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book will inspire you  
as he has inspired me.”  
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THE  
**BLOOD  
SUGAR  
SOLUTION**

The UltraHealthy Program for Losing Weight,  
Preventing Disease, and Feeling Great Now!



Mark  
Hyman, MD

Bestselling author of *UltraMetabolism*  
and *The UltraMind Solution*

THE  
**BLOOD  
SUGAR  
SOLUTION**

ALSO BY MARK HYMAN, MD

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*Ultraprevention*

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Mark Hyman, MD



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*For the first generation of children in history that will live sicker  
and die younger than their parents. For their sakes and ours may  
we all work together to take back our health.*



# Contents

How to Use This Book	xiii
Join the Blood Sugar Solution Community Today	xix
Do You Have Diabetes?	xxi
Introduction. Diabetes: What You Don't Know May Kill You	3

## **PART I**

### **UNDERSTANDING THE MODERN PLAGUE**

1. A Hidden Epidemic: The United States of Diabetes	7
2. The Real Causes of Diabetes	14
3. Seven Myths About Obesity and Diabetes That Keep Us Sick	21
4. Food Addiction: Fixing Your Brain Chemistry	36
5. How Big Food, Big Farming, and Big Pharma Are Killing Us	46
6. Functional Medicine: A New Approach to Reverse This Epidemic	54

## **PART II**

### **THE SEVEN STEPS TO TREATING DIABESITY**

7. Understanding the Seven Steps	63
8. Step 1: Boost Your Nutrition	72
9. Step 2: Regulate Your Hormones	87
10. Step 3: Reduce Inflammation	98



## Contents

- |                                       |     |
|---------------------------------------|-----|
| 11. Step 4: Improve Your Digestion    | 111 |
| 12. Step 5: Maximize Detoxification   | 118 |
| 13. Step 6: Enhance Energy Metabolism | 126 |
| 14. Step 7: Soothe Your Mind          | 134 |

### **PART III**

#### **THE BLOOD SUGAR SOLUTION: PREPARATION**

- |                                    |     |
|------------------------------------|-----|
| 15. Start the Journey              | 141 |
| 16. Harness the Power of Community | 163 |
| 17. Take a Measure of Yourself     | 172 |

### **PART IV**

#### **THE SIX-WEEK ACTION PLAN**

- |   |     |
|---|-----|
| 18. Ready. Set. Take Action!                                    | 189 |
| 19. Week 1: Eat Your Medicine:<br>Nutrition Basics for Everyone | 192 |
| 20. Week 2: Optimize Metabolism with<br>Nutritional Supplements | 215 |
| 21. Week 3: Relax Your Mind, Heal Your Body                     | 232 |
| 22. Week 4: Fun, Smart Exercise                                 | 240 |
| 23. Week 5: Live Clean and Green                                | 247 |
| 24. Week 6: Personalize the Program                             | 255 |
| 25. <i>The Blood Sugar Solution:</i><br>Weekly Overview         | 276 |
| 26. Get Healthy for Life  | 287 |

### **PART V**

#### **TAKE BACK OUR HEALTH**

- |   |     |
|---|-----|
| 27. Get Healthy Together:<br>Creating a Social Movement | 299 |
| Conclusion: Reversing the Diabesity Epidemic            | 313 |

**PART VI**

***THE BLOOD SUGAR SOLUTION MEAL PLAN AND RECIPES***

28. Your Six-Week Meal Plan	317
29. Recipes and Shopping Lists	322
Acknowledgments	373
Resources	377
Notes	395
Index	413



# How to Use This Book

You may have picked up this book for many reasons.

You may be interested in understanding the scope and impact of our current global epidemic of obesity and type 2 diabetes or what should be called “diabesity.”

You may want to understand the social, political, or economic factors that continue to fuel this epidemic and what we can do about them. You may be a policy maker, health care organization, educator, or religious leader looking for a solution.

You may be a scientifically curious health care consumer or health care practitioner who wants to better understand the biology of obesity and diabetes and why it is so difficult to find an effective solution, despite the advances of modern medicine.

You may want to create or join a group or be part of a grass-roots social movement to change the course of this epidemic.

Or you may simply be looking for a practical solution and program to lose weight and reverse your own type 2 diabetes or pre-diabetes.

Whatever your reasons, this book is for you.

We face a problem that will touch almost everyone on the planet. It is no secret we are in the middle of an explosive epidemic of obesity and type 2 diabetes.

As a physician, scientist, educator, and citizen, I have struggled to find a comprehensive solution. That is what motivated me to write this book, *The Blood Sugar Solution*.

It is about much more than blood sugar. It is about getting to the

While this book is primarily about obesity and type 2 diabetes, it can be helpful for type 1 diabetics who want to live a healthy blood sugar–balancing lifestyle. Type 1 diabetes is an autoimmune disease that results in damage to the pancreas and **lack of insulin** production. Type 2 diabetes is also an inflammatory disease, but it is a disease of **too much insulin**, where your cells become numb to the insulin produced by the body. This is called **insulin resistance** and often precedes the onset of type 2 diabetes by years or decades. This book is about type 2 diabetes and insulin resistance, so whenever I refer to diabetes in this book, I am referring to type 2 diabetes.

very root of the problem and providing a solution on a biological, personal, social, and economic level.

The book opens with a simple quiz to help identify if you have “diabetes.” Since one in two Americans has this problem, the answer will likely be yes.

In Chapter 1 of Part I, “Understanding the Modern Plague,” I explore the scope of the epidemic across the globe and its impact not only on rich Western countries, but also on the developing world. In Chapter 2, we will review the real biologic cause of the epidemic—insulin resistance—and why our current approaches to the problem don’t work.

In Chapter 3, I dispel the medical myths that prevent us from effectively addressing the epidemic, for example, that obesity and type 2 diabetes are genetic, or that type 2 diabetes is not reversible, or that medication is effective in preventing or treating diabetes and related diseases.

In Chapter 4, I explore new research on the biology of food addiction and why food cravings and overeating are not your fault. This brings into question our food marketing practices and their impact on children and childhood obesity.

In Chapter 5, I explore how Big Food, Big Farming, and Big Pharma fuel the epidemic of obesity, diabetes, and chronic disease across the

*The UltraWellness Quiz: Discover  
The Root Causes of Weight Gain and Diabetes*

This book will help you understand and treat the underlying causes of weight issues and diabetes and almost any chronic health problem. Inside this book are special quizzes that together make up **The UltraWellness Quiz**. It is the key to discovering the cause and the cure of all your health problems and creating a clear personalized path to health. The science behind this, functional or whole systems medicine, allows you to discover the true source of your health issues through a specific set of quizzes.

**The UltraWellness Quiz** can be filled out in the book, but I encourage you to go to [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com) and fill out the quiz online to get and track your **UltraWellness Score** and start on your road to lifelong health and vitality.

globe, creating an “obesogenic” environment, and explain what we collectively can do about it.

In Chapter 6, I introduce a new science-based model of whole systems medicine, a road map for addressing chronic disease in the twenty-first century called **functional medicine**, which treats the underlying biologic causes of obesity and diabetes. It applies the advances in personalized medicine, genomics, and systems biology in a practical road map for diagnosing, treating, and reversing disease. It is medicine focused on causes and mechanisms, not location in the body and symptoms. We treat the system and not just the symptoms. We treat the soil or the terrain and not the plant. It is extraordinarily effective for obesity and type 2 diabetes.

In Part II, “The Seven Steps to Treating Diabetes,” I explain the latest scientific advances in our understanding of the biology of obesity and diabetes, advances that allow us to discern the root biological causes of the problem. Obesity and diabetes are the result of many different causes, including nutritional, hormonal, immunological, inflammatory, and digestive imbalances, as well as environmental toxins, metabolic

dysfunction, and stress. Each of these either separately or collectively may be involved in *your* particular case. Finding out which problems you have through the quizzes in Part II, and personalizing your approach, is critical to healing.

In Part III, “The Blood Sugar Solution: Preparation,” you will learn how to prepare your mind, body, and kitchen for the six-week program; how to get together to get healthy by creating or joining a small support group; and finally how to take a measure of your health through *The Blood Sugar Solution* quiz and laboratory tests, which will help you understand the cause and severity of your diabetes.

Part IV, “The Six-Week Action Plan,” is a practical six-step, six-week program you can do on your own, or in partnership with your health care provider. It also shows you how to create a community of support for yourself. Support and feedback from a group of people make the program more fun and effective and the change more sustainable.

*The six-week action plan outlines:*

- How to identify the underlying causes of insulin resistance and diabetes in yourself
- Personalized self-care therapeutic treatments to help you address your unique underlying causes of diabetes
- How to change your diet to reverse the problem and use food as medicine
- A delicious, easy-to-follow menu plan with recipes and shopping lists included
- Which supplements and medication to take in order to improve and optimize insulin function and blood sugar balance
- How to use exercise more effectively and more efficiently
- Stress-reducing tools to reverse diabetes
- How to address and reduce your exposure to and your body burden of environmental toxins
- Which tests to get to determine whether you have a problem
- How to work with your doctor so you can get the information, tests, and treatments you need to address the problem effectively and use medications intelligently when needed

**Note:** Following this six-week action plan can radically lower your blood sugar and cause low blood sugar if you are on medication. If you are currently taking medication and wish to follow the program, it's important that you monitor your blood sugar carefully and work with your doctor as needed. It is possible you will need to reduce the amount of medication you are taking. Changes in medication should only be done with the help and supervision of your physician.

- Instructions on how to take advantage of our online support tools and community at [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com)
- How to get healthy for life

Part V is a manifesto, a call to action, and a plan for us as individuals, families, communities, schools, workplaces, and faith-based groups to “Take Back Our Health.” A diverse community-based movement is the only way to effectively reverse this epidemic. This will ultimately be necessary if we are to help not only ourselves, but also our children and their children. To paraphrase my friend Hillary Clinton, it takes a village to get healthy.





# Join the Blood Sugar Solution Community Today

This book is just the beginning of the resources I have created to help you get healthy for life. The companion website for the book, [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com), also provides an online curriculum, program-enhancing tools, resources, ongoing education, and support.

As you will learn, community is essential, and I have created an entire online web experience to help you get healthy together. The website will help you find others who are on the same journey and offer a way to support each other. Change is often difficult, but sharing your journey and getting support from others are powerful medicines that will ensure your success. I will be part of the community, too, and will do my best to stay in touch and support you along the way.

Visit [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com) and learn more about how to:

- 1. Join a Group.** Join a group in our online community, or your local community.
- 2. Take Your Quizzes.** Online versions of the Blood Sugar Solution Quizzes have been provided to help you self-diagnose the cause of your problems and get the right treatment.
- 3. Take Advantage of *The Blood Sugar Solution* course.** This includes the two-week preparation phase, a six-week program, week-by-week action steps, and ongoing education and support to help you stay healthy for life.

*Join the Blood Sugar Solution Community Today*

- 4. Access Online Checklists.** Use our daily and weekly checklists to help you succeed in the program.
- 5. Use Health Trackers.** Access online and mobile weight, height, BMI (body mass index), and lab tests trackers to securely and privately record changes over the course of the program.
- 6. Develop Your Personal Journal.** You can record your experience and track your daily diet and exercise securely and privately.
- 7. Learn What Supplements to Take.** I provide specific recommendations for the nutrients and supplements you need to succeed in the program.
- 8. Access Mind-Body Tools.** I have developed some easy-to-use online exercises for relaxing mind and soul, including breathing exercises and yoga.
- 9. Get Tested.** Learn about resources for self-testing and medical testing.
- 10. Use Our Health and Nutrition Coaching.** Get personal coaching by trained nutritionists to help you succeed in your program.
- 11. Get More Recipes.** With the help of a professional chef, we have developed additional delicious recipes and kid-friendly recipes.
- 12. Get Online Cooking Classes.** I developed a set of lessons in simple cooking featuring me—your friendly doctor-chef!
- 13. Access Healthy Living Resources.** Information on finding good foods, clean and green products, and tools and resources for fitness and mind-body balance.
- 14. View Educational Articles, Videos, and Webinars.** Access videos, webinars, and ongoing education to support you as you move toward health.
- 15. Find a Doctor.** Links to functional medicine and integrative medical and health care professionals in your area.
- 16. Join a Movement to Take Back Our Health.** Specific action steps for you to take in your family, home, school, workplace, faith-based community, our health care system, and our democracy.
- 17. Share Your Successes.** A place you can post your own stories, and inspire and be inspired by thousands of others.

Visit [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com) to join.

# Do You Have Diabetes?

Now let's see if you have diabetes or are at risk for it.

If you answer yes to any of these questions, you may already have diabetes or are headed in that direction. You may not know the answers to all these questions now, but in Part III there is a more extensive quiz with instructions for testing that will help you identify the severity of your diabetes.

- Do you have a family history of diabetes, heart disease, or obesity? Yes \_\_\_\_\_ No \_\_\_\_\_
- Are you of nonwhite ancestry (African, Asian, Native American, Pacific Islander, Hispanic, Indian, Middle Eastern)? Yes \_\_\_\_\_ No \_\_\_\_\_
- Are you overweight (BMI or body mass index over 25)? See page 171 to calculate your BMI based on weight and height. Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you have extra belly fat? Is your waist circumference greater than 35 inches for women or greater than 40 inches for men? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you have sugar and refined carbohydrate cravings? Yes \_\_\_\_\_ No \_\_\_\_\_

*Do You Have Diabetes?*

- Do you have trouble losing weight on a low-fat diet? Yes \_\_\_\_\_ No \_\_\_\_\_
- Has your doctor told you your fasting blood sugar is a little high (greater than 100mg/dl) or have you actually been diagnosed with insulin resistance, pre-diabetes, or diabetes? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you have high levels of triglycerides (over 100 mg/dl) or low HDL (good) cholesterol (less than 50 mg/dl)? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you have heart disease? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you have high blood pressure? Yes \_\_\_\_\_ No \_\_\_\_\_
- Are you inactive (less than 30 minutes of exercise 4 times a week)? Yes \_\_\_\_\_ No \_\_\_\_\_
- Have you had gestational diabetes or polycystic ovarian syndrome? Yes \_\_\_\_\_ No \_\_\_\_\_
- Do you suffer from infertility, low sex drive, or sexual dysfunction? Yes \_\_\_\_\_ No \_\_\_\_\_

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## INTRODUCTION

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# Diabesity: What You Don't Know May Kill You

What's in a name: insulin resistance, metabolic syndrome, syndrome X, obesity, pre-diabetes, adult-onset diabetes, type 2 diabetes. These are all essentially one problem; some vary by severity but *all* can have deadly consequences. The diagnosis and treatment of the underlying causes that drive all these conditions are actually the same.

Diabesity is a more comprehensive term to describe the continuum from optimal blood sugar balance toward insulin resistance and full-blown diabetes. If you answered yes to any of the questions in the quiz on page xix, you may already have diabesity.

Nearly all people who are overweight (over 70 percent of adult Americans) already have “pre-diabetes” and have significant risks of disease and death. They just don't know it. Even worse, while the word “diabesity” is made up of the concepts of obesity and diabetes, even those who aren't overweight can have this problem. These are the “skinny fat” people. They are “underlean” (not enough muscle) instead of “overweight” and have a little extra weight around the middle, or “belly fat.” Currently there are no national screening recommendations, no treatment guidelines, no approved medications, and no reimbursement to health care providers for diagnosing and treating anything other than full-blown diabetes. Think about that. **Doctors are not expected, trained, or paid to diagnose and treat the single biggest chronic disease in America,** which, along with smoking, causes nearly all the major health



care burdens of the twenty-first century, including heart disease, stroke, dementia, and even cancer. But here is the good news—there is a scientifically proven solution that I have mapped out for you in this book.

Our current medical practice has not caught up with our knowledge. In 2008, the American College of Endocrinology and the American Association of Clinical Endocrinologists gathered twenty-two experts and reviewed all the scientific data on pre-diabetes and diabetes. They heralded a wake-up clarion call for individuals, the health care community, and governments around the world.<sup>1</sup> Their conclusions were as follows:

1. The diagnosis of pre-diabetes and diabetes is arbitrary. A fasting blood sugar over 100 mg/dl is considered pre-diabetes, and a blood sugar over 126 mg/dl is considered diabetes. **However, they found these cutoffs don't reflect the whole spectrum of risk—including heart disease, cancer, dementia, stroke, and even kidney and nerve damage—which starts at much lower numbers, numbers most people consider normal.**
2. The DECODE study of 22,000 people<sup>2</sup> examined the continuum of risk measured not by fasting blood sugar, but by blood sugar after a big sugar drink (the best way to diagnose the problem). The study found that even starting at blood sugar levels that were perfectly normal (95 mg/dl), there was a steady and significant risk of heart disease and complications well below the accepted abnormal of less than 140 mg/dl for pre-diabetes and long before people reached the diabetic cutoff of 200 mg/dl.

Bottom line: Even if you have perfectly normal blood sugar, you may be sitting on a hidden time bomb of disease called diabetes, which prevents you from losing weight and living a long healthy life. Insulin resistance is the major cause of aging and death in the developed and most of the developing world. This book will help you identify and reverse this explosive situation for yourself. It also lays out a comprehensive action plan for greater collective action to solve this problem individually and collectively by getting healthy together.

## PART I

# UNDERSTANDING THE MODERN PLAGUE

*For this we must make automatic and habitual, as early as possible, as many useful actions as we can, and guard against the growing into ways that are likely to be disadvantageous to us, as we should guard against the plague.*

— William James,

“The Laws of Habit,” *The Popular Science Monthly* (February 1887)

*It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so.*

— Mark Twain



# 1

## A Hidden Epidemic: The United States of Diabetes

Diabetes, the continuum of health problems ranging from mild insulin resistance and overweight to obesity and diabetes, is the single biggest global health epidemic of our time. It is one of the leading causes of heart disease, dementia, cancer, and premature death in the world and is almost entirely caused by environmental and lifestyle factors. This means that it is almost 100 percent preventable and curable.

Diabetes affects over 1.7 billion people worldwide. Scientists conservatively estimate it will affect 1 in 2 Americans by 2020, 90 percent of whom **will not be diagnosed**. I believe it *already* affects more than 1 in 2 Americans and up to 70–80 percent of some populations.

Obesity (almost always related to diabetes) is the leading cause of preventable death in the United States and around the world. Gaining just 11–16 pounds doubles the risk of type 2 diabetes, while gaining 17–24 pounds triples the risk. **Despite this, there are no national recommendations from government or key organizations advising screening or treatment for pre-diabetes.** We are becoming the United States of Diabetes.

The prevalence of type 2 diabetes in America has tripled since the 1980s. In 2010 there were 27 million Americans with diabetes (25 percent of whom were not diagnosed) and 67 million with pre-diabetes (90 percent of whom were not diagnosed). African-Americans, Latin Americans, and Asians have dramatically higher rates of diabetes than

Caucasians do.<sup>1</sup> By 2015, 2.3 billion people worldwide will be overweight and 700 million will be obese. The number of diabetics will increase from 1 in 10 Americans today to 1 in 3 by the middle of this century.

## A CHILDHOOD PROBLEM

Perhaps most disturbing, our children are increasingly affected by this epidemic. We are raising the first generation of Americans to live sicker and die younger than their parents. Life expectancy is actually declining for the first time in human history.

Here are some startling statistics:

- One in three children is overweight in America.
- Childhood obesity has tripled from 1980 to 2010.
- There are now more than 2 million morbidly obese children above the 99th percentile in weight.
- In New York City, 40 percent of the children are overweight or obese.
- One in three children born today will have diabetes in their lifetime.
- Childhood obesity will have more impact on the life expectancy of children than all childhood cancers combined.

## A GLOBAL PROBLEM

Diabetes is just as widespread in other parts of the world: In 2007, it was estimated that 240 million people worldwide had diabetes. It is projected to affect 380 million by the year 2030, about 10 times the number of people affected by HIV/AIDS.<sup>2</sup> Sadly this is a gross underestimate. Estimates in 2011 put the worldwide total at 350 million. In China alone, rates of diabetes were almost zero 25 years ago. In 2007, there were 24 million diabetics in China, and scientists projected that by 2030 there would be 42 million diabetics in China. However, by 2010, there were 93 million diabetics and 148 million pre-diabetics in China,

*Special Note: Childhood Obesity and  
Diabetes—The Blood Sugar Solution for Children*

The biggest tragedy is the global spread of childhood obesity and “adult”-onset or type 2 diabetes in little children. We are now seeing eight-year-old children with diabetes, fifteen-year-olds with strokes, and twenty-five-year-olds who need cardiac bypass. While *The Blood Sugar Solution* is a program mostly for adults, it is also powerful and effective for children. The whole family must be part of the solution, and we have to make our homes, communities, and schools safe for our children.

*The Blood Sugar Solution* includes many child-friendly recipes. And when it comes to supplements, there is something for everyone, even infants and children. In fact, any child over twelve years of age with diabetes can follow the basic Blood Sugar Solution plan. Children younger than twelve or those who qualify for the Advanced Plan should work with an experienced functional medicine practitioner. See [www.bloodsugarsolution.com](http://www.bloodsugarsolution.com) for how best to support your children’s health if they are overweight or have type 2 diabetes.

almost all of whom were previously undiagnosed. Imagine if we had 148 million new cases of AIDS overnight in one country.

Sixty percent of the world’s diabetics will eventually come from Asia because it is the world’s most populous region. The number of individuals with impaired glucose tolerance or pre-diabetes will increase substantially because of increased genetic susceptibility to the harmful effects of sugar and processed foods. Interestingly, people in this Asian population (who are uniquely susceptible to diabetes even though they may not be obese) are increasingly affected as they adopt a more Western diet. Weaker environmental laws and regulations also expose them to increasing levels of toxins, which, as we will see later, are a significant cause of diabetes.<sup>3</sup>

Ponder this: From 1983 to 2008, the number of people in the world with diabetes increased sevenfold, from 35 to 240 million. In just three years, from 2008 to 2011, we added another 110 million diabetics to

our global population. Shouldn't the main question we ask be *why is this happening?* instead of *what new drug can we find to treat it?* Our approach must be novel, innovative, and widely applicable at low cost across all borders. Billions and billions have been wasted trying to find the “drug cure,” while the solution lies right under our nose. This is a lifestyle and environmental disease and won't be cured by a medication.

## DIABESITY: THE MAJOR CAUSE OF CHRONIC DISEASE AND DECREASED LIFE EXPECTANCY

Diabesity is one of the leading causes of chronic disease in the twenty-first century, including heart disease, stroke, dementia, and cancer.<sup>4</sup>

Consider the following:

- One-third of all diabetics have documented heart disease.<sup>5</sup>
- It is estimated that nearly everyone else with type 2 diabetes has undiagnosed cardiovascular disease.
- People with diabetes are four times more likely to die from heart disease, and the rate of stroke is three to four times higher in this population.
- Those with pre-diabetes are also four times more likely to die of heart disease.<sup>6</sup> So having pre-diabetes isn't really “pre” anything in terms of risk.
- There is a fourfold increased risk for dementia in diabetics.<sup>7</sup> And pre-diabetes is a leading cause of “pre-dementia,” also known as mild cognitive impairment.
- The link between obesity and cancer is well documented and is driven by insulin resistance.<sup>8</sup>
- Diabesity is the leading cause of high blood pressure in our society. Seventy-five percent of those with diabetes have high blood pressure.
- Diabesity is also the leading cause of liver failure from NASH (non-alcoholic steatohepatitis), also known as fatty liver. It affects 30 percent of our general population (about 90 million) and 70–90 percent of those who have diabesity. Those with fatty liver are at much greater risk of heart attack and death.<sup>9</sup>

- Diabesity is an important cause of depression and mood disorders. Women with diabetes are 29 percent more likely to develop depression, and women who took insulin are 53 percent more likely to develop depression.<sup>10</sup>
- Nervous system damage affects 60–70 percent of people with diabetes, leading to a loss of sensation in the hands and feet, slow digestion, carpal tunnel syndrome, sexual dysfunction, and other problems. Almost 30 percent of people age forty or older with diabetes have impaired sensation in their feet, and this frequently leads to amputations.
- Diabesity is also the leading cause of blindness among people ages twenty to seventy-four.
- Diabesity is the leading cause of kidney failure—accounting for 44 percent of new cases each year.
- People with poorly controlled diabetes are three times more likely to have periodontal or severe gum disease.

A recent remarkable study published in the *New England Journal of Medicine* examining 123,205 deaths in 820,900 people found that diabetics died an average of six years earlier than nondiabetics and 40 percent of those did not die from heart disease or the usual diabetes-related causes.<sup>11</sup> They died from other complications not obviously related to diabetes, complications most wouldn't necessarily correlate with the disease. Yet it makes perfect sense given that diabesity is the underlying cause that drives most chronic illnesses.

## DIABESITY: A MAJOR GLOBAL THREAT TO ECONOMIC DEVELOPMENT

Direct health care costs in the United States over the next decade attributable to diabetes and pre-diabetes will be \$3.4 trillion, or one in every ten health care dollars spent. Obese citizens cost the U.S. health care system 40 percent more than normal-weight citizens. In a sample of 10 million commercial health plan members, those without diabetes



## THE BLOOD SUGAR SOLUTION

cost \$4,000 a year compared to \$11,700 for those with diabetes, and \$20,700 for those with complications from diabetes.

Diabetes places a large economic burden on our society. The direct and indirect costs of diabetes in America in 2007 amounted to \$174 billion. The cost of obesity is also significant, and amounts to \$113 billion every year. From 2000 to 2010, these two conditions have already cost us a total of \$3 trillion. That's three times the estimated cost of fixing our entire health care system!<sup>12</sup>

Are we getting our money's worth? Is our current approach winning the battle against these completely preventable and curable diseases? Clearly the answer is *no!*

### *The Impact of Diabetes on Developing Nations*

Diabetes is not just a problem for rich countries with too much food; it is also a disease of poverty<sup>13</sup> that is increasing in developing countries as well.<sup>14</sup> In India, diabetes carries a greater risk of death than infectious disease. In the Middle East, nearly 20–25 percent of the population is diabetic. When I helped in Haiti (the poorest country in the Western hemisphere) after the earthquake in 2010, I asked the director of Haiti's main public hospital what the major medical problems were prior to the earthquake. His answer surprised me: heart disease, high blood pressure, and diabetes—all caused by diabetes.

By 2020, there will be fewer than 20 million deaths worldwide from infectious disease, but more than 50 million deaths from chronic preventable lifestyle diseases—heart disease, diabetes, and cancer. These are all fueled by the same preventable risk factors: high blood pressure, overweight, physical inactivity, high blood sugar, high cholesterol, and smoking. But strikingly, 95 percent of private and public efforts and funding focus almost exclusively on combating communicable or infectious disease.<sup>15</sup>

## THE SOLUTION: TAKE BACK OUR HEALTH

There is a solution available, one that is accessible and scalable, one that is available to everyone and prevents, treats, and reverses diabetes at a

fraction of the cost. This book provides that solution for individuals, communities, and nations. It will require significant change at all levels, but each of us has the power to transform this problem.

In addition to curing diabetes on an individual level, we need a movement. I call it *Take Back Our Health*, and in Part V, I explain how we can all join this movement so we can get healthy together. It starts with the individual, but moves into families, communities, workplaces, schools, and faith-based organizations and filters through us to government and corporations.

In the next chapter, we will look at the true causes of diabetes, and why current treatments aren't working.