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LIVE LONG.**

A 6-week program
for lifelong
strength and
vitality

UNBREAKABLE

A WOMAN'S GUIDE
TO AGING WITH POWER

VONDA WRIGHT, MD

ORTHOPEDIC SURGEON AND LONGEVITY SPECIALIST

BY VONDA WRIGHT, MD

Unbreakable

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To the extraordinary women who have inspired me throughout my life and career—your strength and unwavering resilience fuel my passion for changing the way we age. Thank you for your trust, your courage, and your belief in a world where age is not a barrier but a badge of honor. Together, we rewrite the narrative of what it means to age with power. This book is for you. It is my honor to care for you.

Dr. Vonda Wright

INTRODUCTION

We Are Not the Victims of the Passage of Time

I felt like I was stuck in time, I didn't know how each day turned into years, and I felt lost and didn't know how to get back to a place I recognized.

—EVA

I've known Eva since we were in our thirties. We used to talk daily, but over the years that regular contact has waned as career and family obligations have taken up more and more of our time. But what I remember of Eva is that she is brilliant, funny, and warm, and that she lights up every room she walks into with her energy and laughter. She is the embodiment of her name, which means “full of life”!

A few years ago, we reconnected after several years of being out of touch. I could immediately sense how tired she was, how the time had bruised her vitality and dimmed her light. She explained that she had gained unwanted weight, especially around her once hourglass middle, and that her heaviness left her winded when simply going up stairs. She described the days of hurried minutes turning into years and wondering where all the time went and what had happened to her along the way. She also spoke of how disturbing it was to be perceived as “past her prime” and in a menopausal body that made her feel invisible to society. My vibrant, full-of-life friend seemed to be lost and didn't know how to find her way back to a life beyond merely surviving.

I understood what she described. Not too long ago I too was miserably menopausal, but I've since returned to my roots of being a scholar of musculoskeletal aging and longevity to reclaim and build what now feels like an unbreakable life. People chuckle or look at me skeptically when I say that these can be the best years of our lives. Eva initially laughed at my excitement over living in midlife too; it's hard to imagine thriving during this time given the many media messages and societal norms that tell us women our best days are behind us. But I shared with Eva all the ways I had helped myself and the women I work with reclaim control physically and emotionally through the new science of aging and how I had reframed aging from a detriment to a superpower. Instead of winding down, I explained, I now have a new lease on life; I've reset my clock.

Eva was curious about the possibility of feeling like herself again, even if I could sense her doubts. I reminded her that she had done hard things before, including raising her two kids largely on her own, building an amazing career, and now stepping into the caregiving role for her parents. She conceded as much and put her trust in me. Together we laid out a plan to help her feel like herself again. That plan was much like the one I will lay out for you in these pages.

I'm a doctor who believes a patient has the right and the need to know where they stand and why they must do the hard work. Eva deserved the same. I explained how different lifestyle choices could defuse what scientists have come to understand as time bombs of aging, and she took action to build what we also now understand to be shields of protection for the rest of her life. Most of what Eva had tried before were quick fixes, anti-aging products, short-term diets, and workouts based on the latest fad, not science. She was willing to try again, but the fear of failure was real. Was the hope of transforming her health realistic?

As she went through this journey, Eva had great days; she also had dog days, when she was just grinding out the work, and there were setbacks when she wondered if she would ever see progress. But she stuck with our plan, and she did see that progress. Of course, Eva has not returned to her thirty-year-old self, but she *has* built a new, authentic midlife and is directing the energy and light she has always had toward being physically and emotionally resilient in her next forty years. She is strong. She is aging with power.

Getting Beyond “Fine”

When someone asks you how you’re doing, how often do you just say “Fine”? Sometimes, of course, that’s shorthand for *I don’t have time to get into it*, or it’s a response that guards your privacy. But maybe you’re like the thousands of women I’ve talked to who say “Fine” and mean that they are just okay—not amazing, not optimal, and not how they remember feeling in a younger body. “Fine” means “passable,” and—ironically—it’s exhausting.

The foundational steps in becoming Unbreakable are to assess where you are (which is often “fine”) and move through a process to optimize your health, as I will explain in the progression of Parts 1 through 3 of this book. Understand, though, that I do not mean merely living in the absence of disease (which we’ll talk about in a bit) but truly investing the time and energy to transform from the dullness of “fine” to the physical and mental vibrance of Unbreakable. You are worth it.

I believe, in general, that our bodies hold the capacity for our own personal versions of optimized health, but our lifestyle choices and circumstances chip away at the possibilities until we are “fine” or even diseased. This decline is only amplified by the biological time bombs of aging you will learn about in Chapter 1. Let’s use this knowledge as a call to action to reclaim your capacity to live in optimal health and even peak performance, not to mention finally to feel like yourself again.

Trying to reclaim your vitality isn’t an anti-aging pursuit; it’s pro-health. Still, too often we women frame our efforts to get healthy as ways to stop the proverbial clock. I believe this is because midlife for us can be associated with profound emotional pain. We were raised in an era in which women were most valued for their reproductive capability, and sometimes when we’re done with bearing and rearing children, we can feel irrelevant and almost give up on ourselves. But the same internal energy that can bring life into this world, that can nurture new ideas and take chances, can be channeled beyond children (whether or not you have any of your own!). The men I rub elbows with in this bookstore category are all about “longevity,” because they see the value and potential in living longer and aging with power. We women can too.

The stories of the women I serve, many of which you will hear in this book, embody what I have always believed to be the human potential. Even in the earliest days in my career I questioned the common societal myth that aging is an inevitable decline from the vitality of youth down a slippery slope to frailty. I never believed it. Maybe because from my earliest memories I have seen my father—an endurance runner even today, at age eighty-five—defy time across his healthspan, or perhaps because through my work with athletes competing in their seventies and eighties, I have seen what it looks like to live out our bodies' true capacity.

Too often, we see these people as anomalies instead of as role models for our own futures. We accept that our future—especially as aging women—will be far bleaker. Unfortunately, as an orthopedic surgeon, I see this bleaker future every day in my practice. I find myself standing at the bedside of a frail woman who is broken—literally. Perhaps she's fallen and broken a bone, but sometimes her bones have become so fragile that her hip has fractured while she's simply standing in her kitchen tending to the dishes, sending her to the ground.

As I meet her for the first time in the emergency department, I'm thinking about her fracture and how I'm going to help put her back together. But I am also thinking about her as a woman. How did she break? How long has she been incontinent? Will her heart be strong enough to withstand the surgery we are about to discuss? And has she started down the slippery slope of immobility that can lead to memory problems?

The truth is, the frail woman crumpled up in front of me on the hospital bed in her wrinkled blue hospital gown, ravaged by the pain of her broken bone, and at risk of so much more disability, is not a picture of someone she would have envisioned becoming. She tells me so herself.

As I'm standing there at the bedside of this broken woman with her daughters (it is usually the daughters at the bedside) discussing the upcoming surgery, how she will recover, and where she will live after surgery, her thoughts often wander to the question "How did I get like this?" My patients often look at me and the nurses and tell us how lucky we are to be young, that they were once like us, and not to get old, ending with "This isn't how I want people to remember me."

I'm writing this book so you can choose which future you want and so you, as I have, can turn your back on the outdated narrative society—including many doctors!—has created about "normal aging." To be blunt, as

women, right now, we spend the last twenty—or as I’ve seen, sometimes thirty—years of our lives dying. And it’s time to say *enough*.

I contend that although we certainly undergo some life stage changes, what we call “normal aging” is actually “normal aging for stressed-out, undernourished people who are not intentionally building muscle, not attending to their hormonal health, and not prioritizing mobility.”

Aging to frailty only seems “normal” because modern life has made it so and threatens to rob us of our vitality. It’s why most of us spend a quarter of our lives deteriorating from the chronic diseases that encompass what we now understand as sedentary death syndrome (we’ll talk all about the lethality of this in the chapters to come).

As women, we are hit particularly hard. Medical research and longevity science have been so centered on males that our unique needs and challenges, which include those that come during the menopause transition, have been largely ignored, leaving us vulnerable to that grim future I just described.

When you consider that 70 percent of all people live sedentary (and often, I’ll add, insufficiently nourished) adulthoods, you realize that aging into weakness has less to do with our biological capacity and more to do with how we live out our years. Indeed, the biological pillars of aging are modifiable! We can defuse those ticking time bombs. We can age with power. We can maintain our natural armor—our bones, muscles, healthy cells, and very DNA—against premature damage and deterioration. And it is *never too late* to start.

Your Story Is Also My Story

Now for a confession. Eva’s story, my clients’ stories, maybe your story, is also my story. It’s a story of unintentional neglect. Perhaps, like you, I got so busy with my day-to-day caretaking of others and my career that I simply put building my own infrastructure of health on the back burner. Also perhaps like you, I was so laser focused on today that I got sloppy about seeing the future. To wit: My thirties went by in a blur as I was

finishing medical school and a seven-year surgical residency, and then building a career in orthopedic research and surgery. I prided myself on pulling forty-hour shifts and eating whatever worked best for single-fisted consumption as I raced from task to task.

My early and mid-forties were amazing. Now out of school and established in my career, I was able to get into the best shape of my life with 19 percent body fat; I was training for triathlons, and I ran a PR (personal best record) 10K in Central Park at 7:44 per mile. Finally, after eleven years of medical and orthopedic surgery training, I had moved from New York City to Pittsburgh for a dream job at one of the best orthopedic surgery departments in the country, where I also served as the head team doctor for a Division I football team. I married the love of my life—an all-around terrific person, father, and two-time NHL Stanley Cup champion—and created an amazing blended family. I also, seemingly miraculously, had a daughter of my own—Isabella—at a time in my life when pregnancy is termed “geriatric.”

I felt on top of the world...until I turned forty-seven, when suddenly—no exaggeration—I thought I was going to die. My whole body hurt. My period was a flooding river. I wasn’t sleeping well, and when I did sleep, I often woke in a hot sweat with a raging heart rate. My once sharp brain, which had always been capable of absorbing deep detail and memorizing books of information, was now shrouded in fog. I felt like I was losing my mind. I made an appointment with a cardiology colleague to get a heart stress test. I was assured I was okay—definitely not dying—but something had changed and I wasn’t mollified.

The most visible change was that I now had 34 percent body fat. My waist disappeared, and I had back fat hanging out of my bra. Worse, I was suddenly weaker, and my body hurt all over to the point I could barely get out of bed in the morning. As a female surgeon in a very macho field, I had always prided myself on being able to do the heavy lifting (literally) involved in orthopedic surgery by myself. I distinctly remember the day when I attempted to move a three-hundred-pound patient on the bed, like I had always done, and felt weak. It was a sentinel event for me and sent me searching for answers.

I came to realize I was in perimenopause, which at that time nobody, even doctors, talked about. After my estrogen walked out the door, a cascade of metabolic reactions left me staring at a stranger in the mirror.

I didn't think aging would happen to me!

I know how it sounds. But somehow, I think because I had always been strong and valued my health, and even though my entire research career had investigated musculoskeletal aging, I never thought “aging” would happen to me (and boy I know I’m not alone here...). I had conducted so many research studies pointing the way to living healthy, vital, active, and joyful, and I could not envision a future of frailty for myself. And yet...there I was in the mirror staring back at someone I did not recognize and feeling like a stranger in my own skin.

As I dug further into the science—including much of my own!—I could clearly see where midlife and menopause had collided, with me in the middle, damaging my health, strength, and confidence right down to the cellular and molecular level. The biological shield of my youth, which I had taken for granted and unknowingly worn down in my twenties and thirties, was giving way and falling off in chunks. This left me vulnerable to the damaging impact of “normal” aging—all those biological processes that promote deterioration and the progression of chronic disease and disability happening over time when we are stressed out, sedentary for long stretches, and improperly nourished. I had been working so hard and was so confident in the armor of my youth, I didn’t see the damage being done until it barreled me over and forced me to reckon with it.

I sorted out my hormonal health with hormone replacement therapy, which helped, but didn’t magically make everything better. That’s when I realized that menopause was a much-needed wake-up call, but there were more than hormonal factors at work. I think this is an especially important message for midlife women now that menopause is featured so prominently in the mainstream. It’s critical that menopause is finally being recognized. Now we need to understand, *it’s not the whole story, and while hormone replacement therapy can help, we need to take action to protect our future selves.*

Your Road Map to What’s Next

We can let time pass without knowledge of or attention to the real and unrelenting effects of low hormones and the ticking time bombs of cellular aging, or we can choose to build an Unbreakable infrastructure. If you're reading this book, you've opted for the latter. Welcome!

First, it's important to understand those biological time bombs of "normal aging" and help you maintain and even fortify your shields against them. You'll find this vital context information in Chapters 1 and 2 respectively.

It's also important for you to take a hard look at your mindset, your attitude about your capabilities, and your commitment to a future different than the one you are on the path to today. In Chapter 3 I offer you ways to make this emotional assessment and steps to help you reframe and shift your outlook.

Chapter 4 lays out how I'll ask you to make a different kind of assessment: your physical state. I'll walk you through the simple at-home ways you can take stock of the efficiency with which your body may or may not currently be functioning. I have developed a research-based Unbreakable score, which converts the top predictors of health and longevity into a quantifiable measure that can be retested after you build your Unbreakable lifestyle. I also suggest and explain the important biomarkers, or blood tests, that can help you understand your current health state. With a clear idea of where your mind and body are *today*—your baseline—you'll be ready to start on the path to that different future.

Part 2 gets you on your way. It covers how I prescribe and design exercise programs. It's what I refer to as the FACE-ing your future protocol. It's the regimen I undertook myself and over the last twenty years have coached thousands of women to do for themselves as well. Expressed as an acronym for the four components of that journey, FACE is a stepwise approach that addresses your flexibility and mobility (F), your aerobic capacity (A), your ability to carry a load (C), and your equilibrium and footspeed (E). I will offer you specific exercise sets and sequences that, over time, you can make part of your daily and weekly routines. So that you have all you need at hand for this important work, Appendix 1 puts it all together in one place.

In focusing on and bolstering our health in these four critical areas, we are—of course—really working on our muscular and skeletal longevity. Muscle is the engine that drives your healthspan. Though we tend to think

of it as a mechanical workhorse, we now know muscle is so much more. Your skeletal muscle is a literal longevity factory. It churns out hormones, proteins, and other chemicals that build and protect your brain, heart, and other organs. It helps keep your bones strong. It helps manage your blood sugar and metabolic health. When it wanes, your health sputters and starts to backslide. Skeletal muscle is the very foundation of our shield against those time bombs of aging. Mobility—and by that I mean literal mobility, the ability to move your body with strength and endurance—equals vitality.

While muscle is our primary armor and the master of metabolism, bone is the scaffolding that supports that armor and is the master of biochemical communication. As you'll learn, though we think of bones as calcified rods that hold us up, our skeleton is actually an endocrine organ! Our bones produce proteins that help to control brain function by stimulating the production of neurotransmitters. They work with our pancreas, muscle, and fat tissue to regulate glucose metabolism and even produce a hormone that is a satiety factor, traveling to the brain and telling your body it is full after a meal. That's all on top of serving as a storehouse of minerals (like the electrolyte calcium), being the incubator of our blood cells, and playing a pivotal role in gut microbiome health. Of course, they provide structural strength. Without strong, healthy bone, our muscle would be just a pile of twitching tissue. Instead, bones and muscle work collaboratively for locomotion, communication, and metabolism; they are one ecosystem.

While specific kinds of exercise are essential to strengthen the engine that is our musculoskeletal system, our diets are *literally* how we fuel that engine—they provide Unbreakable nourishment to every cell in our body. That's why reading and paying attention to Chapter 10 is nonnegotiable! There I'll explain the basics of meal planning based on macronutrients (protein, carbohydrate, fat) and how to design an anti-inflammatory diet. Appendix 2 provides sample recipes specifically designed to support your Unbreakable lifestyle.

The last component of the FACE program isn't actually part of the pithy acronym, but it may be important for you anyway: working with a trusted clinician to assess and correct your hormonal health. After all, as estrogen production starts to wane during the menopause transition, it takes some of your armor with it. On the basis of my review of the literature that is emerging on hormone therapy for women in menopause and my assessment of the signals I see, I believe that hormone replacement therapy provides

valuable protection that fortifies the biological shield. It's not a silver bullet, but it's well worth consideration. I also recognize that hormone therapy is not for everyone, so I'm here to help with nonhormonal reinforcements as well.

I mentioned that this is the journey I undertook myself. Indeed, through this blend of optimizing my hormone health; performing a simple, targeted strength and cardio exercise routine; and eating a diet that promotes muscle building and reduces inflammatory damage, I found great success. I recomposed my body by losing 12 percent body fat and gaining eight pounds of muscle; I lost eighteen pounds overall. Most important, I felt strong, my brain was clear, and I gained a certain swagger from my accomplishment. I felt *Unbreakable*.

Going the Extra Mile

Parts 1 and 2 give you the foundation for building an Unbreakable lifestyle and moving into optimal health. As you invest in your health daily and feel the profound changes you are capable of, I believe that you will grow in confidence and want to do more. Part 3 takes things to another level.

In my career as an orthopedic sports surgeon, my role is to help athletes and active people move beyond optimized health into peak performance in all aspects of their lives, whether at home or at work. Once you feel that you have optimized your health and are invigorated, you will want to push toward your own version of peak mental and physical performance. That is what Part 3 is about—feeling and looking even more Unbreakable.

Muscle health is still center stage here, of course, but I will also help you to start expanding the supporting players in your longevity and healthspan. In Part 3 I'll discuss how to home in on what's called our VO_2 max, a measure of the maximum amount of oxygen your body can use during exercise, which is considered the primary hallmark of performance and longevity. I also augment your exercise routines with higher-velocity training (which, before you ask, studies show you can—and maybe should—do at any age).

I will help you dig deeper into how your body works. Are you getting the optimum amounts of micronutrients? Is your body absorbing them? What is the state of your cellular health, and is your body able to repair itself and take out the cellular trash? Or are you piling up waste and having “zombie cells” running around? Do you need to reduce what longevity researchers call cellular senescence (one of those time bombs), when cells stop dividing and growing as nature intends? You will learn how to address all of these factors and then some.

All physical change requires the leadership and support of the brain. That is why, in Chapter 12, I do a deeper dive into mental resilience and how you can build the Three Cs of hardiness—Commitment, Control, and Challenge—in much the same way you build the muscles and bones of your body.

Finally, I’ll explore the present and future of living longer Unbreakable lives in what I call precision longevity. New technologies are growing at an exponential rate. They allow us to measure not only the rate of aging and biological clocks but also how each body biome, such as the microbiome of the gut, works individually and collaboratively to optimize not only digestion but also hormonal and mental health. I cover emerging technologies and a simple supplement strategy that is designed to further fortify your armor and make the rest of your years—until the ripe old age of ninety-seven is my personal goal—the best of your years.

Though I see it all too frequently, I have never believed that we are destined to slide down a slippery slope to frailty, even when we get busy and take our bodies for granted and they eventually demand our attention with pain and disease. I believe we can harness the new science of aging, increase our understanding of midlife hormone fluctuations, and design precision lifestyle interventions that build our infrastructure down to the cellular level. I believe we can live the life we envision. I want to be Unbreakable for life. I want you to be Unbreakable for life.

Now turn the page and get started.