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ACKNOWLEDGMENTS

I would like to thank everyone who has kept this project as well as my vision and dream alive. There were many times when the book had to be shelved and when BOKsystems development came to a halt, but my science and business teams have always been there to support me and this project. The exalted feeling I have after finishing this book is overshadowed by the relationships and friendships I have made during the last ten years.

Because this book project was a huge undertaking, and the fact that I am sure I will be adding more people to the BOK family, I have placed the individual names on the web site.  I am grateful to everyone we have encountered who has helped with this project and grateful to everyone who continues to address the present obesity and health care crises.



INTRODUCTION

A Personal Message:

Most doctors share a common dream—to help cure those who are in need and to do something really special in their career. While I enjoy every facet of my surgical practice, overall my professional sense of accomplishment has come from successfully helping people transform their lives through the Body of Knowledge™ system.

Body of Knowledge, or BOK™ (pronounced “Be Okay”), is the result of twenty years of study, research, and working with people who have come to me overweight, out of shape, and often despondent. I believe that my vision and expertise mirrors an emerging public demand for healthy lifestyle programs. I have found that most people prefer a blend of truth and essential information in an organized, facts-driven format over the gimmick-driven and “quick fix” weight loss plans of the past. This new enthusiasm could not have come at a better time. Serious health problems associated with weight gain in both adults and children are increasing across the nation. Even though there are more diet and fitness plans on the market than any time in history, there are more people considered obese and overweight than ever before (over half of our population). And I have special concern about the childhood obesity epidemic.

My quest is to help you design your own weight, fitness, and life-management plan; I’ll give you the essential information and techniques you’ll need to customize it to match your personal goals and lifestyle.

My personal message to you is this: there is no one better qualified to create a health plan for you than *you*. Use the Body of Knowledge system as your guide and consider me your teacher. My wish is for you to be armed with all the knowledge you need to once again take control of your health.

The BOKsystem is not a magic bullet or a fad diet but a sensible, sustainable program for managing weight and promoting good health. As you will see in the coming pages, the BOKsystem is designed to help individuals learn how a healthy body should function and how to “unlearn” their unhealthy habits. Then we use the BOKsystem to help individuals create a personal plan for healthy living that makes sense for them.

Body of Knowledge is also addressing the critical rise in health care costs. It is no coincidence that medical expenses and health insurance premiums mirror the rise in obesity cases and other related health problems. However, recent studies show that some overweight and obese employees who lost weight not only reduced their employers’ health care costs but were also rewarded a portion of the savings, which encouraged them to keep the weight off longer. Better health results in proven savings for everyone. Individuals pay for fewer doctor visits, emergency room admissions, surgeries, and prescriptions. Companies save on a decrease in sick leave, fewer employees retrained, and reduced disability costs; they also benefit from the increase in productivity, innovation, and employee morale. In addition, allowing primary care physicians and specialists to utilize a more effective preventative care model instead of continuing to treat the end-stage diseases associated with obesity (heart disease, stroke, diabetes, cancer, etc.) is a win-win situation.

The Body of Knowledge system is exciting because it offers a realistic plan to help people make life-altering, life-affirming changes. If enough people take the precepts of Body of Knowledge to heart, it could have an impact beyond all of our dreams.

THE BOK MISSION

Our mission is to provide information that gives you the ability to create and maintain a healthy lifestyle that adapts to change—one that naturally manages your weight, keeps you fit, promotes good health, and gives you a Body of Knowledge.

What if we lived in a world where


- all food choices were healthy choices—made cost-effective and available due to consumer demand;
- fast food and junk food in the home, schools, and the workplace were eliminated;
- businesses and health insurance companies offered bonuses or incentives to reward employees and clients who achieve and maintain better health;
- parents and schools taught children the foundation of healthy living so no one was programmed with bad habits that follow them through life;
- obesity and health-related problems were only read about in history books.

This is my dream, my quest—to make sure that you and your family will B-OK. And I'll take it one meal, one workout, and one person at a time.

Good health and all my best,
Dr. B.



HOW TO USE THIS BOOK

I developed the Body of Knowledge system to help people create a personalized fitness program that can adapt to their individual lifestyle. In the beginning, I encourage you to use this book as a reference guide. Make notes in the margins, tab important sections with color-coded flags, or do whatever suits your style. Recording details about the program and how it is affecting you will give you the ability to refer back to your notes later to see what gave you good, mediocre, or bad results. If you prefer to keep a daily or weekly written record, you can print your BOK Journal pages from the web site as you need them. 

There's so much information about our bodies and health, it was necessary to move some of the book's content to the web so you wouldn't end up with a five hundred page tome! I also didn't want to limit this learning process to just ink and paper. With all the options the Internet offers, I hope to give you the opportunity to learn as much as you want and do it on your time schedule. The web site will allow you to find more details on interesting subjects from the book, see in-depth graphics and analyses, and *link* to other web sites that offer useful information. I hope you'll take advantage of this opportunity and not limit your learning to just what's contained in this book. Using the BOK web site to complement your reading will truly enhance your plan for total health and fitness.



Web Icon: This icon will pop up often in the book, and it's your signal that more information on the subject you've been reading about is on the BOK web site. When you go to www.BOKsystems.com, you'll see this icon on the homepage. Click on it and you'll be directed to a listing of all the places this icon appears in the book, organized according to the five main parts and then by page number. Find the corresponding page number, click, and you'll have access to new information, graphics, charts, audio summaries, and more.



Audio Icon: This icon is located exclusively on the web site where you can hear a simplified version of a complicated subject that I have narrated for your convenience.

To give you an idea of what you're about to get into, I've put together a quick overview of the book:

PART 1 – WELCOME TO THE MACHINE: Before we get started on building a better you, you'll first need to understand what you are up against and learn how fad diets, super-sized food portions, and extreme exercise plans have conspired to undo your healthy you. In this section I will teach you the basics of how your machine works and help you gain the knowledge, motivation, and inspiration to get your personal machine back in tune with the world around you.

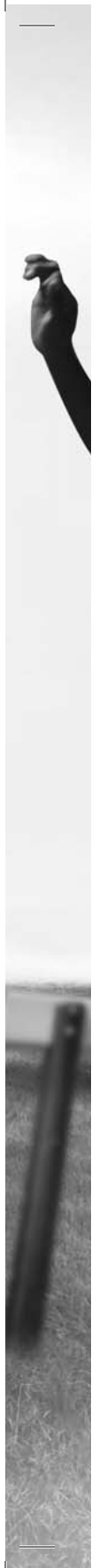
PART 2 – FOOD AND EATING HABITS: In this section I am going to help you rethink how, what, and why you eat. Somewhere along the line eating became a recreational hobby rather than a simple act of human survival. We'll untwist our "eating for fun" thinking and get back to the reality of eating for peak performance and health.

PART 3 – ACTIVITY AND EXERCISE: I think exercise should be as enjoyable as possible, and I hope by the end of this section you will too. At any age and fitness level I encourage you to rethink activity and exercise in terms of fun and relaxation. In fact, the right kind of exercise will make you feel good, which will make you want to exercise more—a healthy cycle that maintains itself. Together we'll design a fitness plan that's just right for you.

PART 4 – PUTTING IT ALL TOGETHER: By this point you'll be ready to take your newfound knowledge and put it all together. Design your own eating and exercise program from scratch or you can choose from the five BOK programs already designed for you and then modify them to fit your own preferences and needs on the BOK web site. The BOKsystem is a *complete* weight-management system, so we offer plans for healthy weight loss, weight maintenance, and even weight gain.

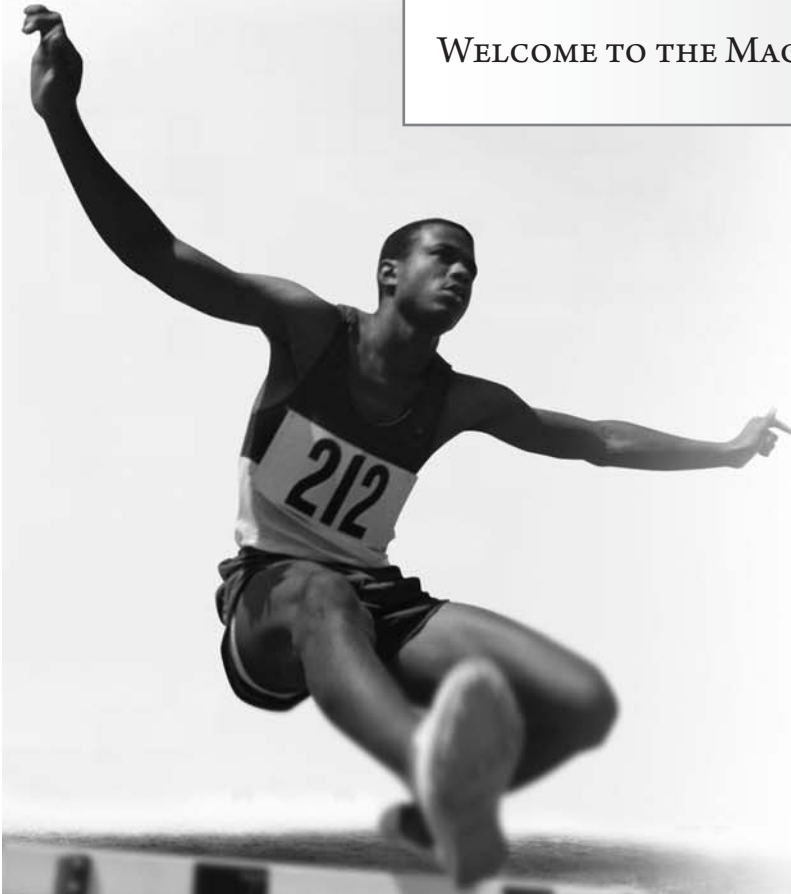
PART 5 – MIND OVER MATTER: Now that you'll know how and why good eating habits and a sensible exercise program can put you on the fast track to healthy living, I'll show you how avoid or navigate through the obstacles that keep you from reaching your goals. Your mind is the most powerful organ in your body, but you have to learn how it affects your body and use this knowledge to remove its unhealthy influences and avoid potential setbacks. Your Body of Knowledge program will be complete once you learn how to turn your thoughts and decisions into the healthy actions and results you want.

As you go through the book don't be afraid to skip around to different parts when you need some refreshing or a little extra inspiration. Revisiting concepts after you've read the entire book can really put things in a new light or change the way you plan to design your own BOK program. Now, enjoy yourself and have fun as you discover new facts, dispel old myths, and begin your journey toward your new Body of Knowledge.



PART 1

WELCOME TO THE MACHINE




- An Amazing Discovery
- The Body: The Ultimate Machine
- Food as Building Blocks
- Exercise: Make Your Workouts Work for You
- The Dynamic Duo: The Combined Power of Diet and Exercise
- Free Your Mind and Your Body Will Follow

An Amazing Discovery

Today, many people know the sad statistics behind popular diets. About 90 to 95 percent of people in this country who lose weight gain some or all of it back within two years. This statistic has remained consistent since dieting became a focus in our society. Ironically, health problems associated with weight gain and obesity in both adults and children are increasing, while the diet and fitness industry continues to grow. Every day there is a new magic diet plan, pill, or exercise machine introduced to a willing audience of people looking for a quick fix. Clearly, we haven't gotten it right yet.

There are many factors in our lives that influence weight management, our health, or even our ability to make informed decisions, and the dominant gimmick-driven, quick-fix weight loss plans only address a handful of those factors. The good news is that there has been a backlash to the magic pill pursuit that has resulted in a very positive trend. People are finally seeking truthful, fact-driven information that will help them make educated decisions about their health. I will provide this information and teach you how to get better results and keep them for life.

MAKE THE MOST OF YOUR BOK EXPERIENCE

1. Visit the web site any time you see a  icon to get more in-depth information, extra graphics, audio summaries, and more.
2. Make notes in the book margins and mark pages you want to continuously refer to.
3. Keep a journal or enter information in a day planner. You can go to the web site and print BOK Journal pages as you need them.
4. Make time to become familiar with the web site and its tools. It is your most complete source for daily information, record keeping, and motivation.
5. Skip around to the different parts of the book when you need some refreshing or a little extra inspiration.
6. Through continued reinforcement from the book and web site, you will master the BOK experience and learn how to attain a lifetime of health and fitness.

It has been proven that people who are able to lose weight and then manage it for life share some common truths. First, they have a sense of *autonomy*. They trust their own judgment, make good decisions, and have learned some good personal habits. Second, they do not consistently connect emotional highs and lows with food, but treat food as fuel to run their machine and promote good health. They've learned that the secret to losing weight and keeping it off is not just about calorie restriction but knowing what they are eating, when to eat it, and why they are eating it. Third, they have found a way to make exercise simple, effective, and fun. As with everything else in life, knowledge is power, and you alone are ultimately responsible for your own health. The Body of Knowledge system is designed for one purpose and with one goal in mind—to provide you with the information and tools you need to maintain a healthy weight, to stay fit, and remain energetic for life! Before we get started, I want to share my own story with you.

PEOPLE WHO ARE ABLE
TO LOSE WEIGHT AND
THEN MANAGE IT FOR
LIFE ... HAVE A SENSE OF
AUTONOMY.

The Medical Sleuth

A strange thing happened to me on the way to becoming a doctor. I discovered the secret to permanent weight loss and fitness.

It all started in the mid-1980s when I began studying for the Medical College Admission Test (MCAT). When I made the decision to take the test, I knew my life would change dramatically. Prior to this turning point, most of my life had revolved around organized sports. By my sophomore year in college, reality took hold. I stopped playing football (though I still worked out at the gym) and got more involved in my studies. My eating habits deteriorated to a steady diet of high-calorie processed junk food—convenient and cheap was my mantra. Before I knew it, I was carrying around an extra fifty pounds or more. Ironically, I had a part-time job as a personal trainer, which kept me in decent shape despite the extra weight. Happy with my status quo, and promising myself to slim down after the MCAT was over, I started eating whatever and whenever I wanted to—which meant five to seven times a day.

That's when the strangest thing happened. After about a month of this new lifestyle, I noticed that my pants were looser—ten pounds, gone. The muscles remained, but the love handles were disappearing. It wasn't due to stress. What is going on here? I wondered. I was eating more meals per day, and I was exercising a lot less, but my body was looking better. How could this be? I was determined to find out.

At first, I played with my diet to decrease even more body fat. I thought this required eating more carbohydrates (which to me at the time meant processed breads, crackers, and packaged meals) and eating less protein. I was also concentrating less on lifting weights at the gym in favor of aerobic conditioning through running. This new plan created a two-fold problem: the carbs were putting me on a mental and physical roller coaster ride, and the absence of weight training decreased my muscle mass. I was naïve about good protein so I ate steak, cheese, or other easily accessible high-protein foods that were also high in fat. To fix this, I focused on eating even less fat and compensated by loading up on fat-free dishes high in carbohydrates and salt. My weight did not change significantly, but I kept losing muscle mass, and the love handles were reappearing.

Then, I refocused my diet to eating leaner proteins like chicken, fish, and nonfat dairy products. This seemed to correct the fat gain and muscle loss, but I was still gulping down a large espresso every day after lunch to avoid the coma-like state I fell into after meals. The carbohydrate rush from the prepared foods I was still eating was making my blood sugar plummet one and a half to two hours after each meal. And to make matters worse, once this stupor passed, I was hungry again and had a hard time concentrating in class. This plan was not working.

My salvation came from my biochemistry classes. They taught me the truth about metabolism, food groups, and my personal machine—how it worked and what fuel it needed to consume for optimal energy. I learned that all carbs are not created equal, and the same was true for fats and proteins. All three food groups have healthy and unhealthy varieties.

I started to concentrate on eating more unprocessed and complex (good) carbohydrates—vegetables, fruit, and whole grains—and avoided simple processed (bad) carbs—mainly sugary foods. Immediately I felt better, but it was not the final formula I was looking for.

I finally tied all of the information together: I added more lean protein, continued eating quality carbs and fat, minimized my salt intake, and ate five to six smaller meals per day. Right away I noticed the difference. I was more alert and felt no fatigue after meals. Quality fuels and more frequent meals were helping to regulate the way my body burned calories. Weeks later I noticed that my muscle tone and mass were returning and were easier to maintain with added weight training and less total exercise.

Finally, I had found the perfect way to eat and exercise while maintaining my health and fitness goals. With this newfound knowledge and proof of its effectiveness, I set out to first learn why these eating habits really worked and then find a way to share my good news.

Knowledge Is Power

This was just the beginning of my dietary sleuthing. Through trial and error, I became convinced that diet, above all, is central to weight management and maintaining health. For me, the exercise maven, it was an eye-opening discovery. But why then do all diets have such

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miserable track records when it comes to losing weight and keeping it off? I found the answer.

My research has led me to develop an eating program that for the past twenty years has allowed me to maintain my optimum weight and cut my exercise regimen in half while maintaining my ideal fitness level and muscle mass. It may sound trite, but it wasn't until I understood the chemical composition of foods, how they react in my body, and when to eat them that I was able to develop an eating pattern that allowed me to reach my goals. Remember, the secret to losing weight and keeping it off is not just about calorie restriction. It is not as simple as eating low-fat or low-carbohydrate foods. It's about knowledge—knowledge of what to eat, when to eat, and how much to eat.

Be Autonomous

Anyone can eat healthy for a while and lose some weight, but what do the 5–10 percent who do maintain their results have that the rest of us do not? Autonomy: they have created and continue to manage their fitness program on their own. How? They simply know what they are doing and why they are doing it. I am going to help you develop your own personalized Body of Knowledge program that will give you this autonomy.

THE SECRET TO LOSING
WEIGHT AND KEEPING IT
OFF IS ... KNOWLEDGE OF
WHAT TO EAT, WHEN TO
EAT, AND HOW MUCH TO
EAT.

What you won't find in this book are gimmicks and quick weight-loss schemes. Though I do offer a BOK Accelerated Fat Loss Meal Plan™, trust me, it will not happen overnight. What you will experience, however, is a gradual reduction in your weight and body fat, more muscle tone, robust energy, mental clarity, and a renewed spirit.

When it comes to optimum health, the most important thing you can feed yourself is knowledge. Let's start with a little background in human history and a recap of some of the science you learned in high

school. Hang in there; this isn't hard. Think of this as an owner's manual to your most important possession—your healthy body. Knowing how your body responds to foods and activities is fundamental to establishing your autonomy.

The Body: The Ultimate Machine

I'm with Leonardo Da Vinci. The human body is the uncontested Ultimate machine on planet earth. Yes, we humans have built incredible, complex machines that are energy efficient and have automated processes. But do they have the ability to manufacture their own fuel, automatically store it, build replacement parts from this fuel, and repair themselves?

This machine worked perfectly for our ancestors. They got up at dawn and went to bed at sunset. They hunted, foraged, traveled, and played to naturally keep in shape. And, most certainly, they ate whatever they came across in small, healthy portions several times a day to ensure survival. These basic instincts never adapted to the fact that we now have an unlimited supply of food, that we actually develop foods that are unhealthy and make them easily accessible, and that we have all sorts of technology and conveniences that minimize our daily activity. We've created a dangerous super-sized, non-nutritional nightmare of a national diet that has led us to our present obesity levels and related medical problems like diabetes and heart disease. We have basically engineered ourselves away from a healthy lifestyle.

Life Changed, Habits Didn't

The truth is we're not that far from the instincts of our ancestors—at least where food is concerned. Too many of us approach the dinner table as if we may not eat again tomorrow, thinking the same way that early man had to, just to survive. And now, America is the fattest nation in the world. Our cups runneth over—and our waistlines are

now running over our belts. The most recent statistics show that more than half of all Americans are overweight—10 percent of them by one hundred pounds or more. And these numbers are climbing. Yet other statistics show that, at any given time, half of us are on diets. Obviously, something isn't working.

“Dieting” requires us to ignore the basic needs of our bodies. Food deprivation goes against the grain of natural instincts. By ignoring hunger signals, eliminating foods that our bodies may need, and skipping meals altogether, we are aggravating our instinctual responses to food. This is one of the greatest challenges when it comes to losing weight; most of the time, we are working against our instincts.

Where Did We Come From?

The popular phrase “dust to dust” is still the easiest way to sum up our existence. All living things share the same atoms and molecules from the beginning of life to the end of life: carbon, oxygen, nitrogen, and hydrogen. These elements form the trillions of individual cells that make up the body and the active processes, such as metabolism, that allow us to function. We were designed to absorb nutrients that exist in natural, or unprocessed, foods made up of these same four main elements.

According to recent studies, anthropologists have found that early man ate lean meats, fresh fruit, assorted vegetables, and nuts. Food was naturally available in the environment and naturally provided all of the nutrients that humans needed to run their machines at peak efficiency. Food was not readily available in a refrigerator in the next room—they had to work for it back then. But most importantly, they ate when their body told them to: throughout the day, usually five to seven small meals.

Sometimes food was scarce, and because of that, early man was instinct-driven for survival. Eat it when you find it because you might not be eating tomorrow. The most brilliant natural defense mechanism to ward off starvation was the body's ability to store fat. Fat is high in calories and is an excellent fuel. It is also compact and can store more calories in smaller spaces throughout the body than carbohydrates and proteins.

In the early years of human development, fat was the wonder fuel. Fat supplied energy for the constant physical activity required in the days of hunting and gathering. There was little opportunity for fat to collect around midsections or

EARLY MAN ATE LEAN MEATS, FRESH FRUIT, ASSORTED VEGETABLES, AND NUTS.

anywhere else on the body in large quantities. As time moved on and agriculture developed, societies depended less and less on hunting and gathering. Starvation became a concern only in the years when harvests were bad. As we became more “civilized” and our crops provided more food than we needed to survive, things began to change. What was genetically programmed into us to ensure our existence was beginning to threaten our health and very survival.

The other factor that now contributes to our collective weight and health problems is inactivity. Early man had to work hard to gather the fruits, vegetables, nuts, and lean wild game that made up his diet. Primitive man ate very few “empty” calories—there were no cupcakes, potato chips, or candy bars to be gathered in the forest!

ALL THINGS BIG AND SMALL

Simply put, macronutrients (macro = big nutrients) have a dual role: they are building blocks for our bodies and also act as fuel to keep it running. Micronutrients (micro = small nutrients) are exactly what their name states, smaller parts of our machine necessary to run important processes like our metabolism.

Macronutrients

Carbohydrates
Protein
Fats

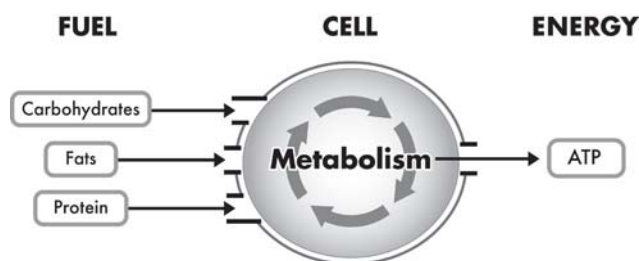
Micronutrients

Vitamins
Minerals

However, today we live in a time of limitless food choices and availability. We drive cars, take elevators, sit at desks, and view exercise as work. Our goal now is to untwist what has gone wrong in our lifestyles and get back to the way things should be.

The Big Picture: It's All about Energy

The human body is like a chemical factory. Thousands of chemicals are churning and mixing and reacting inside of us. And the power source for this factory is energy. The energy needed to power the body comes in the form of calories—a word every dieter is very familiar with. Our calories are either burned or stored for use as energy on an as-needed basis. But energy doesn't like to sit around waiting to be called into action. Unlike energy that waits to be turned on in your home and flows only in one direction, the energy that powers your body is in a constant state of flux—it flows both ways depending on your need to either burn it or store it.




Most people assume that the three types of fuel that make up our food—carbohydrates, fat, and protein—directly supply the body with the energy it needs to function. Not so. All types of energy need a vehicle, a way to move around. Unlike the electrical wiring in your home, the energy in your body uses molecules to move around. An important molecule known as adenosine triphosphate (ATP) is the battery that keeps your machine going. Think of the three fuels you eat as three grades of gasoline that produce different amounts of energy and think of ATP as a battery on wheels that takes that energy (a.k.a. calories) produced by the three fuels to wherever it is needed. The three fuels all produce different amounts of ATP, but fat produces much more than carbohydrates or protein. Translated, this fundamental biochemical fact means fat produces more calories (or ATP) per gram than its cousins, protein and carbohydrates (carbs):

| | |
|------------------------|--------------|
| 1 gram of protein | = 4 calories |
| 1 gram of carbohydrate | = 4 calories |
| 1 gram of fat | = 9 calories |

Energy Basics

In a perfect biochemical world, our bodies would take in the precise amount of calories we need to burn to keep our bodies at their ideal weights. For too many of us, this doesn't happen. Most of us eat more calories than our bodies require, and excess calories go straight to the storage bin (which is usually around your waistline or hips).

ENERGY = CALORIES
ATP IS THE CALORIE CARRIER

WANT TO SEE WHAT HAPPENS WHEN YOU EAT AND RUN?
WE DID THE MATH FOR YOU ON THE WEB SITE. 

The simple equation of burn more energy than you consume is central to any reputable weight-loss program. It doesn't matter if you eat pounds of food or no food, eat every fifteen minutes or once a day, eat only grapefruit and egg whites, meat and potatoes, or coffee and doughnuts. In order to lose weight you must burn more energy than you consume. However—and this is at the heart of a smart weight-management program—there are ways to consume calories that will enable you to burn energy more quickly. And, there are foods and food combinations that are used more efficiently by the body and are less likely to turn into fat. Later I am going to show you how to combine this knowledge with efficient exercise so that you won't have to worry about counting every calorie at every meal or focus on the scale ever again.

Food as Building Blocks

Now you know that the way to burn calories most efficiently has a lot to do with the quality, quantities, and combinations of the three fuels—carbohydrates, protein, and fat—that we consume. Our bodies use each fuel in the foods we eat in a different way, so varying the percentage of one fuel or combining two fuels will produce different results. The three fuels also play different roles in building and maintaining the bones, muscles, and organs in our body. Yes, you really are what you eat. The compositions of the fuels that give us energy to live and function are also the building blocks of our bodies. And because both the human body and food supplied by Mother Nature are composed of the same organic compounds—carbohydrates, protein, and fat—then it only makes sense that we maintain our bodily structures with the intended building blocks designed by Mother Nature.

Carbohydrates

Carbohydrates play a major role in energy creation and regulation, but they are limited in their structural contribution. They don't directly build the mortar and bricks of our bodies' construction, but they do affect the quality of the construction. For example, they protect our stomach linings from the harsh acid environment and help lubricate our joints. They also make up one of the three basic parts of DNA, which is what our genes are made of.

Carbohydrates also play an important role in the regulation and release of the hormones serotonin and insulin. Serotonin lev-

DR. ROBERT MOORE III

els can affect your mood and mental clarity. Insulin is one of the key players in the fat storage game. All of these starring roles—energy production, quality of construction, and regulation—make carbohydrates like a quarterback on a football team. They are key players, and they also make some important decisions in the game.

Protein

When it comes to safeguarding our structure, protein plays the biggest role of all. If carbs are like a quarterback, protein is like the rest of the team, plus the coaches, recruiters, fans—even the stadium. Protein's structural contribution to the body is well known (e.g., muscles and bones), but what is more essential is its job as the main chemical component of *enzymes*. Enzymes are vital to the body because they run all of our life-sustaining chemical reactions.

YES, YOU REALLY ARE
WHAT YOU EAT.

ENZYMES—YOUR BODY'S ASSEMBLY LINES

At this moment, every vital biochemical reaction occurring inside of us is dependent upon the 10,000 different enzymes swimming around in our bodies.

Enzymes are not only made of protein, they are also the only substance capable of breaking down the protein that we eat and then using it to build all the protein structures in our body. This "rate of reaction" is essential for life because any enzyme deficiencies or dysfunctions can result in serious or even life-threatening health problems. Like assembly line workers, enzymes can also add new elements to existing parts or break down structures for other purposes, like growth and healing from injuries. Problems with or a lack of certain enzymes can cause problems or even serious illnesses; learn more about this on the web site.

Protein is the major component in such bodily structures as muscles, tendons, bones, hair, and internal organs. It is also the main chemical component of hormones, blood cells, antibodies,

and important chemical messengers (like insulin). Growth, reproduction, metabolic processes, and even emotional responses are dependent on protein.

Fat

When it comes to maintaining our physical structure, fat is vital to basic survival. As much as we try to rid our diets of fat, without it the most basic structure in our bodies—the cell—could not exist. Fat’s main job is to keep cells and us alive. Fat molecules make up cell walls, which are responsible for keeping cells intact. Our life processes all occur in watery environments, which need the natural repelling properties of fats and oils to keep everything in its proper place. Simply put, the oily cell walls keep the good watery things in and the bad ones out. You may never look at the olive oil in your Italian salad dressing the same way again!

The male and female sex hormones (testosterone and estrogen) are also predominantly constructed of a fat derivative. And fats form the basis of myelin, a substance that coats nerve cells, like the plastic insulation around an electrical wire. Cerebral palsy and multiple sclerosis are conditions caused by damage to the fatty myelin covering around nerves.

FAT’S MAIN JOB IS TO
KEEP CELLS AND US
ALIVE.

Unfortunately, fat gets a bad rap for being the lazy building block. It snuggles up under the skin, forming that infamous spare tire that develops around the waist. But unlike protein, fat prefers to burn itself off as fuel. Though fat’s role as a structural requirement is relatively simple, its role in the makeup of the food we eat is quite complex. The average consumer is well aware of the endless arguments over the benefits and evils of saturated, unsaturated, polyunsaturated, monounsaturated, and trans-fats. Unfortunately much of the truth about fat has been misinterpreted or misunderstood.

CHOLESTEROL: FAT'S BUILDING BUDDY

Cholesterol is many things (both good and bad), but the fat you eat and the cholesterol in your body are two different things. Cholesterol is a type of modified fat, but it is not a type of fat used for fuel—cholesterol has no calories. Like dietary fat, however, it has an important role. Along with dietary fat it helps form a protective coating around cell walls. It also helps build hormones, like testosterone, progesterone, and estrogen. The problem with cholesterol is that we can get too much of it. Because it is essential, the body has the ability to make the amount of cholesterol it needs on its own from fat supplies. Too much cholesterol is bad enough, but too much fat and cholesterol can collect in our blood vessels, and this is a proven lethal combination that contributes to our high rate of heart disease.

Shellfish, such as crab, lobster, and shrimp, are great lean protein sources, but they contain some of the highest concentrations of cholesterol in their cell walls. The meat in shellfish is low in calories only because of cholesterol's inability to be recognized by the body as a fuel. Even though shellfish is a great source of low-fat protein, you may want to check your cholesterol level if you eat it more than two to three times a week.

Adding Up the Three Fuels

I hope that you are starting to see why any diet that minimizes or cuts out an entire food or fuel group just doesn't make sense. Once you learn how to effectively combine the three fuels and learn how to manage your intake, you will no longer make your food choices solely on taste or convenience or impulse. If you look at food as fuel and building blocks and select unprocessed varieties that provide all the benefits a healthy, fit body requires, then your weight and fitness goals will be within reach.

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I want to stress that if you eat for your body's needs, you don't have to sacrifice anything in the way of taste, texture, or eye appeal. I'll show you how to make creative choices to a point where eating what you want and eating what you need will become one and the same. Now that we've covered the basics of how food creates energy and provides the building blocks for all of your body parts, it's time to move on to your body's need for another kind of energy, the kind you exert—exercise.

Exercise: Make Your Workouts Work for You

Exercise is as essential to a healthy body as eating the right food. It is a critical part of the process that maintains our fitness levels and basic bodily structures. First and foremost, exercise helps keep our hearts strong and our arteries flowing. Exercise also stimulates the calcium-building process in our bones, so we can slow the bone-thinning, debilitating disease of old age: osteoporosis.

When done properly, exercise helps keep the slippery fluid in our joints flowing and helps maintain healthy cartilage, thus easing the joint friction that leads to arthritis. So exercise benefits the heart, arteries, bones, and joints, but that's not all. Most importantly, exercise helps keep our muscles conditioned by building and maintaining their mass. Maintaining healthy muscle mass means continued strength and the ability to maintain your ideal weight. The more muscle mass you acquire and maintain, the more calories you burn throughout the day. This is because more muscle equals better metabolism, which uses more fuel, even when you are at rest.

MORE MUSCLE = BETTER METABOLISM.

Exercise keeps muscles toned and helps fight the effects of aging—a sagging backside, flabby upper arms, and the dimpling-effect of cel-

lulite. Exercise is essential to our staying power. It helps us take the stairs easier, walk or run farther, breathe more efficiently, and increases our energy. There is even scientific evidence to prove that exercise is a mood elevator, depression fighter, and an overall age extender. But, you must be asking by now, what about weight loss? Exercise is synonymous with weight loss, right? Well, get ready for another surprise.

Exercise is the Other Energy

For most people who decide that they want (or need) to lose weight, the knee-jerk response is “I’ve got to get to the gym.” Few of these people look forward to scheduled exercise and view it as a painful step to weight loss. Many people mistakenly believe that exercise is more important than a healthy diet when it comes to any type of weight management.

EXERCISE IS MOST
IMPORTANT IN
MAINTAINING YOUR
WEIGHT AND HEALTH.

It is our eating habits that profoundly affect our personal well-being and longevity and act as the primary force for shedding body fat and regulating metabolism. Exercise burns calories, but it is most important in *maintaining* your weight. In the absence of a properly managed diet, exercise alone will at best just slow fat production and storage. So if you want lasting results and better overall health proper exercise is essential.

EXERCISE IS ENERGY EXERTED

I like to think of exercise as the other energy—the energy we exert in order to burn more calories. Like the energy we take in (food), the energy we put out (exercise) is a matter of quantity and quality. Remember how ATP is produced from the three fuel groups—fats, carbohydrates, and protein—to supply energy to its needed destination? Exercise uses up a lot of ATP, so when more is needed, fat cells are called on to produce a new supply, thus indirectly reducing fat stores.

Quality, Not Quantity

The biggest problem with exercise is that most people look at it like a chore, something they have to do. It doesn't have to be this way. You can exercise effectively in less time and with less effort than you think. Different exercises produce different results.

Whether your goals require fat loss, muscle toning, muscle building, aerobic conditioning, cross-training, or a combination of them all, your physical efforts should be specific to your goals and need not be excessive. Too many people learn too late that more exercise is not better. They exercise more than they should, or perform maneuvers that are not effective in helping them reach their goals. This limits their achievements, creates disappointment, can cause injuries, and ultimately contributes to the high dropout rate.

The key to an effective exercise and weight-loss program involves three parameters: repetitions, technique, and breathing. Huffing and puffing programs and "no pain, no gain" thinking are a thing of the past. Research has shown that results in any area of exercise can be achieved with a lot less time and effort than traditional physical training programs.

The Dynamic Duo: The Combined Power of Diet and Exercise

Fact: you can essentially produce any change in your body by using a combination of diet modifications and different physical training techniques. Reducing your caloric intake while burning more calories will obviously help increase your weight loss odds, but there's more to it than that. Here are some encouraging examples:

1. Did you know that your metabolism is designed to be fueled every two to three hours? Yes, you can manage your weight easier and have better overall health by eating smaller meals five to seven times a day.
2. Medical research shows that the most effective tool for living longer and enjoying better health is eating less. Animals that were allowed to overeat at every meal had more heart disease, diabetes, cancer than the ones that simply ate less. And the one who ate less lived 20 percent longer!
3. Did you know that your metabolism burns at a faster rate for many hours after most conditioning exercises are finished? That means a larger portion of your next meal will be burned off instead of being stored in your body as extra calories if you exercise before.
4. Timing between exercises is important as well as eating particular foods before or after exercise because both can make it easier to create and maintain muscle mass. This means less total exercise is required, creating a less stressful fitness cycle

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that constantly feeds off itself to ensure that you reach your goals and maintain them once they are achieved.

Not only will you be able to create your own diet and exercise program after reading Parts 2 and 3, but in Part 4, Putting it All Together, you will have the option to choose from five different real-life examples that have sample eating and exercise programs provided for each one. I encourage you to enjoy yourself in the process. You are about to take charge of your health and fitness in a way you never have before, with more quality information than you have ever had from one source.

Free Your Mind and Your Body Will Follow

A patient of mine named Jim came to me as a typical middle-aged man juggling too many balls in the air between his family and work. He first complained about his inability to exercise since he had less energy, less time, and painful joints. He would wake up at five in the morning and hit the weights before work, skip breakfast, and then have lunch during meetings, eating whatever they served (usually takeout). By three he was pounding down several cups of coffee to stave off fatigue and taking ibuprofen for his knees, which ached after sitting all day in one position. When he came home, he had to have a few beers or cocktails to “wind down.” By the time dinner was ready he was famished and wolfed down the usual he-man helping of food that he had been praised for eating as a young man. Then he was off to watch television with the family, but this wasn’t quality time since he would pass out an hour after eating. Hours later, after his wife would wake him and tell him it was time to go to bed, he would have a hard time getting to sleep and then feel exhausted when the alarm went off at five again the next morning.

Jim was also a borderline diabetic and taking oral medication to control his blood sugar. He came to me desperate for help, and we put together his personalized BOK program. He was able to untwist his unhealthy lifestyle and correct the problems he had been developing since childhood. First he started to feel more energy eating five meals per day instead of two. He made many excuses in the beginning

about eating this frequently, but found there were always possibilities to catch a quick snack (even if he had to excuse himself from a meeting to “go to the men’s room” and eat a piece of fruit, small yogurt, or protein bar). He also noticed that the amount of alcohol he was drinking to wind down was not only wreaking havoc with his blood sugar but the disinhibition or “buzz” that it provided really triggered a type of mindless speed eating that made him gorge at dinner.

After changing his eating habits, he noticed that a snack at 3:30 or 4:00 completely erased the feeling of hunger and anxiety that drove him to reach for his cocktails in the first place—to a point where he lost any need to wind down at all and changed his drinking habits to an occasional glass or two of red wine. In fact, he found himself interacting with his wife and children more, taking the time to discuss their day and school activities. Dinner became a tranquil event and not a race. Now his family walks after dinner, providing the opportunity for even more time together while they continue to add to their new health and fitness goals. And, during these walks he found a group of gentlemen who would work out during lunch or after work downtown near his office. The steady weight loss not only allowed him to eventually get off of the medication for his diabetes, but also alleviated the load on his knees, to the point that he could even catch a few pick-up basketball games with the neighborhood kids.

Others do not always get to enjoy a simple, straight-forward program and sustainable results like Jim did though. I had another special patient named Tracy, whom you’ll get to know later in this book. She followed her own BOK program too and physically lost a lot of weight, but then wasn’t able to handle the weight loss emotionally. She gained back almost a hundred pounds. Once she told me the shocking truth behind her emotional weight gain, I was able to help her. It took some effort, but Tracy was able to understand and face the reasons why she regained the weight, and she eventually won her battle.

It appears that for each of us, there are no absolutes in the world of diet and exercise. True weight management is a lifestyle unique to each person, but the interaction between our mind and body seems to be consistent for everyone—like Tracy discovered. The body and the mind do not function separately or independent of one another.

Rather, they are wholly interdependent. The mind has amazing powers over the body, and much of that influence is good. Your mind can push your body in the direction of good health and successful weight management or push it in the opposite direction. On the other hand, your body's overall health can support mental clarity and better decisions or influence bad habits that lead to unhealthy choices. Consider those days when you are so mentally or emotionally drained that you are incapable of any physical activity at all. Conversely, think of the difficulty you have in maintaining mental focus and productivity after a full day of physical activity—or after eating a bacon cheeseburger and fries.

Identifying the Obstacles

Popular media along with many scientific studies have pointed to our physical failings as the cause of the rising obesity rate in the United States. We don't eat right and we don't exercise enough. Is this a physical failing—or is it a mental one?

FORGET THE WORD
“WILLPOWER.”

Think back again to those common everyday obstacles we run into during our quest for health and fitness. In reality, this is what is behind the majority of setbacks and the high attrition rate in weight management. The temptation of ever-present junk food makes you cave too often. You may skip exercise because of a few stiff muscles, or in your frustration to break a weight loss plateau, you just want to give up. There are too many obstacles, and they all affect us differently.

Some people have dysfunctional eating habits or what is clinically known as an eating disorder. These problems range in severity from overeating excessively and gaining five to ten pounds over the holidays, to bingeing on weekends, to more severe problems such as bulimia and anorexia. What is more alarming is that these problems are more common than you might think. I will go so far as to say that anyone who continually struggles with their weight is suffering from some type of eating dysfunction, addiction, or disorder.

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Overcoming the Obstacles: The Positive Picture

Physical obstacles like soreness, burning, stiffness, cramping, and plateaus do get in the way of everyone's fitness goals, and I will show you simple ways to navigate through them or avoid them altogether. Other obstacles are not as obvious though. Recent medical studies prove that certain mental and social issues contribute to a large percentage of poor diet and fitness outcomes. Without addressing those issues you can never win the sadistic game of lose-gain-lose-gain. There is also new scientific evidence that shows how basic brain functions support some of these bad habits and how the mind tries to override your intellectual ability to defeat them.

Fear not—there are ways to get over all these hurdles so you can attain your goals. I'll help you identify your particular obstacles, connect with their origins in Part 5, and once and for all correct them at their sources. Understanding the obstacles and your mind's reaction to them will give you the knowledge and power to overcome them. Forget the word "willpower." It isn't in my health and fitness vocabulary, and it shouldn't be in yours. Once the hidden reasons behind a particular setback are discovered, they lose their detrimental effect on your efforts. Your machine will no longer be controlling you; you will be back online and in charge.

Welcome to BOKsystems. You will use these new tools for your self-discovery. And, combined with my eating and exercise plans, you will be able to form your own Body of Knowledge program.

Let's get started.