonetheless, I have become convinced that the most overlooked tool in our medical arsenal is harnessing the body's own ability to heal through nutritional excellence.

Dr. Fuhrman is doctor as teacher; he makes applying nutritional science to our own lives easy to learn, compelling, practical, and fun. His own common sense and his scientifically supported solutions to many diet-induced ailments will enable many readers to achieve unexpected degrees of wellness quickly and easily. He reminds us that not all fats or carbohydrates are good or bad and that animal proteins catalyze many detrimental side effects to our health. He pushes us to avoid processed foods and to seek the rich nutrients and phytochemicals available in fresh foods. Finally, he offers a meal plan that is tasty and easy to follow. However, make no mistake, the information you will find in this book will challenge you; the scientific evidence he cites will make it harder for you to ignore the long-term impact of the typical American diet. Indeed, it is a wake-up call for all of us to make significant changes in our lives. Now is the time to put this information into action to bring optimal health to all Americans. Go for it!

Mehmet C. Oz, M.D.
*Director, Cardiovascular Institute
Columbia-Presbyterian Medical Center*

Introduction

Let me tell you about a typical day in my private practice. I'll see anywhere from two to five new patients like Rosalee. When Rosalee first walked through my door, she weighed 215 pounds and was on two medications (Glucophage and Glucotrol) to control her diabetes, as well as two more (Accupril and Maxide) to control her high blood pressure. She had tried every diet on the market and exercised but still couldn't manage to lose the weight she wanted to. She came to me desperate to regain a healthy weight but skeptical that my program could do anything more than what she experienced in the past—failure.

I asked her what in her wildest dreams she wanted her ideal weight to be and how long it should take her to attain that goal. She thought that her ideal weight should be 125 pounds and she would like to attain that within a year. I smiled and told her that I could design a diet for her to lose about five pounds the first month or twenty pounds the first month *and* reduce her medications. Not surprisingly, she picked the latter.

After hearing my explanation of the program I designed for her, Rosalee was psyched. Despite all that she had learned from reading about dieting, she never realized how all the mixed messages had led her down the wrong path. The plan I outlined for Rosalee made sense to her. She said, "If I can eat all that good-tasting food and still lose that much weight, I will definitely follow your instructions precisely." When Rosalee returned to my office the following month, she had lost twenty-two pounds and had been off the Glucotrol for four weeks and the Maxide for two weeks. Her blood pressure was normal and her glucose was under better control on less medication. It was now time to reduce her medication even further and move to the next phase of the diet.

Rosalee is typical of the thousands of patients I have helped in my practice, men and women who are no longer overweight and chronically ill. I get such a thrill from helping these patients regain optimal health and weight that I decided to write this book to place all the most important information for weight loss and health recovery in one clear document. I needed to do this. If you implement the information in the pages that follow, you too will see potentially lifesaving results.

I also see many young women who want to lose twenty to fifty pounds quickly in anticipation of an upcoming wedding or trip to the beach. This winter I saw a swimming coach who had to look great in her bathing suit come summer. These younger and healthier individuals are typically referred by their physicians or are informed enough to know that it can be dangerous to crash-diet. My plan is not only a healthful, scientifically designed diet calculated to supply optimal nutrition while losing weight quickly, it also meets the expectations of those desiring superb health and vitality while they find their ideal weight. My diet style can be combined with an exercise program for astonishing results, but it can also be used effectively by those too ill or too overweight to exercise sufficiently.

In spite of the more than \$110 billion consumers spend every day on diets and "reducing" programs (more than \$40 billion per year), Americans are the most obese people in history. To

be considered obese, more than one-third of a person's body must be made up of fat. A whopping 34 percent of all Americans are obese, and the problem is getting worse, not better.

Unfortunately, most weight-loss plans either don't work or offer only minor, usually temporary, benefits. There are plenty of "rules and counting" diets, diet drugs, high-protein programs, canned shakes, and other fads that might enable you to lose some weight for a period of time. The problem is that you can't stay on these programs forever. What's worse, many are dangerous.

For example, high-protein diets (and other diets rich in animal products and low in fruits and unrefined carbohydrates) are likely to significantly increase a person's risk of colon cancer. Scientific studies show a clear and strong relationship between cancers of the digestive tract, bladder, and prostate with low fruit consumption. What good is a diet that lowers your weight but also dramatically increases your chances of developing cancer? Because of such serious drawbacks, more and more desperate people are turning to drugs and surgical procedures for weight loss.

I have cared for more than ten thousand patients, most of whom first came to my office unhappy, sick, and overweight, having tried every dietary craze without success. After following my health-and-weight-loss formula, they shed the weight they always dreamed of losing, and they kept it off. For the first time in their lives, these patients had a diet plan that didn't require them to be hungry all the time.

Most patients who come to me say that they just can't lose weight, no matter what they do. They are not alone. It is almost universally accepted that obese patients cannot achieve an ideal weight or even an acceptable weight through traditional weight-loss programs. In one study of sixty overweight women who enrolled in a university diet-and-exercise program, none achieved her ideal weight.

My diet plan and recipes are designed for the hardest cases and those who have failed to lose the desired weight on other plans. Following the dietary advice offered in this book, you will achieve remarkable results, regardless of your previous experience. Weight loss averages fifteen pounds the first month and ten pounds each month thereafter. Some people lose as much as a pound a day. There is no hunger, and you can eat as much food as you desire (usually more food than you were eating before). It will work for everyone.

My patients experience other benefits as well. Many of them once suffered from chronic diseases that required multiple medications. A substantial number of my patients have been able to discontinue their medications as they recover from angina, high blood pressure, high cholesterol, diabetes, asthma, fatigue, allergies, and arthritis (to name just a few). More than 90 percent of my diabetic patients who are on insulin at the time of their first visit get off all insulin within the first month.

When I first saw Richard Gross, he had already had angioplasty and bypass surgery, and his doctors were recommending a second bypass operation because his chest pain had recurred and catheterization showed two out of the three bypassed vessels were severely blocked. Because he had suffered brain damage from the first bypass, Richard did not want to undergo another operation. Needless to say, he was very motivated to try my noninvasive approach. He followed my recommendations to the letter, and within two months on the plan his chest pains disappeared. His blood pressure normalized, his total cholesterol came down (without drugs) to 135, and he no longer required the six medications he had been taking for angina and hypertension. Now, seven years later, he is still free of any signs of vascular insufficiency.

I see numerous patients whose physicians have advised them to have angioplasty or bypass surgery but who have decided to try my aggressive nutritional management first. Those who follow the formula described in this book invariably find that their health improves and their

chest pains gradually disappear. Of hundreds of cardiac patients treated in this manner, all but a few have done exceptionally well, with chest pain resolving in almost every case (only one went to repeat angioplasty because of a recurrence of chest symptoms), and I have had no patient die from cardiac arrest.

With the help of their doctors, most patients can slowly reduce—and eventually cease—their dependency on drugs. This program often enables my patients to avoid open-heart surgery and other invasive procedures. It often saves their lives.

However many details I provide of my patients' success, you are right to be skeptical. Thousands of patients with successful outcomes does not necessarily translate into your individual success. After all, you might point out, weren't these patients motivated by severe illness or the fear of death? Actually, many were relatively healthy people who came to me for routine medical care. They found a hidden benefit, and just decided to "eat to live" longer and healthier and lose the extra weight they did not need to carry, even if it was only ten to twenty pounds. When faced with the information in this book, they simply changed.

Dr. Fuhrman's Health Equation

These results sound fantastic, and they are. They are also true and predictable on my program. The key to this extraordinary diet is my simple formula: $H = N/C$.

Health = Nutrients/Calories

Your health is predicted by
your nutrient intake divided by your intake of calories.

$H = N/C$ is a concept I call the *nutrient density* of your diet. Food supplies us with both nutrients and calories (energy). All calories come from only three elements: carbohydrates, fats, and proteins. Nutrients are derived from noncaloric food factors—including vitamins, minerals, fibers, and phytochemicals. These noncaloric nutrients are vitally important for health. *Your key to permanent weight loss is to eat predominantly those foods that have a high proportion of nutrients (noncaloric food factors) to calories (carbohydrates, fats, and proteins). In physics a key formula is Einstein's $E = mc^2$. In nutrition the key formula is $H = N/C$.*

Every food can be evaluated using this formula. Once you begin to learn which foods make the grade—by having a high proportion of nutrients to calories—you are on your way to lifelong weight control and improved health.

Eating large quantities of high-nutrient foods is the secret to optimal health and permanent weight control. In fact, eating much larger portions of food is one of the beauties of the Eat to Live plan. You eat more, which effectively blunts your appetite, and you lose weight—permanently.

Eating to live does not require any deprivation. In fact, you do not have to give up any foods completely. However, as you consume larger and larger portions of health-supporting, high-nutrient foods, your appetite for low-nutrient foods decreases and you gradually lose your addiction to them. You will be able to make a complete commitment to this diet style for the rest of your life.

By following my menu plans with great-tasting recipes, you will significantly increase the percentage of high-nutrient foods in your diet and your excess weight will start dropping quickly and dramatically. This will motivate you even more to stick with it. This approach requires no denial or hunger. You can lose as much weight as you want even if diets have never worked for you in the past.

This book will allow everyone who stays on the program to become slimmer, healthier, and younger looking. You will embark on an adventure that will transform your entire life. Not only will you lose weight, you will sleep better, feel better physically and emotionally, and have more energy. You will also lower your chances of developing serious diseases in the future. You will learn why diets haven't worked for you in the past and why so many popular weight-loss plans simply do not meet the scientific criteria for effectiveness and safety.

My promise is threefold: substantial, healthy weight reduction in a short period of time; prevention or reversal of many chronic and life-threatening medical conditions; and a new understanding of food and health that will continue to pay dividends for the rest of your life.

All the Information That You Need to Succeed

*The main principle of this book is that for both optimal health and weight loss, you must consume a diet with a high nutrient-per-calorie ratio. Very few people, including physicians and dietitians, understand the concept of nutrient-per-calorie density. Understanding this key concept and learning to apply it to what you eat are the main focus of the book—but you must read the *entire* book. There are no shortcuts.*

I have found that a comprehensive education in the subject is necessary for my patients to achieve the results they are looking for—but once they understand the concepts, they “own” them. They find it much easier to change. So make no mistake: the complete knowledge base of the book is essential if you want to achieve significant success, but I know that after you read this book you will say, “This makes sense.” You will be a weight-loss and nutrition expert, and by the end you will have a strong foundation of knowledge that will serve you (and your newly slim self) for the rest of your life.

Why should you wait until you are faced with a life-threatening health crisis to want health excellence? Most people would choose to disease-proof their body and look great now. They just never thought they could do it so easily. Picture yourself in phenomenal health and in excellent physical condition at your ideal body weight. Not only will your waist be free of fat but your heart will be free of plaque.

Still, it is not easy to change: eating has emotional and social overtones. It is especially difficult to break an addiction. As you will learn, our American diet style is addictive, but not as addictive as smoking cigarettes. Stopping smoking is very hard, yet many still succeed. I have heard many excuses over the years, from smokers aiming to quit and sometimes even from failed dieters. Making any change is not easy. Obviously, most people know if they change their diet enough and exercise, they can lose weight—but they still can't do it.

After reading this book, you will have a better understanding of why changing has been so extremely difficult in the past and how to make it happen more easily. You will also discover dramatic results available to you that make the change exciting and well worthwhile. However, you still must first look deep within yourself and make a firm decision to do it.

I ask you to let me make my case, and try this plan for six weeks. After the first six weeks—the hardest on the plan—it becomes a lot easier. You may already have strong reasons to

make a commitment to the Eat to Live plan, or you would not be reading this.

Even with patients determined to quit smoking, I insist that if they are faced with significant work-related stress, have an argument, get in a car accident, or experience any other calamity, they should not go back to smoking and use smoking as a stress reliever. I admonish them, “Call me, wake me in the middle of the night if you have to; I will help you, even prescribe medication if necessary, but just don’t give yourself that option of self-medicating with cigarettes.” It is not so different with your food addictions—accept no excuse to fall off the wagon in the first six weeks. You can break the addiction only if you give your body a fair chance. Do not say you will give it a try. Do not try; instead, make a commitment to do it right.

When you get married, does the religious figure or justice of the peace ask, “Do you swear to give this person a try?” When people tell me they will give it a try, I say don’t bother, you have already decided to fail. It takes more than a try to quit addictions; it takes a commitment. A commitment is a promise that you stick with, no matter what.

Without that commitment, you are doomed to fail. Give yourself the chance to really succeed this time. If you commit to just six weeks on this program, you will change your life forever and turning back becomes much more difficult.

Make a clear choice between success and failure. It takes only three simple steps. One, buy the book; two, read the book; three, make the commitment.

The third step is the difficult choice, but that is all it is—another choice. Don’t go there yet. First, read the entire book. Study this book; then it will become easier and logical to take the third step—making the commitment to follow the plan for at least six weeks. You must have the knowledge carefully and elaborately described in this book before that commitment is meaningful. It is like getting married. Don’t commit to marriage unless you know your partner. It is an educated choice, a choice made from both emotion and knowledge. The same is true here.

Let me thank you for beginning the journey to wellness. I take it personally. I sincerely appreciate all people who take an interest in improving themselves and taking better care of their health. I am committed to your success. I realize that every great success is the result of a strong and sustained effort. I have no aspirations to change every person in America, or even a majority of people. But at least people should be given a choice. This book gives everyone who reads it that choice.

A lifetime of compromised health does not have to be your destiny, because this plan works and it works marvelously. If you weren’t sure in the past that you could do it, let me repeat that taking that big step makes all the hard work worthwhile, because then you get the results you desire.

You have my respect and appreciation for making that choice to help yourself, your family, and even your country by earning back your health.

Put my ideas through this six-week test before evaluating your progress or deciding how healthy you feel. Do the grocery shopping. If you have lots of weight to lose, begin with my most powerful menu plans and instructions, without compromise, for the full six weeks. You will find the physiology of your body changing so significantly that you will never be the same. Your taste buds will become more sensitive, you will lose most of your cravings to overeat, you will feel so much better, and you will see such remarkable weight-loss results that it will be difficult ever to go back to your former way of eating. If you are on medication for diabetes or even for high blood pressure, make sure your physician is aware of your plan at the outset. He or she will need to monitor dosage to avoid overmedication. Read more about this in chapter seven.

Here is how the book works: Chapters one through four, considered together, are designed to be a comprehensive overview of human nutrition. The foundation of your success is based on the scientific information contained in these four chapters. In chapter one, you will see the problems with the standard American diet and learn how our food choices have the power to either cut short or add many years to our life. You may think you know all this, but let me surprise you with all that you don't know. Chapter two explains why obesity and chronic disease are the inevitable consequences of our poor food choices. I explain the link between low-nutrient foods and chronic disease/premature death as well as the connection between superior health/longevity and high-nutrient foods. In chapter three you will learn about those critical phytochemicals and the secret foods for both longevity and weight control. You will also learn why trying to control your weight by eating less food almost never works. The final chapter of this section of the book explains the problem with a diet rich in animal products and puts into perspective all the misleading advertising claims about foods that people have accepted as truth.

The next two chapters apply the concepts learned in the first four chapters by evaluating other diet plans and tackling many of the current controversies in human nutrition. Chapter five deepens your knowledge of the critical issues in order to understand the accurate information that is essential for maintaining your weight loss over the long term—your most important goal. Chapter six discusses food addiction and the differences between true hunger and toxic hunger.

Chapter seven illustrates the power of the Eat to Live plan to reverse illness and provides instruction on how to apply this plan to remedy your health problems and find your ideal weight. Applying the Eat to Live formula to reverse and prevent heart disease, autoimmune illnesses, and so much more opens your critical eye to a new way of looking at your well-being. Health care becomes self-care, with food your new weapon to prevent and defeat illnesses. This is a key chapter, not just for those with chronic medical problems but for all who want to live a longer, healthier life.

Chapters eight, nine, and ten put the advice into action and teach you how to make the healthy eating plan of this book taste great. Chapter eight explains the rules for swift and sustained weight loss and gives you the tools you need to adjust your diet to achieve the results you desire. It offers guidelines and a set program that allows you to plan your daily menus. Chapter nine contains cooking tips, menu plans, and recipes, including the more aggressive six-week plan designed for those who want to lose weight quickly, as well as vegetarian and nonvegetarian options. Frequently asked questions and answers are put forth in chapter ten, and I provide more practical information to aid you in your quest to regain your health.

It is my mission and my hope to give everyone the tools to achieve lifelong slimness and radiant health. Read on and learn how to put my health formula to work for you.

1

**Digging Our Graves with Forks and
Knives**

THE EFFECTS OF THE AMERICAN DIET, PART I

Case Study: Robert lost over sixty pounds and saved his life!

I was generally thin until about thirty-two years of age. I gained about thirty pounds seemingly overnight. At thirty-four, I began having labored breathing and was diagnosed with sarcoidosis, which caused significant scarring over a large area of my lungs. I began the standard treatment of a biopsy and steroids.

At age thirty-seven, I was fifty pounds overweight. My life changed one afternoon at an all-you-can-eat buffet. The button on my last comfortable pair of pants snapped and the zipper broke. It was funny, embarrassing, and deadly serious all at the same time. That day, I decided I had to change and went to the bookstore to find some answers. I stumbled upon Dr. Fuhrman's book, and it made sense to me.

Six months later, I was sixty pounds lighter, but my wife brought to my attention a lump in my neck. The lump had been there for years, but without all my fat obscuring it, it was now readily visible. I had assumed that my gasping was a result of the sarcoidosis, but I had a massive thyroid cyst, which blocked my windpipe and cut off my air supply. The doctors decided that it needed to come out. A couple of days prior to surgery, I was given an MRI, which showed that I had no traces of the sarcoidosis. It had completely cleared up, just as Dr. Fuhrman had predicted.



During the surgery the cyst burst as soon as the surgeon attempted to cut it out with his scalpel, causing me to go into anaphylactic shock. Had the doctor not first drained the fluid with a needle, I might have died. Even more sobering is the fact that had I not adopted Dr. Fuhrman's advice, the cyst would have remained obscured and would have burst on its own. I would not have had the benefit of being on the operating table.

I am now forty-six years old, I run about twenty miles a week, and I have unbelievable stamina. My systolic blood pressure went from 140 to 108, and my current LDL cholesterol level is 40 (that is not a typo). I feel great. I look ten years younger than I did two years ago and take no medications. I have competed in several triathlons and am preparing for my first marathon.

Not long after my surgery, I sought out Dr. Fuhrman to thank him. You too can achieve your ideal weight, reverse disease, and, yes, even delay the aging process.

Americans have been among the first people worldwide to have the luxury of bombarding themselves with nutrient-deficient, high-calorie food, often called *empty-calorie or junk food*. By “empty-calorie,” I mean food that is deficient in nutrients and fiber. More Americans than ever before are eating these high-calorie foods while remaining inactive—a dangerous combination.

The number one health problem in the United States is obesity, and if the current trend continues, by the year 2048 all adults in the United States will be overweight or obese.¹ The National Institutes of Health estimate that obesity is associated with a twofold increase in mortality, costing society more than \$100 billion per year.² This is especially discouraging for dieters because after spending so much money attempting to lose weight, 95 percent of them gain all the weight back and then add on even more pounds within three years.³ This incredibly high failure rate holds true for the vast majority of weight-loss schemes, programs, and diets.

Obesity and its sequelae pose a serious challenge to physicians. Both primary-care physicians and obesity-treatment specialists fail to make an impact on the long-term health of most of their patients. Studies show that initial weight loss is followed by weight regain.⁴

Those who genetically store fat more efficiently may have had a survival advantage thousands of years ago when food was scarce, or in a famine, but in today’s modern food pantry they are the ones with the survival disadvantage. People whose parents are obese have a tenfold increased risk of being obese. On the other hand, obese families tend to have obese pets, which is obviously not genetic. So it is the combination of food choices, inactivity, and genetics that determines obesity.⁵ More important, one can’t change one’s genes, so blaming them doesn’t solve the problem. Rather than taking an honest look at what causes obesity, Americans are still looking for a miraculous cure—a magic diet or some other effortless gimmick.

Obesity is not just a cosmetic issue—extra weight leads to an earlier death, as many studies confirm.⁶ Overweight individuals are more likely to die from all causes, including heart disease and cancer. Two-thirds of those with weight problems also have hypertension, diabetes, heart disease, or another obesity-related condition.⁷ It is a major cause of early mortality in the United States.⁸ Since dieting almost never works and the health risks of obesity are so life-threatening, more and more people are desperately turning to drugs and surgical procedures to lose weight.

Health Complications of Obesity

- Increased overall premature mortality
- Adult-onset diabetes
- Hypertension
- Degenerative arthritis
- Coronary artery disease
- Cancer
- Lipid disorders
- Obstructive sleep apnea

- Gallstones
- Fatty infiltration of liver
- Restrictive lung disease
- Gastrointestinal diseases

The results so many of my patients have achieved utilizing the Eat to Live guidelines over the past twenty years rival what can be achieved with surgical weight-reduction techniques, without the associated morbidity and mortality.⁹

Surgery for Weight Reduction and Its Risks

According to the National Institutes of Health (NIH), wound problems and complications from blood clots are common after-effects of gastric bypass and gastroplasty surgery. The NIH has also reported that those undergoing surgical treatment for obesity have had substantial nutritional and metabolic complications, gastritis, esophagitis, outlet stenosis, and abdominal hernias. More than 10 percent required another operation to fix problems resulting from the first surgery.¹⁰

GASTRIC BYPASS SURGERY COMPLICATIONS: 14-YEAR FOLLOW-UP¹¹

Vitamin B ₁₂ deficiency	239	39.9 percent
Readmit for various reasons	229	38.2 percent
Incisional hernia	143	23.9 percent
Depression	142	23.7 percent
Staple line failure	90	15.0 percent
Gastritis	79	13.2 percent
Cholecystitis	68	11.4 percent
Anastomotic problems	59	9.8 percent
Dehydration, malnutrition	35	5.8 percent
Dilated pouch	19	3.2 percent

Dangerous Dieting

In addition to undergoing extremely risky surgeries, Americans have been bombarded with a battery of gimmicky diets that promise to combat obesity. Almost all diets are ineffective. They don't work, because no matter how much weight you lose when you are on a diet, you put it right back on when you go off. Measuring portions and trying to eat fewer calories, typically called "dieting," almost never result in permanent weight loss and actually worsen the problem over time. Such "dieting" temporarily slows down your metabolic rate, so often more weight comes back than you lost. You wind up heavier than you were before you started dieting. This

leads many to claim, “I’ve tried everything, and nothing works. It must be genetic. Who wouldn’t give up?”

You may already know that the conventional “solution” to being overweight—low-calorie dieting—doesn’t work. But you may not know why. It is for this simple yet much overlooked reason: for the vast majority of people, being overweight is not caused by how much they eat but by what they eat. The idea that people get heavy because they consume a high volume of food is a myth. Eating large amounts of the right food is your key to success and is what makes this plan workable for the rest of your life. What makes many people overweight is not that they eat so much more but that they get a higher percentage of their calories from fat and refined carbohydrates, or mostly low-nutrient foods. This low-nutrient diet establishes a favorable cellular environment for disease to flourish.

Regardless of your metabolism or genetics, you can achieve a normal weight once you start a high-nutrient diet style. Since the majority of all Americans are overweight, the problem is not primarily genetic. Though genes are an important ingredient, physical activity and food choices play a far more significant role. In studies on identical twins with the tendency to be overweight, scientists found that physical activity is the strongest environmental determinant of total body and central abdominal fat mass.¹² Even those with a strong family history of obesity effectively lose weight with increased physical activity and appropriate dietary modifications.

Most of the time, the reason people are overweight is too little physical activity, in conjunction with a high-calorie, low-nutrient diet. Eating a diet with plenty of low-fiber, calorie-dense foods, such as oil and refined carbohydrates, is the main culprit.

As long as you are eating fatty foods and refined carbohydrates, it is impossible to lose weight healthfully. In fact, this vicious combination of a sedentary lifestyle and eating typical “American” food (high-fat, low-fiber) is the primary reason we have such an incredibly overweight population.

Killing the Next Generation

This book may not appeal to individuals who are in denial about the dangers of their eating habits and those of their children. Many will do anything to continue their love affair with disease-causing foods and will sacrifice their health in the process. Many people prefer not to know about the dangers of their unhealthy diet because they think it will interfere with their eating pleasure. They are wrong. Healthy eating can result in even more pleasure.

If you have to give up something you get pleasure from, your subconscious may prefer to ignore solid evidence or defend illogically held views. Many ferociously defend their unhealthy eating practices. Others just claim, “I already eat a healthy diet,” even though they do not.

There is a general resistance to change. It would be much easier if healthful eating practices and the scientific importance of nutritional excellence were instilled in us as children. Unfortunately, children are eating more poorly today than ever before.

Most Americans are not aware that the diet they feed their children guarantees a high cancer probability down the road.¹³ They don’t even contemplate that eating fast-food meals may be just as risky (or more so) as letting their children smoke cigarettes.¹⁴

The 1992 Bogalusa Heart Study confirmed the existence of fatty plaques and streaks (the beginning of atherosclerosis) in most children and teenagers!

You wouldn't let your children sit around the table smoking cigars and drinking whiskey, because it is not socially acceptable, but it is fine to let them consume cola, fries cooked in trans fat, and a cheeseburger regularly. Many children eat doughnuts, cookies, cupcakes, and candy on a daily basis. It is difficult for parents to understand the insidious, slow destruction of their children's genetic potential and the foundation for serious illness that is being built by the consumption of these foods.¹⁵

It would be unrealistic to feel optimistic about the health and well-being of the next generation when there is an unprecedented increase in the average weight of children in this country and record levels of childhood obesity. Most ominous were the results reported by the 1992 Bogalusa Heart Study, which studied autopsies performed on children killed in accidental deaths. The study confirmed the existence of fatty plaques and streaks (the beginning of atherosclerosis) in most children and teenagers!¹⁶ These researchers concluded: "These results emphasize the need for preventive cardiology in early life." I guess "preventive cardiology" is a convoluted term that means eating healthfully.

Another autopsy study appearing in the *New England Journal of Medicine* found that more than 85 percent of adults between the ages of twenty-one and thirty-nine already have atherosclerotic changes in their coronary arteries.¹⁷ Fatty streaks and fibrous plaques covered large areas of the coronary arteries. Everyone knows that junk foods are not healthy, but few understand their consequences—serious life-threatening illness. Clearly, the diets we consume as children have a powerful influence on our future health and eventual premature demise.¹⁸

There is considerable data to suggest that childhood diet has a greater impact on the later incidence of certain cancers than does a poor diet later in life.¹⁹ It is estimated that as many as 25 percent of schoolchildren today are obese.²⁰ Early obesity sets the stage for adult obesity. An overweight child develops heart disease earlier in life. Mortality data suggests that being overweight during early adult life is more dangerous than a similar degree of heaviness later in adult life.²¹

Drugs Are Not the Solution

New drugs are continually introduced that attempt to lessen the effects of our nation's self-destructive eating behavior. Most often, our society treats disease after the degenerative illness has appeared, an illness that is the result of thirty to sixty years of nutritional self-abuse.

Drug companies and researchers attempt to develop and market medications to stem the obesity epidemic. This approach will always be doomed to fail. The body will always pay a price for consuming medicines, which usually have toxic effects. The "side" effects are not the only toxic effect of medications. Doctors learn in their introductory pharmacology course in medical school that all medications are toxic to varying degrees, whether side effects are experienced or not. Pharmacology professors stress never to forget that. You cannot escape the immutable biological laws of cause and effect through ingesting medicinal substances.

If we don't make significant changes in the foods we choose to consume, taking drugs prescribed by physicians will not improve our health or extend our lives. If we wish true health protection, we need to remove the cause. We must stop abusing ourselves with disease-causing foods.

Surprise! Lean People Live Longer

In the Nurses' Health Study, researchers examined the association between body mass index and overall mortality and mortality from specific causes in more than 100,000 women. After limiting the analysis to nonsmokers, it was very clear that the longest-lived women were the leanest.²² The researchers concluded that the increasingly permissive U.S. weight guidelines are unjustified and potentially harmful.

Dr. I-Min Lee, of the Harvard School of Public Health, said her twenty-seven-year study of 19,297 men found there was no such thing as being too thin. (Obviously, it is possible to be too thin; however, it is uncommon and usually called anorexia, but that is not the subject of this book.) Among men who never smoked, the lowest mortality occurred in the lightest fifth.²³ Those who were in the thinnest 20 percent in the early 1960s were two and a half times less likely to have died of cardiovascular disease by 1988 than those in the heaviest fifth. Overall, the thinnest were two-thirds more likely to be alive in 1988 than the heaviest. Lee stated, "We observed a direct relationship between body weight and mortality. By that I mean that the thinnest fifth of men experienced the lowest mortality, and mortality increased progressively with heavier and heavier weight." The point is not to judge your ideal weight by traditional weight-loss tables, which are based on Americans' overweight averages. After carefully examining the twenty-five major studies available on the subject, I have found that the evidence indicates that optimal weight, as determined by who lives the longest, occurs at weights at least 10 percent below the average body-weight tables.²⁴ Most weight-guideline charts still place the public at risk by reinforcing an unhealthy overweight standard. By my calculations, it is not merely 70 percent of Americans who are overweight, it is more like 85 percent.²⁵

The Longer Your Waistline, the Shorter Your Lifeline

As a good rule of thumb: for optimal health and longevity, a man should not have more than one-half inch of skin that he can pinch near his umbilicus (belly button) and a woman should not have more than one inch. Almost any fat on the body over this minimum is a health risk. If you have gained even as little as ten pounds since the age of eighteen or twenty, then you could be at significant increased risk for health problems such as heart disease, high blood pressure, and diabetes. The truth is that most people who think they are at the right weight still have too much fat on their body.

A commonly used formula for determining ideal body weight follows:

Women: Approximately ninety-five pounds for the first five feet of height and then four pounds for every inch thereafter.

5'4"	$95 + 16 = 111$
5'6"	$95 + 24 = 119$

Men: Approximately 105 pounds for the first five feet of height and then five pounds for every inch thereafter. Therefore, a 5'10" male should weigh approximately 155 pounds.

All formulas that approximate ideal weights are only rough guides, since we all have different body types and bone structure.

Body mass index (BMI) is used as a convenient indicator of overweight risk and is often used in medical investigations. BMI is calculated by dividing weight in kilograms by height in meters (squared). Another way to calculate BMI is to use this formula:

$$\text{BMI} = \frac{\text{weight in pounds} \times 703}{\text{height in inches (squared)}}$$

A BMI over 24 is considered overweight and greater than 30, obese. However, it is just as easy for most of us merely to use waist circumference.

I prefer waist circumference and abdominal fat measurements because BMI can be inaccurately high if the person is athletic and very muscular. Ideally, your BMI should be below 23, unless you lift weights and have considerable muscle mass. As an example, I am of average height and build (5'10" and 150 pounds) and my BMI is 21.5. My waist circumference is 30.5 inches. Waist circumference should be measured at the navel.

The traditional view is that men who have a waist circumference over forty inches and women with one over thirty-five inches are significantly overweight with a high risk of health problems and heart attacks. Evidence suggests that abdominal fat measurement is a better predictor of risk than overall weight or size.²⁶ Fat deposits around your waist are a greater health risk than extra fat in other places, such as the hips and thighs.

What if you feel you are too thin? If you have too much fat on your body but feel you are too thin, then you should exercise to build *muscle* to gain weight. I often have patients tell me they think they look too thin, or their friends or family members tell them they look too thin, even though they are still clearly overweight. Bear in mind that by their standards you may be too thin, or at least thinner than they are. The question to ask is, is their standard a healthy one? I doubt it. Either way: *Do not try to force yourself to overeat to gain weight!* Eat only as much food as your hunger drive demands, and no more. If you exercise, your appetite will increase in response. You should not try to put on weight merely by eating, because that will only add more fat to your frame, not muscle. Additional fat, regardless of whether you like the way you look when you are fatter or not, will shorten your life span.

Once you start eating healthfully, you may find you are getting thinner than expected. Most people lose weight until they reach their ideal weight and then they stop losing weight. Ideal weight is an individual thing, but it is harder to lose muscle than fat, so once the fat is off your body, your weight will stabilize. Stabilization at a thin, muscular weight occurs because your body gives you strong signals to eat, signals that I call "true hunger." *True hunger* maintains your muscle reserve, not your fat.

The Only Way to Significantly Increase Life Span

The evidence for increasing one's life span through dietary restriction is enormous and irrefutable. Reduced caloric intake is the only experimental technique to consistently extend maximum life span. This has been shown in *all* species tested, from insects and fish to rats and cats. There are so many hundreds of studies that only a small number are referenced below.

Scientists have long known that mice that eat fewer calories live longer. Research has demonstrated the same effect in primates (i.e., you). A study published in the *Proceedings of the National Academy of Sciences* found that restricting calories by 30 percent significantly increased life span in monkeys.²⁷ The experimental diet, while still providing *adequate* nourishment, slowed monkeys' metabolism and reduced their body temperatures, changes similar to those in the long-lived thin mice. Decreased levels of triglycerides and increased HDL (the good) cholesterol were also observed. Studies over the years, on many different species of animals, have confirmed that those animals that were fed less lived longest. In fact, allowing an animal to eat as much food as it desires can reduce its life span by as much as one-half.

High-nutrient, low-calorie eating results in dramatic increases in life span as well as prevention of chronic illnesses. From rodents to primates we see:

- Resistance to experimentally induced cancers
- Protection from spontaneous and genetically predisposed cancers
- A delay in the onset of late-life diseases
- Nonappearance of atherosclerosis and diabetes
- Lower cholesterol and triglycerides and increased HDL
- Improved insulin sensitivity
- Enhancement of the energy-conservation mechanism, including reduced body temperature
- Reduction in oxidative stress
- Reduction in parameters of cellular aging, including cellular congestion
- Enhancement of cellular repair mechanisms, including DNA repair enzymes
- Reduction in inflammatory response and immune cell proliferation
- Improved defenses against environmental stresses
- Suppression of the genetic alterations associated with aging
- Protection of genes associated with removal of oxygen radicals
- Inhibited production of metabolites that are potent cross-linking agents
- Slowed metabolic rate²⁸

The link between thinness and longevity, and obesity and a shorter life span, is concrete. Another important consideration in other animal studies is that fat and protein restriction have an additional effect on lengthening life span.²⁹ Apparently, higher fat and higher protein intake promotes hormone production, speeds up reproductive readiness and other indicators of aging, and promotes the growth of certain tumors. For example, excess protein intake has been shown to raise insulin-like growth factor (IGF-1) levels,³⁰ which are linked to higher rates of prostate and breast cancer.³¹

In the wide field of longevity research there is only one finding that has held up over the years: eating less prolongs life, as long as nutrient intake is adequate.³² All other longevity ideas are merely conjectural and unproven.³³ Such theories include taking hormones such as estrogen, DHEA, growth hormones, and melatonin, as well as nutritional supplements. So far, there is no solid evidence that supplying the body with any nutritional element over and above the level present in adequate amounts in a nutrient-dense diet will prolong life. This is in contrast to the overwhelming evidence regarding protein and caloric restriction.

This important and irrefutable finding is a crucial feature of the $H = N/C$ equation. We all must recognize that if we are to reach the limit of the human life span, we must not overeat on high-calorie food. Eating empty-calorie food makes it impossible to achieve optimal health and maximize our genetic potential.

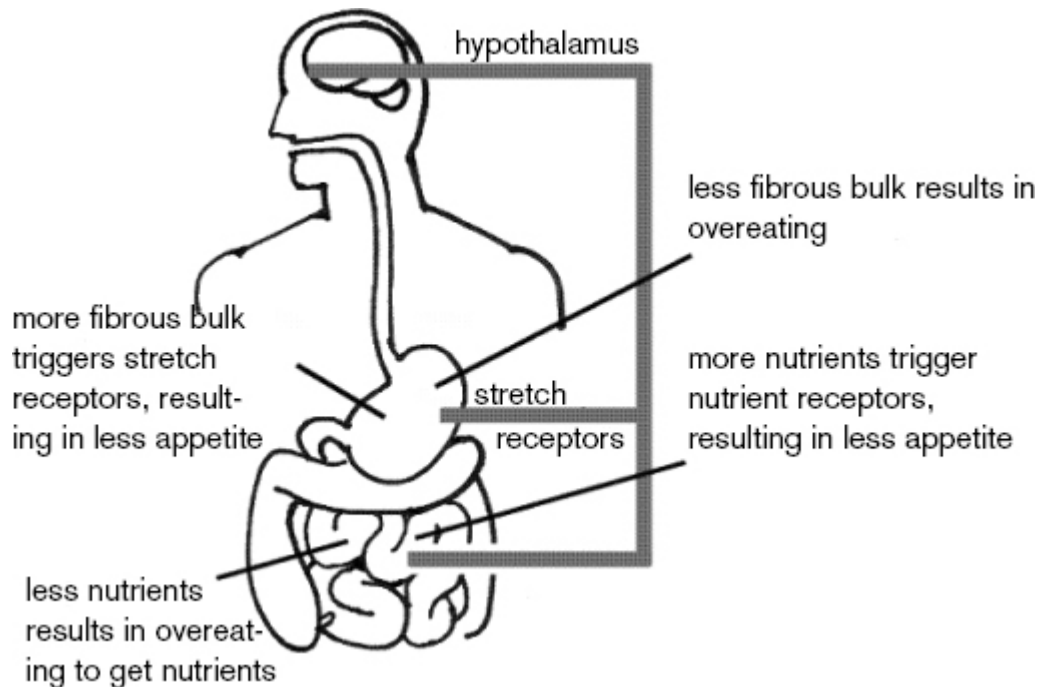
To Avoid Overeating on High-Calorie Foods, Fill Up on Nutrient-Rich Ones

An important corollary to the principle of limiting high-calorie food is that the only way for a human being to safely achieve the benefits of caloric restriction while ensuring that the diet is nutritionally adequate is to avoid as much as possible those foods that are nutrient-poor.

Indeed, this is the crucial consideration in deciding what to eat. We need to eat foods with adequate nutrients so we won't need to consume excess "empty" calories to reach our nutritional requirements. Eating foods that are rich in nutrients and fiber, and low in calories, "fills us up," so to speak, thus preventing us from overeating.

To grasp why this works, let us look at how the brain controls our dietary drive. A complicated system of chemoreceptors in the nerves lining the digestive tract carefully monitor the calorie and nutrient density of every mouthful and send such information to the hypothalamus in the brain, which controls dietary drive.

MORE NUTRIENTS AND FIBER WILL REDUCE YOUR CALORIC DRIVE



There are also stretch receptors in the stomach to signal satiety by detecting the *volume* of food eaten, not the *weight* of the food. If you are not filled up with nutrients and fiber, the brain will send out signals telling you to eat more food, or overeat.

In fact, if you consume sufficient nutrients and fiber, you will become *biochemically* filled (nutrients) and *mechanically* filled (fiber), and your desire to consume calories will be blunted or turned down. One key factor that determines whether you will be overweight is your failure to consume sufficient fiber and nutrients. This has been illustrated in scientific studies.³⁴

How does this work in practice? Let's say we conduct a scientific experiment and observe a group of people by measuring the average number of calories they consumed at each dinner. Next, we give them a whole orange and a whole apple prior to dinner. The result would be that the participants would reduce their caloric intake, on the average, by the amount of calories in the fruit. Now, instead of giving them two fruits, give them the same amount of calories from fruit juice.

What will happen? They will eat the same amount of food as they did when they had nothing at the beginning of their meal. In other words, the juice did not reduce the calories consumed in the meal—instead, the juice became additional calories. This has been shown to occur with beer, soft drinks, and other sources of liquid calories.³⁵

Liquid calories, without the fiber present in the whole food, have little effect in blunting our caloric drive. Studies show that fruit juice and other sweet beverages lead to obesity in children as well.³⁶

If you are serious about losing weight, don't drink your fruit—eat it. Too much fiber and too many nutrients are removed during juicing, and many of the remaining nutrients are lost through processing, heat, and storage time. If you are not overweight, drinking freshly prepared juice is acceptable as long as it does not serve as a substitute for eating those fresh fruits and vegetables. There is no substitute for natural whole foods.

There is a tendency for many of us to want to believe in magic. People want to believe that in spite of our indiscretions and excesses, we can still maintain optimal health by taking a pill,

powder, or other potion. However, this is a false hope, a hope that has been silenced by too much scientific evidence. There is no magic. There is no miracle weight-loss pill. There is only the natural world of law and order, of cause and effect. If you want optimal health and longevity, you must engage the cause. And if you want to lose fat weight safely, you must eat a diet of predominantly unrefined foods that are nutrient-and fiber-rich.

What if I Have a Slow Metabolic Rate?

Your body weight may be affected slightly by genetics, but that effect is not strong. Furthermore, I am convinced that inheriting a slow metabolic rate with a tendency to gain weight is not a flaw or defect but rather a genetic gift that can be taken advantage of. How is this possible? A slower metabolism is associated with a longer life span in all species of animals. It can be speculated that if one lived sixty thousand or just a few hundred years ago, a slower metabolic rate might have increased our survival opportunity, since getting sufficient calories was difficult. For example, the majority of Pilgrims who arrived on our shores on the *Mayflower* died that first winter.³⁷ They could not make or find enough food to eat, so only those with the genetic gift of a slow metabolic rate survived.

As you can see, it is not always bad to have a slow metabolic rate. It can be good. Sure, it is bad in today's environment of relentless eating and when consuming a high-calorie, low-nutrient diet. Sure, it will increase your risk of diabetes and heart disease and cancer, given today's food-consumption patterns. However, if correct food choices are made to maintain a normal weight, the individual with a slower metabolism may age more slowly.

Our body is like a machine. If we constantly run the machinery at high speed, it will wear out faster. Since animals with slower metabolic rates live longer, eating more calories, which drives up our metabolic rate, will cause us only to age faster. Contrary to what you may have heard and read in the past, our goal should be the opposite: to eat less, only as much as we need to maintain a slim and muscular weight, and no more, so as to keep our metabolic rate relatively slow.

So stop worrying about your slower metabolic rate. A slower metabolic rate from dieting is not the primary cause of your weight problem. Keep these three important points in mind:

1. Resting metabolic rates do decline slightly during periods of lower caloric intake, but not enough to significantly inhibit weight loss.
2. Resting metabolic rates return to normal soon after caloric intake is no longer restricted. The lowered metabolic rate does not stay low permanently and make future dieting more difficult.
3. A sudden lowering of the metabolic rate from dieting does not explain the weight gain/loss cycles experienced by many overweight people. These fluctuations in weight are primarily from going on and getting off diets. It is especially difficult to stay with a reduced-calorie diet when it never truly satisfies the individual's biochemical need for nutrients, fiber, and phytochemicals.³⁸

Those with a genetic tendency to be overweight may actually have the genetic potential to outlive the rest of us. The key to their successful longevity lies in their choosing a nutrient-rich, fiber-rich, lower-calorie diet, as well as getting adequate physical activity. By adjusting

the nutrient-per-calorie density of your diet to your metabolic rate, you can use your slow metabolism to your advantage. When you can maintain a normal weight in spite of a slow metabolism, you will be able to achieve significant longevity.

An Unprecedented Opportunity in Human History

Science and the development of modern refrigeration and transportation methods have given us access to high-quality, nutrient-dense food. In today's modern society, we have available to us the largest variety of fresh and frozen natural foods in human history. Using the foods available to us today, we can devise diets and menus with better nutrient density and nutrient diversity than ever before possible.

This book gives you the information and the motivation you need to take advantage of this opportunity to improve your health and maximize your chances for a disease-free life.

You have a clear choice. You can live longer and healthier than ever before, or you can do what most modern populations do: eat to create disease and a premature death. Since you are reading this book, you have opted to live longer and healthier. "Eat to live" and you will achieve a happier and more pleasurable life.