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YOU DON'T HAVE TO HAVE A HEART ATTACK!

Imagine a world in which heart attacks are rare and death from a premature heart attack is virtually unknown—a thing of the past. Imagine a world in which heart disease is detected so early and so accurately—and treated so effectively—that very few people will ever need to be subjected to invasive and expensive procedures such as angioplasty or coronary bypass surgery. Imagine a world in which we can confidently look forward to healthy and productive lives free from the threat of heart attack and stroke.

You may be thinking, “Gee, my kids or grandchildren might be lucky enough to live in such a world, but this isn’t going to happen in my lifetime.”

If that’s what you’re thinking, you’re wrong.

The exciting news is that we now have the knowledge and ability to prevent the great majority of heart attacks and strokes. We can save hundreds of thousands of lives each year—maybe even yours. I’m not talking about what we will be able to do 10 years from now, or even 5 years from now. I’m talking about what we can do *right now*. What’s even more remarkable is the fact that *right now* we have noninvasive—no cutting, no pain, no recovery required—diagnostic techniques that can identify people who are at high risk for developing coronary artery disease (or CAD), so that they can be treated early. We also have highly effective treatments, including medications and lifestyle changes, that can reverse damage to the heart’s arteries without

requiring patients to go under the knife. These treatments are simple and inexpensive when compared to angioplasty or bypass surgery.

I know this is true because I prescribe them every day in my medical practice. Many of you may know me as the doctor who created the South Beach Diet, but I am an *accidental* diet doctor. For nearly 30 years, I have been a cardiologist—a specialist in disorders of the heart—and for more than 20 years, I’ve been an associate professor at the University of Miami Miller School of Medicine at Mount Sinai. Much of my medical career has been devoted to noninvasive cardiac imaging, the technology that allows us to get detailed pictures of the heart and coronary arteries from *outside* the body. If you have ever had a heart scan—either a computed tomography (CT) scan or an electron beam tomography (EBT) scan—you were probably given a *Calcium Score* as part of your test results. That measure of coronary calcium is often referred to as the *Agatston Score*, and the method for calcium screening is called the *Agatston Method*. Both come from my early work with my colleague Warren Janowitz, MD, developing a method of imaging plaque-clogged arteries that can be employed years before heart attack symptoms occur. In fact, the diagnosis and prevention of heart disease has been my focus and passion throughout my professional life.

A Passion for Prevention

Today, an unbelievable 66.5 percent of Americans are either overweight or obese, and 40 percent of those over the age of 40 are prediabetic. Nearly 21 million Americans actually have diabetes, and that number is growing daily. What’s more, we are exporting our epidemics of obesity, prediabetes, and diabetes to the rest of the world at an alarming rate. People who have these conditions, which are largely due to poor diet and lifestyle habits, are prime candidates for heart disease.

I developed the South Beach Diet to help my patients lose weight, improve their blood chemistries, and avoid becoming diabetic. It was a piece of the prevention puzzle and it worked. Thanks to the world-

wide success of my first book, I have been given the unique and wonderful opportunity to help change the way America eats. And while I am thrilled that millions of people are following the South Beach Diet, I have an even more ambitious agenda.

My goal in writing *The South Beach Heart Program* is to speed the pace of the cardiac prevention revolution currently taking place in this country.

I believe that one of the great failings in medical practice today is that cardiovascular disease is not diagnosed and treated in its earliest stages. Every time I hear that someone has died of a “sudden heart attack,” I can’t help but think that it shouldn’t have happened. A life could have been saved if the victim had just had the benefit of the latest diagnostic techniques and medical treatments.

The South Beach Heart Program is based on these cutting-edge tools, which are currently being used by prevention-oriented cardiologists and internists around the country. It shows you how to make the most of these advances, while improving your diet and lifestyle as well.

Heart Attacks Can Be Prevented

From the moment I graduated from medical school, I had a great interest in preventing heart disease, but I didn’t know how. That changed with the development of cholesterol-lowering drugs, new noninvasive coronary screening methods, advanced blood testing, and a much more accurate understanding of how heart attacks happen. Although I had been practicing a form of what I like to call “aggressive prevention” for years, it wasn’t until the late 1990s that I was able to take advantage of all these new strategies and implement the heart disease prevention program I use today.

Now, thankfully, I am hard-put to remember the last time I got a late-night call from the emergency room telling me that a patient of mine had suffered a heart attack. I don’t have 40-, 50-, or 60-year-olds in my practice suffering heart attacks or strokes. And among people whom I’ve treated over a period of time, I rarely find it necessary to refer them for invasive procedures such as angioplasty or bypass

surgery. I don't pick only heart-healthy patients, either. I treat primarily high-risk men and women with multiple risk factors and often a family history of heart disease. In fact, many of my patients have come to me after already suffering a heart attack at a young age. If they follow my program, they don't go on to have another.

As I've said, this is not just *my* experience. One of the best-kept secrets in medicine today is that many doctors who practice aggressive prevention have essentially stopped seeing heart attacks and strokes among their patients. When we meet at conferences and compare notes, it's common to hear "I've hardly had a heart attack in my practice this entire year" and "If hospitals had to rely on my referrals for surgery, they'd have very quiet operating rooms." We don't wait until our patients are crippled by chest pain or in the throes of a heart attack to act. At that late stage, an invasive approach is usually essential. Instead, we use the latest technology to identify people who are at high risk for a heart attack years before they experience any symptoms. We educate our patients about the right diet and exercise. And we prescribe cholesterol-lowering drugs and other medications that are proven to help prevent heart attacks and strokes.

We closely monitor our patients and our perseverance pays off. They stay healthy, happy, and nearly always heart attack free. Watching patients who had a parent or sibling die of heart disease before age 50 reach their sixties—and often well beyond—has brought me my greatest satisfaction as a physician. There is usually nothing routine about saving lives. Yet, in cardiology practices using aggressive prevention techniques, saving lives has become routine. My program works because it is a synthesis of what I have learned over the years from so many leaders in cardiology research and practice, and I owe them a great debt of gratitude. In the Foreword to this book, I have named those who have had the greatest influence on me.

Millions Are Missing Out

Despite all the advances and our proven success, I am frustrated that more Americans aren't getting the preventive care enjoyed by my

patients and the patients of other preventive physicians. In fact, heart disease is by far the number one killer in the United States, accounting for 1 in 5 deaths annually. And it's not just the stereotypical middle-aged or older man who falls victim. Heart disease is an equal-opportunity killer—approximately 500,000 women die of heart-related ailments each year. *And women, take note:* If you have a heart attack, you are twice as likely as a man is to die from it. I want you women readers to realize that what I say in this book is as relevant to you as it is to your husband, sons, father, and brothers.

Most deaths from heart disease result from a condition known as *atherosclerosis*, or “hardening” of the arteries, which occurs when artery walls are gradually filled by plaque, a toxic soup consisting mainly of cholesterol, inflammatory cells, and scar tissue. But all plaque isn't created equal. A heart attack occurs when a *soft, cholesterol-rich plaque* bursts, resulting in the formation of a blood clot that blocks the flow of blood to the heart. (The mechanism of most strokes is similar, except that it occurs in the arteries in or leading to the brain.)

Despite the fact that most heart attacks are preventable, there are about 865,000 new and recurrent heart attacks each year. And notwithstanding what preventive cardiologists are seeing every day, *the total number of invasive heart procedures is actually on the rise*. More than 1 million angioplasties are performed each year to open clogged arteries. In addition, some 467,000 coronary bypass operations are performed annually in the United States.

Patients are often told that having angioplasty or bypass surgery will prevent them from having a first or second heart attack. In the majority of cases, this simply is not true. While angioplasty (which involves opening a blockage by inflating a balloon at the end of a catheter) can be lifesaving when performed early in the course of a heart attack or when symptoms are severe, it is too often being done on patients with mild or no symptoms of heart disease. In other words, this invasive procedure is being performed on people who are otherwise leading normal lives and for whom opening a chronically blocked artery will do *nothing* to prevent a future heart attack. And while bypass surgery (which reroutes bloodflow around blockages in the coronary arteries using veins and/or arteries transplanted from other

parts of the body) can be lifesaving or life-extending in certain people, too many patients are undergoing this very serious procedure even though it will neither prolong their lives nor make them feel better.

Why Do So Many Doctors Practice Intervention?

So . . . the question is, if we preventive cardiologists are able to sharply reduce the incidence of heart attacks among our patients, and if we have virtually eliminated the need for invasive procedures such as cardiac surgery, why are hundreds of thousands of people still getting heart attacks, undergoing these procedures, and dying from heart disease? What is it that we are doing that other doctors are not? And more importantly, why aren't they doing it? The answers to these questions speak volumes about the current state of the practice of medicine.

First and foremost, cardiologists who practice aggressive prevention understand that the *real* cause of a heart attack is different from what is commonly believed. When I was in medical school in the 1970s, my classmates and I were taught what I call the “plumbing model” of heart disease. We learned that a heart attack results from a blockage in a major coronary artery caused by a gradual buildup of plaque, in much the same way that a clogged kitchen sink results from a gradual buildup of sludge in a drainpipe. The theory was that as an artery became more and more clogged with plaque, it would narrow to the point that bloodflow to the heart would be cut off.

About 20 years ago, cardiac researchers began to poke holes in the plumbing model. They had noticed that it was not the largest, so-called obstructive plaques seen on angiograms that caused most heart attacks. Instead, it was smaller plaques within the inner lining of the vessel walls. These plaques are like little pimples, but instead of being filled with pus, they are filled with cholesterol. When these cholesterol pimples pop, they cause tiny injuries to the vessel wall. To begin to heal the injury, a blood clot forms, just as it does when your skin is cut.

If the clot is large enough to block an artery, blood does not get to the portion of the heart muscle supplied by that artery, and that part of the heart muscle dies. This is a “heart attack”; if enough heart muscle is compromised, the heart cannot function, and heart failure or death results. But, as you will learn in Chapter 2, most of these plaque ruptures do not cause a heart attack or any symptoms at all.

So, if a procedure to push back or bypass the blockages isn’t the best treatment, what is? How do we deal with these cholesterol-filled soft plaques that can still grow, rupture, and cause heart muscle damage? The answer is found in the program I offer in Part 2, which uses diet, exercise, and medications to literally heal the vessel walls and return them to their natural, healthy state. In many ways, we are only as old as our blood vessels. With the proper techniques, I have seen that we can actually make our blood vessels younger.

I like to characterize the growing number of physicians using an aggressive prevention approach to heart disease as the “healers,” in contrast to the “plumbers,” who primarily use an interventional approach. The science and the future belong to the healers, but far too many patients (the great majority, in fact) are being treated according to the plumbing model. For example, it is estimated that only about 50 percent of high-risk heart patients who would benefit from taking a potentially lifesaving statin drug to lower their cholesterol are being prescribed one—and this is a conservative estimate. The fact that people aren’t being treated with the appropriate noninvasive medical therapies, whether that means a statin drug, a blood pressure medication, a heart-healthy diet, an exercise program, or smoking cessation, helps explain our persistently high rates of angioplasty and bypass surgery. This is costing us dearly from both a human and economic perspective.

It has been the rule rather than the exception that new medical approaches, even those that have solid scientific backing, are slow to be integrated into everyday practice. Today, if surgeons went from patient to patient without washing their hands or sanitizing their instruments, you would be appalled. Yet back in the mid-1800s, this was standard practice, and as a result, nearly half of all surgery patients died from postoperative infection. One would think that when, in the

1870s, renowned British physician Joseph Lister demonstrated that measures such as hand-washing, sterilizing surgical equipment, and cleaning wounds could reduce patient death rates dramatically, his fellow physicians would have readily adopted his lifesaving techniques. In fact, most physicians in his own country refused to believe him. Two decades would pass before aseptic surgery would become standard practice in his native England. I mention this because, when it comes to the willingness and speed of the medical community to embrace new approaches, things haven't changed all that much.

Follow the Money

There are strong economic incentives for physicians and hospitals to cling to the old way of doing things. The reimbursement policies of our health-care system clearly favor the plumbing approach. Insurance policies typically pay for procedures—not prevention. In many cases, this is a holdover from the days when there were few effective preventive strategies for heart disease or, for that matter, many other diseases. As a result, you don't see many hospitals featuring “preventive care units.” Instead they boast of their “cardiac care units,” designed for the invasive procedures that are vital sources of income. Doctors are being paid to treat disease, not to prevent it.

In contrast, insurers and health plans pay woefully little to primary-care doctors who practice preventive medicine. Physicians who sit down with their patients and take the time to educate them and work out individual treatment plans are reimbursed for a standard office visit whether they spend 5 minutes or much longer with a patient. According to the Agency for Healthcare Research and Quality, the average bypass surgery costs \$83,900 in doctor and hospital fees; the average angioplasty costs \$39,200. These two procedures alone bring \$50 billion into the health-care industry each year. A hospital administrator recently told me point-blank that if his hospital adopted a prevention policy similar to mine, the hospital would lose so much income that it would have to close its doors!

Breaking the Back of the Health-Care System

But consider for a moment the cost of *not* implementing an aggressive program to prevent heart disease. The fact that we are wasting so much money on treating late-stage heart disease has the potential to break the back (and the bank) of the health-care system now that baby boomers are aging. If you think that you're already paying too much for private health insurance, if you think your copayments are excessive, if you think your Medicare tax is too high, I'm afraid you're in for a big shock. Those premiums, copays, and taxes are going to keep rising.

Why? Because we Americans are getting fatter and suffering more diabetes than ever before. As I noted earlier, the causal link between diabetes, obesity, and heart disease is well known. In addition, some 36 million of us have already reached the age of 65 or older, the stage of life when the risk of heart attacks and strokes is the greatest. And as the baby boomers age, this high-risk population will swell to 70 million by 2030. There is no question that if we do not change things, the already high cost of health care will converge with the increased medical demands of the aging baby boomers to overwhelm the system.

I am a third-generation doctor. My father was an ophthalmologist, and my grandfather was first a pediatrician and later an ophthalmologist as well. This has given me a long-term perspective on how the economics of health care have hurt the doctor-patient relationship, which is the very thing that attracted many of us to the practice of medicine in the first place. Today, patients feel that their doctors don't listen, often don't care, and are always in a hurry. Doctors feel burdened by the massive amount of paperwork and oversight demanded by insurance companies, HMOs, and government-sponsored programs such as Medicare. No wonder it's virtually impossible for many of us to take the time we want with our patients. I believe that the situation is critical, but treatable. In my Afterword, I offer some thoughts on helping to restore the health of the health-care system.

Your Role as a Medical Consumer

Patient education and good communication are essential parts of my practice. I have found that patients who understand the reasons behind my recommendations are much more likely to follow them.

Knowing more about cardiovascular disease is essential if you are going to benefit from the revolution in cardiac care. Because of the constraints on our health-care system, you will need to play an active role in preserving your own health. In this book, you'll learn how.

If you have a healthy cardiovascular system, you will learn how to keep it that way for the rest of your life. If you have a family history of heart disease, you will learn how to keep from being a victim of your genes. If you have already suffered a heart attack or stroke or have undergone angioplasty or bypass surgery, you will learn how to dramatically reduce your risk of further events and a premature death.

Heart disease may be the number one killer in the United States, but it doesn't have to kill you.

Ted Feldman, MD

"When you are treating people aggressively with cholesterol-lowering medications . . . you don't get heart attacks. You've cured the disease."

The first angioplasty was performed in 1977 when I was still in medical school, and I remember thinking, "This is really cool. We're opening blocked arteries with balloons and little catheters. We can save lives. This is what I want to do." I became a very proud interventional cardiologist. I judged my entire self-worth as a person and a doctor by how many procedures I did every day. I had a thriving practice, but I only got to see people when the building was burning down. Which is ironic, because my dad was a fire chief in New York City and actually did run into burning buildings. But I also felt like I was spending my days putting out fires of a different sort.

Over time, things changed for me personally and so did the practice of cardiology. In the mid-1980s, my mom was diagnosed with very high cholesterol. Her total cholesterol was more than 300 and her triglycerides were more than 500. I knew that with numbers like that she was at very high risk of developing heart disease. And she probably would have, but she was one of the first patients put on a new experimental drug called a *statin*, which at the time was not widely available in the United States. Once she was on the drug, her numbers went way down. I thought taking the drug made a lot of sense. Trying to prevent plaque from building up seemed to be a better approach than what I was doing every day, which was removing it. It dawned on me that if we could get cholesterol levels low enough at some point, I wouldn't have to perform any procedures. I bought into the "lower is better" philosophy early on. When I started telling my patients and other physicians this, they thought I was crazy. Now it's the mantra of the day. And, by the way, it worked for my mom. She's in her eighties now, and her heart is fine.

I was too much of a coward to have my numbers checked until 1994, when I was 39. My numbers were bad—really, really bad. My total cholesterol was 276, my triglycerides were 565, my LDL ("bad") cholesterol was 190, and my HDL ("good") cholesterol was 27. I wasn't overweight or anything; I'm actually quite fit. But I inherited a genetic condition called type 2 familial heterozygous hypercholesterolemia from my parents. We all knew that cholesterol was bad, but we didn't have any overwhelming evidence that lowering cholesterol with statin drugs would actually save lives. So I didn't take one. Then the 4S study (the Scandinavian Simvastatin Survival Study) was presented at the American Heart Association's meeting in 1994. It provided clear evidence that the lower your cholesterol numbers are, the better. I immediately went on a statin drug and since then other drugs too, including niacin and Zetia (ezetimibe). And I started prescribing statins for my patients. My reasoning was, we now have these great drugs, so why not try to get people's cholesterol down as low as possible?

In 2000, I went in to see Arthur Agatston, a friend of mine, for a heart scan, and I found out that my Calcium Score was in the 75th percentile for my age. This meant that I was at higher risk than 75 percent of other men my age. I decided to go on the South Beach Diet, not to

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lose weight—I was 6 feet tall and 205 pounds then and still am—but because it's the most heart-healthy diet around. So now I take my medications, I work out, and I follow the South Beach Diet lifestyle.

This approach has worked. My numbers are great. My total cholesterol is 132, my LDL is 63, my HDL is 57, and my triglycerides are 51. When I went in for a follow-up heart scan, my condition was stable. I had not developed any new plaque. We had, in effect, stopped the progression of my heart disease in its tracks.

Today, that's exactly what I do in my practice, and it's made a huge difference for my patients. The best illustration I can give is that 20 years ago, I would see about five ST-elevation myocardial infarctions (MIs) a week. That's the most life-threatening type of heart attack you can have. I'm now in a practice with six cardiologists and an active database of 10,000 patients whom we've seen in the past 24 months. We don't see five ST-elevation MIs a year among our outpatients! We don't see them because when you are treating people aggressively with cholesterol-lowering medications and you bring LDL levels down to 70 mg/dL or less for very high risk people and 100 or less for those at moderately high risk, you don't get heart attacks. You've cured the disease for the most part. There are still people getting heart attacks and strokes, but those are people who aren't being treated medically.

Now that we've been treating people longer and longer with these drugs and moving their cholesterol levels lower and lower, I'm down to doing very few invasive procedures a week—my patients don't need them. Over the past 5 years, only one of my patients has had a heart attack. He was a cop on a bicycle chasing a robbery suspect in Miami, and in the process of apprehending the perpetrator, he had a heart attack and had to have emergency bypass surgery. He's doing fine, but that is literally the only heart attack I've seen in my practice in 5 years.

When I'm asked how my practice has changed, I like to say, "I've put myself out of the intervention business. I'm in the prevention business." I do a lot of clinical research, I publish in professional journals, and I've become a major advocate for prevention.

The truth is, lower is better. Our goal is to get cholesterol lower, blood pressure lower, blood sugar lower, and weight lower. As I often say, lower is better except for your bank account and your HDL. ■