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Do You Have the Heart to Start?

“I think my dad is having a heart attack.”

My pulse shot up. I started to sweat. My girlfriend shook me awake. I sat up and stared at her for a second, still trying to bring her words into focus as I remembered where I was. I looked around at the walls of our little cabin on the shores of Lake Okoboji in northwest Iowa, three days into a family vacation with my new girlfriend, her sisters, her mom, and her father, Jerry. Stacie and I had been dating for only four months.

We burst out of the cabin into the warm, sticky summer night and flew barefoot down the path towards Cabin 3G, which overlooks the grassy lawn at the lake's edge where we had been playing Frisbee just a few hours earlier. We rushed breathlessly into the bedroom and found Jerry lying on his back. Stacie's mother and

three older sisters were huddled around him in shock. Stacie's oldest sister had already begun mouth-to-mouth resuscitation. She turned and looked at me. I leaped onto the bed, placed my hands on his bare chest, and started to perform compressions. I will never forget the cool moistness of his skin, and the way his ribcage bent slightly under the pressure of my hands.

I was a third year medical student on summer vacation. We had recently taken a class in basic CPR as preparation for clinical rotations. Our instructor estimated that more than 95% of cardiac arrest victims die before reaching a hospital. And a victim's chances of survival are reduced by 10% for each minute that passes without an electric shock bringing the fibrillating heart back into normal rhythm.

We stayed in our positions for nearly an hour as we waited for the paramedics to arrive. I can't remember anyone speaking. All I heard was the strain of our own ragged breathing and the creaking of the bed underneath our combined weight. I then sat in the ambulance by Jerry's side as we raced toward the small local health center. I knew that he was already dead. Even so, I made him two promises that night in the final moments before we arrived at the emergency room.

Both promises changed my life. The first promise is why I wrote this book. As a third year medical student, I was unable to save my future father-in-law's life as his family watched him die. I think about him every single day. He is with me every time I make rounds in the hospital. He is with me each time I meet a new patient in clinic. He is with me whenever I deliver news, good or bad, to patients or their families. Because on that June night seventeen years ago, in the back of an ambulance racing through the streets of Lake Okoboji, Iowa, I promised Jerry that I would devote my career to preventing heart disease from tearing

other families apart, and helping survivors put their lives back together again.

Jerry was born in Cedar Rapids, Iowa to a union laborer and a mother who stayed at home to raise him and his five brothers. He served overseas in the Air Force before going back to school. He and his wife Carol raised four daughters together. He was active in his church and he was president of his local Optimist's Club. Jerry was diagnosed with coronary artery disease in his late forties. He underwent open-heart surgery, and his perspective was never the same. His life was transformed at a young age to an uncertain future of pillboxes, medication side effects, and a possible lifetime of angioplasties, stents, and even more surgery. He felt transformed from a seemingly healthy young man to a cardiac patient, literally overnight. Years after surgery, in the months leading up to our trip to Lake Okoboji, he was experiencing chest pains. But he had resolved never to go under the knife again.

You may know someone like Jerry. Or you might see some of him in yourself.

Heart disease can present itself silently with the gradual accumulation of risk factors like diabetes, high cholesterol, and hypertension, or it can appear suddenly and without warning – with symptoms like chest pains, shortness of breath or fatigue, or even a heart attack. And sometimes we are born with heart disease, only to learn about it through screenings or when symptoms strike.

While we do not always have the ability to change our own destiny, much of our overall heart disease risk is within our control. By addressing high blood pressure, abnormal cholesterol, diabetes, obesity, and tobacco, we can cut our risk of heart disease by 80%. Medications can help us along, but lifestyle changes are king. We know this because a few decades ago, medical

researchers started to study the health patterns and lifestyles of members of a small community in Framingham, Massachusetts. Their discoveries from studying multiple generations have identified the associations between heart disease and its various risk factors. You can calculate the heart disease risk for you or your loved ones online by going to <http://tools.cardiosource.org/ASCVD-Risk-Estimator/>. Take a second and try it. Cardiologists use calculators like these every day to help guide recommendations regarding lifestyle changes and even medical treatments.

But primary prevention is only part of the conversation. You may already know that despite our best efforts, one out of two men and one out of three women in the United States develop coronary artery disease. Heart disease is the number one cause of death, not only in developed countries, but also throughout the entire world. So in a very real sense, we are all at risk. Heart disease impacts almost everyone, once you consider your spouse, your parents and your kids.

Or maybe even you.

So our mission is to put this risk into perspective. In this book, I will share with you the evidence, insight, and a concrete sustainable plan that is research-proven to add years to your life. This is a book about exercise, and I guarantee that it will move you to run your best race, whatever it may be. Because in the words of *Chicago Tribune* columnist Mary Schmich (best known for her “Wear Sunscreen” essay), “the race is long and, in the end, it’s only with yourself.”

Who can benefit? Anyone. Everyone. Because prevention is for everyone, especially everyone with heart disease. Exercise is the treatment of choice. Our health care system treats people aggressively with medications, but lapses in sharing lifestyle interventions to help you improve your quality of life and perhaps

most importantly, your perspective. I believe that exercise is the least prescribed and most effective heart treatment – and until now, we have been leaving it off the table.

REALITY CHECK-UP

This program is not intended to make you lose weight. There are hundreds of books to help you with that. I even wrote one of them. But that's not our goal right now. You will find no recipes, no meal plans, and definitely no fads or fictions. There are many valuable approaches to a heart-healthier diet, from Mediterranean to vegan and everywhere in between, and there are excellent resources available that explore their relative merits. But first and foremost, the key feature of any healthy lifestyle change is sustainability. As a physician, my goal is to write effective prescriptions that are realistic to fill. Advice is not useful if you are unable to follow it. I want to promote a long-term change in your lifestyle, not break you down or yell at you. Our goal here is much greater, and I need you to feel good about yourself to get there.

This book is also not a substitute for your doctor's advice. I recommend that you speak with your doctor before performing any of the exercises detailed in the chapters that follow. And if you have heart disease, you need to discuss exercise specific to your medical history with your own health care team. To that end, this book is not meant to replace a hospital-based cardiac rehabilitation program. If your doctor prescribes it, do it. I will tell you why, and also give you the tools to continue it at home so that your results are long-term.

My hope is that this program will extend the partnership between you and your health care providers by helping make their exercise prescriptions more complete and concrete. For whatever

reason, physicians do not counsel their patients to exercise as much as we should. By sharing this resource with your own doctor and submitting the Heart to Start program for your doctor's approval, I am hoping to turn more physicians into exercise-prescribing "cardiactivists" by witnessing the impact of physical activity on their own patients' health.

PREVENTION IS FOR EVERYONE

We tend to focus our prevention efforts on people who view *themselves* as generally healthy, rather than also tailoring our message toward people who are at serious risk or who have already experienced heart disease. We preach to the healthy about how not to get sick – but the people who live with a diagnosis are overloaded with medications and memories of uncomfortable procedures rather than freed up to use their own feet and forks. Prevention should be for everyone. We cannot leave anyone out, especially since most of us will be impacted by heart disease in one form or another during our lives.

Years ago as a college student, I studied anthropology and learned about the concept of the "liminal state." The word liminal comes from the Latin word *limin*, which means "threshold" – it is commonly used in anthropology circles to describe the cultural practice of having young men or women leave their community or tribe to complete their transformation to adulthood. The liminal period is a time of transition.

As a father of two young boys, I am no stranger to transitions as I experience and observe periods of growth and embrace my kids as they change. Any parent would agree – this is one of the joys and fascinations of having children. But the liminal state of wellness as it shifts toward illness is another story. It seems like

the world is divided into two groups – the “healthy” and the “sick.” The healthy people enjoy a positive perspective and benefit from preventive care. They focus on lifestyle changes rather than on medications, surgeries, or other invasive procedures. The healthy group receives notices about screening colonoscopies, health fairs, Zumba classes, and low-calorie dessert recipes. They are counseled to be optimistic.

But people who have already been diagnosed with a medical condition or who have accumulated risk factors along the way are approached more tentatively – like outsiders to their own health care. Where is the inspiration for them? Where is the motivation to keep them moving forward? Sometimes I feel like our wellness movement is in denial that illness and suffering are even out there. But by the time we reach our forties, many of us have already crossed over into that “outsider” group in one form or another. It could be as seemingly harmless as a diagnosis of high blood pressure or as powerful as a heart attack. And I guarantee that everyone who has been prescribed a medication for the first time or who has received an abnormal test result is affected by it. It makes us feel different. It makes us feel older. And it makes us feel vulnerable.

Take it from my patient, Matt. Matt and I met because of our shared passions about bouncing back from heart disease. My passion is professional – but Matt’s is very personal. When he was in his thirties, Matt was diagnosed with an abnormal heart valve. Heart valves are like the doors and windows of the heart – now imagine if your front door wouldn’t open or close the way it should. Heart valve abnormalities are some of the most common forms of congenital heart disease, and many people born with one will require open-heart surgery to replace it at some point in their lives. But as Matt learned, sometimes the future is now.

MATT, 44 YEARS OLD

I always thought I was invincible. I have fallen off a motorcycle going eighty with no helmet and stood up until the ambulance arrived. I was a wrestler, a boxer. I was a bouncer to pay for my college education. I always thought nothing could stop me.

But as my wife and I hugged in tears as they wheeled me into the operating room, I realized this *could* stop me.

I lost vision one day in my right eye for ten minutes. I didn't even have a primary care doctor at the time. I quickly found one and had things checked out, and they determined I had a bicuspid aortic valve – which I was born with, but never knew until I lost my sight. The theory was that a piece of calcium broke off the valve, and hit the blood supply to my brain. They said that when I'm sixty or seventy I would need a new heart valve. When I heard that I figured I was good for another twenty years. I did four or five marathons after that. And I decided last year that I should go back for an annual physical (six years post vision loss) – just a few weeks after doing a twenty-mile trail run. She listened to my heart, and sent me back to the cardiologist.

“You need a new heart valve right now.”

I was at a work meeting when I received this news and my partner said I looked white as a ghost. Fear, anger, everything comes into play. You ask yourself, “Why me? How did I get stuck with a bad valve?” But everybody's got their own DNA. I exercise six days a week. I eat well. I have never smoked. I'm the youngest of six kids, single mom...I learned early on that you just have to pound through stuff. I have been doing that my whole life. I always pound through things.

Somebody told me after surgery, “Just walk.” So I walked.

And then I ran. Six weeks after surgery I ran a 5K. Six months post I ran a half marathon on my favorite trail. And on the one-year anniversary of my surgery, I'm going to run the same twenty-mile trail run I did before surgery.

Now that I'm through it, I think to myself sometimes...this *didn't* stop me.

And it doesn't need to stop you. Everyone's journey toward better health is profoundly personal and unique, but my underlying message to you is surprisingly simple and applies to nearly everyone. Physical activity is the single most important lifestyle intervention you will make to change your own life. And Matt will be the first to tell you that you don't need to do a twenty-mile trail run to do it, let alone an Ironman. But the stories that you will read from my own patients and from people like you will help you realize that anything is possible, no matter what your experience might have been so far. But it may take a change in perspective.

My goal is to change your perspective.

WHAT TO EXPECT

This is the story of exercise – as prevention and as *intervention* for people who are concerned about heart disease, and especially those who already have it. The most important part of that story is your own personal experience and what you can do today. So in the next chapter I will take you through an easy self-assessment, which will give you new insight about everything from your own level of musculoskeletal fitness to your actual risk of dying over

the next five years. And you won't even have to change into gym clothes.

And then we will find your aerobic exercise starting line by walking you through a six-minute fitness test that will guide you toward better health over the next ten years. We will use the results of both of these tests as benchmarks that you can return to later on so that you can quantify your own progress. We will then delve deeper into the link between exercise and heart disease by exploring the impact of fitness on your cardiac risk factors. Learning more about your own risk is the best way to overcome it.

Next we will take the diet industry to task where it comes to using exercise as a health tool. Diet books as well as the media have done a poor job of defining the appropriate role of exercise and activity in a healthy life. They create tension, false expectations, and mislead us when we are most vulnerable by distorting the truth and presenting extremes as commonplace. I will share some of my own experiences with exercise that have surprised me, and will also address concerns that there can indeed be too much of a good thing.

Prepare to be moved. I have asked my patients as well as others who have completed our cardiac rehabilitation program and 5K training program to share their boots-on-the-ground perspectives on using exercise and activity to reduce their risk, recover from heart disease, rebuild after surgery, and restore their faith. Their generous statements are interspersed throughout the text, and they will teach you not only how they crossed their own personal finish lines, but also how they got the heart to start in the first place.

The final chapters are action-packed. We will give a reboot to traditional cardiac rehabilitation, explore the surprising history of exercise and activity recommendations for people with

heart disease, and provide useful evidence to support the benefit of structured exercise programs as treatments as well as preventive measures. And what if you don't live near a hospital with a cardiac rehabilitation program? No problem. Home-based exercise works just as well, and I'll tell you why.

And then I'll show you how – with exercise prescriptions personalized to your specific level of fitness. They combine aerobic (cardiorespiratory) and resistance (musculoskeletal) routines to help you live your heart-healthiest life. They will also challenge you to incorporate more activity into your everyday living. And after just eight weeks, you will begin to recognize how far you have already come. And then you will move even further. At least five kilometers further, because I'm going to train you to complete a 5K race. Yes. You.

PLAY SMART

Just one last thing. Thank you. Because by reading this book and taking these physical and figurative steps to improve your health, you are also paying forward good health to others. When it comes to prevention, you can never start too early. That is why our team at the Providence Heart and Vascular Institute launched Play Smart Youth Heart Screenings a few years ago. Check us out at www.playsmartgetscreened.org. Our goal is to identify asymptomatic heart conditions in young people to prevent sudden cardiac arrest and to provide opportunities for treatment to ultimately keep kids safe and active. Our screening program is quick and painless. It is also free. In addition to checking blood pressure, we perform a simple cardiac test called an electrocardiogram. You may have had one yourself. Electrocardiograms can identify heart conditions in young people that can put them at risk on the

basketball court, the football field, and in the classroom – or may cause them trouble later in life. We have screened thousands of kids and have identified dozens with heart conditions.

SPENCER, 17 YEARS OLD

It is said that life can change in an instant. But until you are faced with that, you never realize how true it is. One evening during a basketball practice in my high school gym, I began to feel dizzy as I ran down the court. I called a time-out and put my hands on my knees...and later woke up confused and scared in a hospital. I had suffered a sudden cardiac arrest.

Without warning, my heart stopped, and I was clinically dead for almost eight minutes before being rescued by an automated external defibrillator. I was a sixteen-year-old multi-sport athlete fighting for my life, but so grateful to those who helped me survive, and so happy to have the chance to see my family again.

But would I be able to play sports again? Would I have a normal, healthy life? Could this happen to me again? As my family and I worked through months of testing to determine what caused my sudden cardiac arrest, it was very possible that I could never be active again. The thought of that was hard to understand or accept. But after working with my doctors, I am lucky enough to be able to play sports. Although I have limitations, I am fortunate to have a plan that allows me to be active and compete. That active spirit has helped me to heal, and offered me a new platform for personal growth.

You shouldn't have to face your own mortality at such a young age. When you are sixteen years old, your identity is more about what you do. Because of my experience, my faith, my family, my heroes, and my friends, I have learned that my

identity is more about who I am, how I believe, and how I act – and not what sports I play.

There isn't a day that goes by that I don't think about what happened to me, or touch that amazing little bump under my skin where my implanted defibrillator sits. As scary as it sometimes still is, I know that I am blessed. I'm one of the few lucky ones. I hope that by sharing my own story of survival, I can motivate others to accept that life, even though perhaps different from before, can be happy, healthy, and active!

And that is where you come in. Our screening program is and will always be free for our kids and their families, thanks to you. One hundred percent of your book purchase will go directly to support Play Smart Youth Heart Screenings. Every single penny will help screen a child. By reading this book and improving your own health through exercise, you will help make exercise safer for kids in our communities. You may even save a life. And maybe your own in the process. We thank you for your support, and your family and friends thank you for investing in your own health. We all have a stake in this game.

I told you earlier that I made two promises to Jerry in the back of the ambulance on that hot summer night in Lake Okoboji. You are about to experience the first promise. The Heart to Start program will turn your setbacks into opportunities. You will give your diagnosis a direction by creating movement and momentum in the rest of your life. You will be inspired to move toward better health for you and your family.

But the second promise will have to wait. Stick with me and I'll tell you before we're done.

