

# The MidLife Health Guide for Men



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## **The MidLife Health Guide for Men**

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In memory of Dad

*If you want to beat Mother Nature, you must learn to play  
her game.*

—Chris G. Rao, MD

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## Preface

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“Do you see anything wrong with the print on this newspaper?” I asked my wife. “Well, are you sure? It’s all blurry!” After rushing off to an ophthalmologist friend, I learned the coldhearted truth I was denying all along. Having finished examining this forty-four-year-old, he casually said, “Chris, you’re just simply getting old and need reading glasses.” Wow, all in one day. Wham! Nowadays I have specs all around the house, yet I can never seem to find them. “I need my OPGs!” I often call out. (Around our house, that means old people’s glasses.) I used to joke, “Maybe I lost my hair ... but at least, I still have great vision.” Well, there goes that quip. A few weeks before that, I was getting into some heavy yard work. (Yes, doctors do that occasionally.) Working at the breakneck pace I’ve kept since my youth, I found myself huffing and puffing like an old man. I had to then lie down to keep from almost passing out. When getting dressed to go out later that night, I had to shuffle through all my pants to find the few that still fit—size thirty-four. Slowly but surely, middle age was wrapping around me like a kudzu vine alongside an old blacktopped Mississippi highway.

Facing the truth of getting older was even scarier. This can’t be happening to me. As a doctor, I’m constantly reminded of the ravages Father Time deals the elderly every day—pneumonia, osteoporosis, stroke, dementia, and so on. It’s definitely better to be on the outside looking in as opposed to being on the inside looking out. All these thoughts and nuances had been working on me for a while. I’ve always tried to practice what I preach to my patients. I always ate right and got some exercise but had fell off the health wagon the past few years.

In medical school only ten years before, I had jogged my way to first place for my age group in a 5 km run. Achieving many awards in residency, I worked diligently to integrate many of the modern technologies into health-care delivery. I got invited to join the think tank in helping to design the Disney Institute and Celebration Health in Orlando, Florida. Though it may seem ironic to some, I’ve always stressed how the average person can stay healthy without having to visit doctors. Pills were never my first, or only, recommendation. My focus has always been on preventing them from getting sick in the first place. Later, as a clinical professor at Tulane and Louisiana State University medical centers, I enjoyed passing on this knowledge to many eager medical students and stressing the importance of being a healthy role model to their patients. Soon, this expo-

sure, along with my entertainment background, got me regularly writing health-related editorials.

One night, I woke up with this vision of one place where people could go and get the best of both worlds—medical and complementary methods. Since patients would now be on one track to better health, I aptly named the facility Unison Pro-Youth Medical Institute. After all, I'm not really into *antiaging*. That would be like wanting people to die early, right? Instead, I want to help them be physiologically younger and healthier—thus the term *pro-youth*. Eventually, I landed my own radio show, *In the Know with Dr. Rao!* It was quite a success; however, the coverage was only about ten square miles. After much coaxing from others, I felt the desire to write about all I've learned and to spread this mantra to many more.

So why write a book about middle age? This period of a man's life presents what I see as a *window of opportunity*. It's unique in its changes and many challenges. It's a time when most men are at the top of their game, yet early disease may be progressing undetected. Some friends or siblings in their forties or fifties may have already suffered a bout with a severe illness. With a more proactive, preventative approach to health, this need not happen to you. Look at things this way. If you only had one car to drive your whole life, wouldn't you take extra special care of it? Similarly, midlife is a time when our original genetic warranty has expired. We need to protect what's left. As the famous comedian George Burns wisely commented when he was quite elderly, "If I knew I was going to live this long, I would've taken better care of myself!"

Granted, there's been a lot of focus in the past on all the other periods of one's life, i.e., pediatrics or geriatrics; however middle age has oddly been ignored. Yet it's our health in middle age that mostly determines how well we do in our golden years. Furthermore, we baby boomers desire more *quality* of life than just the *quantity* of life our parents wished. Despite modern medicine improving on the latter, there's, unfortunately, more morbidity and suffering at life's end.

Our generation wants to be more proactive and revolutionary in this regard too. We demand a more integrative and functional approach—one that focuses on prevention and more natural means. We refuse to suffer the ills of our parents or take eight to twelve medications. We don't want to become a mere victim of multiple surgical procedures and specialists. It's really what you and your doctor don't know that *can* hurt you!

Most physicians, including myself, spend the majority of our careers treating the very sick, nearly dead, or the aged with advanced multiple diseases. Having my choice of any specialty, I chose my original passion of becoming a true doctor, a family physician. Preventative, holistic medicine with established long-term patient relationships are what I enjoy most. Unfortunately, today's insurance environment doesn't correlate with that. Less than five cents of our national health-care dollar is spent on prevention. Now, patients often see a "health-care provider" in a six-minute time slot. Given all the confusion going on, I felt the need to provide middle-aged men with the resources and information to take the wheel and make their lifetime vehicle shine, go fast, and last a long time. Now is the time, guys.

Today, we have the ability to retain a healthy forty-year-old functioning level well into his eighties! Many baby boomers are expected to live until 120! As promising as this may seem for us proactive ones, I am very disheartened by the improper lifestyle and subsequent poor health of our children. One needs to only look at the young to see our future national health-care costs. The contemporary medical approach reacts with multiple drugs and surgical procedures that merely treat the *symptoms* of aging. This Band-Aid approach results in having just older, sicker people. Instead, there needs to be a better focus on disease *prevention*.

The *Midlife Health Guide for Men* starts off explaining why and how we age in the first place. This is followed by the current and future research being done to determine ways to slow down the heavy hands of time. Next, the basics are covered concerning diet and exercise, the proven ways to lower insulin and cortisol—the aging hormones. Helpful dietary tips and various fad diets are reviewed for their benefits and shortcomings. The ways to start a comprehensive, effective exercise program are also included. As a method to complement these, various supplements and important fluid intake are reviewed as well as recommendations on how to survive today's toxic environment.

There's a lot of controversy concerning testosterone and human growth hormone (HGH) replacement in men. Are these magical, youthful elixirs? When is their use appropriate and safe? Historical points, scientific literature, and practical guidelines are given concerning *all* these men's hormones including melatonin, thyroid, and cortisol. Additionally, insights into dealing with midlife stress and getting the proper rest are presented. Lastly, special concerns for the midlife male are covered, including prostate health, erectile dysfunction, hair loss, mood disorders, chronic pain, and more.

This book and its upcoming sister book, *The Midlife Health Guide for Women* explain this much-needed paradigm shift in health care. Introductions, explanations, and resources will be given for further reading on discussing these novel modalities. It is my hope this book will provide you with the tools necessary to be proactive and responsible for your own health. As I say, “The best health insurance is to be healthy in the first place!” You are the main player and should be the one most in charge of your own health. As your most important asset, you’ll only get out of it what you put into it. This book will get you on the proper path to arrive at optimal health.

**MAG** Let me introduce you to MAG, Middle-Aged Guy. As a teen, he lettered in football and track. He's the average midlifer I see in the office. Now forty-five, he's starting to feel the early symptoms of aging. MAG has gained that middle-age spread and lost some of the muscle strength and endurance he used to crow about. Being in sales, he feels stressed at work, often brings work home, and feels challenged by his younger coworkers. MAG has two young kids and a wife. He often feels guilty about the time he spends away from his children. As far as the marriage ... well, let's say it's more of a convenience now. There's not much passion or lovemaking, a far cry from when they first began chirping as two lovebirds. He wouldn't be surprised one day if she said it was all over. At times, he finds it hard to control his emotions—sometimes crying and sometimes yelling and cussing. MAG sleeps poorly and drinks more than he feels he should. He's been to his family doctor and got some baseline lab work and a full exam. The nurse practitioner told him all his labs were great, except he may want to lose weight, as he did have mildly elevated cholesterol and sugar. MAG told her he didn't feel great, though. After getting a rectal, he was told he could be referred to a psychiatrist or started on some medications.

MAG wanted to try natural things first. He's heard some friends talking about herbs that may be safer. Some coworkers that hang out at the gym said he should get on some testosterone and supplements. MAG, having good sense, steered away from that and tried things the old-fashioned way; he got back to dieting and exercising. He's tried this for a few weeks and finds he does feel better but only lost a few pounds—nothing near where he needs to get. MAG feels like giving up. He heard of Dr. Rao and comes in for a consultation. At the end of each chapter, we'll give MAG the bottom-line advice he has to follow. Do you know anyone like MAG? These tips offer simple ways to stay healthier and avoid medications and operations later on in life.



MAG will be given the bottom-line advice to avoid the ravages of aging.



## Acknowledgments

I would like to thank all the Age-Management Medicine doctors I've had the pleasure of learning from throughout the years.



I.

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## An Introduction: Why and How Do We Age?

*Aging is a tug of war that we can win!*

—Michael Fossel, M.D.

While this may seem to some like a pipe dream or quackery, it's nonetheless a real possibility. This book will give insight into this changing view, or *paradigm shift*. Traditional thinking believes this is absurd or impossible. Yet, many scientists and research now say this can be a reality, although it demands a more proactive approach by both doctors and patients. If we truly desire to enjoy our golden years, we must better understand what causes aging in the first place.

What is age? Let's start by understanding the difference between *chronological age* and *physiological age*. Chronological age is simply your age in years since you were born. We cannot reverse the clock. For example, if you were born thirty-seven years ago, you're chronologically thirty-seven years old—nothing can change that. *Physiological age* is different though. All of us will age at an individual, physiological rate. This is simply a combination of your overall conditioning and functioning level. Think about this for a moment, because this perspective is quite new and a very important one to grasp. Like it or not, we have all been to family or high school reunions and had to face up to those that seem to somehow age better than others. Some old girlfriends may seem as if they were “rode hard and put up wet” a few times too many. You may also have an elderly aunt that looks better preserved than that '55 T-Bird at the big annual car show. She's quite an ageless classic. To some, life just seems unfair. To others, life is great! Personally

and scientifically, we need to find out just why is this so that we can tilt things to our favor.

Of course, how we physiologically age is determined by many factors. We shall review the various theories of aging and then identify the proven ways we can manipulate to our favor. The latter will result in a younger physiological age. Rediscovering the Fountain of Youth that Ponce de Leon bragged about is doable, but it has to be a journey from the inside out! The Tool Guy wouldn't patch a moldy stain without fixing the leaky pipe inside the wall, right? Your woman wouldn't be totally happy to have a face like Kate Moss's, but a figure like Kate Smith's. (You may have to ask your parents who that was.) So it's true; youth starts from within. Let's take a wild trip through these theories.

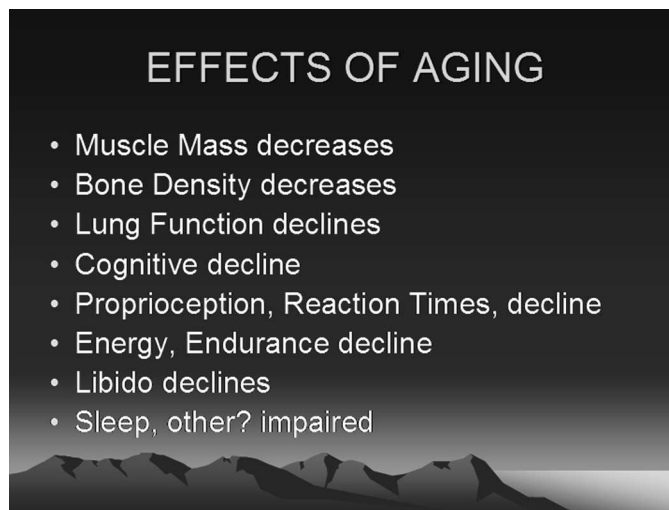


Figure 1.1. A few biomarkers, or measurable health parameters, which generally decline as we chronologically age and comprise our *physiological* age. Many are additive, which lead to more severe consequences. (C. Rao, 2006)

Chronological age—your age in years since your original birthday suit—“can't touch this” until we discover how to go back in time.

Physiological age—your overall level of functioning. You're as young as you feel!

**A. The Genetic Theory.** As famously elucidated by Watson and Crick in 1953,<sup>1</sup> the double helix configuration of deoxyribonucleic acid (DNA) contains the encrypted codes for our many genes. These genes, found on the twenty-three paired chromosomes found in a human cell's nucleus, determine our many inherited traits. In fact, the human genome, the entire genetic map, has now been qualified and quantified since the mid-1990s. There are about 3.5 billion DNA base pairs that determine the blueprints for who and what we are. Although we have identified about 35,000 different genes and have come a long way, genetic therapies are still far from being perfected. Let's not wait until then, though. We can actually do our *own* genetic manipulation cheaply and safely today. Yes, you *can* try this at home! Here are some background and techniques.

We all hope that if our parents lived a long and healthy life, we will too. Unfortunately, this is not always the case. Let me explain with a few examples. If fortunate enough to have healthy parents, we do have some selective advantage for a longer, healthier life. This does make common sense, and scientific evidence backs this up. However, let's take an example of somebody that may have had great genes from the start, yet abused his health. He smoked, drank too much alcohol, didn't exercise, and ate an unhealthy diet. He would probably start to suffer from many mild or frank diseases by middle age. As you will read later, these may include diabetes, hypertension, high cholesterol, obesity, emphysema, back pain, fatigue, sexual problems, and so forth. This will ultimately result in his premature disability and death. So having great genes is like a lottery check that gets cashed in by middle age if you don't invest wisely. Basically, your original factory warranty has run out, and now Mother Nature has to do her recycling thing. (Sorry, she doesn't offer extended warranties at this time.)

Another analogy may be the soapbox derby car you raced as a young Boy Scout. Remember how your dad and you invested the time to make sure it was all shiny and put together right? Sure, having it all aligned on that hill with your back to the wind was a great head start. That's really all he could do for you at that point. It was then up to you to steer the right course and win. If you didn't, you might have lost a wheel or crashed into a tree. Well, midlife is very similar, guys. At this important *fork in the road*, it's all up to you to steer the right course for a healthy finish!

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<sup>1</sup> In 1962, Watson and Crick were awarded the Nobel Prize for their discovery. There were many other researchers that pioneered discoveries leading up to this final compilation. Visit <http://www.geneticengineering.org> for more background information.

Lastly, an alarming example is the onset of adult diabetes in our younger population. Here, the not-so-good genes are being expressed at a much earlier age. We're now in a pandemic of diabetes nationally, if not worldwide. There is an increasing number of preteens with what's been coined *early-onset* adult diabetes. As I like to succinctly put it, diabetes represents *premature aging of the body*. With diabetes, instead of getting the many age-related complications in the seventies, we experience them in our fifties. Unfortunately, today's diabetic teenagers are suffering the same fate as their diabetic grandparents, but at a much earlier age—many in their twenties! This is probably due to their lack of regular exercise, a simple starch-based diet, and more factors that will be discussed later. They never enjoyed the healthier childhood we had that would help them delay these deleterious metabolic changes. They got off on the wrong path from the get-go. Their beneficial, protective genes are, in effect, being repressed. I cannot stress how important it is for us to set the example of proper diet and exercise for our children. In the end, our genes, and jeans, will fit much better!

All we middle-aged men should undergo a full assessment of our health and behavior to make sure we are on our healthiest track. This, of course, will help prevent early-disease risks from worsening. An example is the increase of visceral fat, or the middle-age spread, we guys get. Insulin and cortisol are increasing, therefore increasing risks for hypertension, diabetes, inflammation, and decreased immune function. Cholesterol streaks may be silently progressing to inflamed plaques in the coronary and peripheral arteries. These subacute, hidden changes are quite subtle. Yet, these set the course for us to acquire more severe diseases later, such as dementia, osteoporosis, frailty syndrome, rheumatological diseases, and more that we will present later. Let's prevent these problems before they happen. Let's not wait for a mad scientist to get in our genes and do it for us. At the very least, we will have better genes later on when genetic manipulation may be perfected.

No matter what genetic predisposition you may have, you can *express* the beneficial genes and *repress* the not-so-good ones by being proactive with a healthier lifestyle. So far, scientific genetic manipulation has had not much success. But as the above suggests, you can do your own genetic manipulation cheaply, safely, and effectively with healthier behavior. Avoid smoking, boozing, and just hangin' out. Get moving! Having great genes is a good head start, but you still must be proactive to help ensure a healthy middle and older age. Much research has proven this. The time to act is now. Get moving on the right path!

**B. The Wear 'n' Tear Theory.** This basically became popular in the early 1960s. This is based on a lot of the work on free radical theory done by Denam Harman in the late 1950s. He basically hypothesized that one's life span is determined by the amount of cumulative mitochondrial damage that takes place. (The mitochondria are much like the batteries within the cell.) According to his theory, aging is mostly considered a process of repeated, additive damage to the many cellular molecular structures and the resulting dysfunction. In other words, we age when this damage gradually outpaces the repairs we can make. More damage and fewer repairs equal advanced aging. This damage results from the production of *free radicals*.

Accordingly, aging occurs when the rate of damage exceeds the rate of repair.

Free radicals are also called reactive oxygen species (ROS). As a background, chemical compounds can be either stable or unstable. Unstable molecules are more *reactive*. This stability is determined by the amount of paired electrons or *shared* electrons in an element or compound respectively. Basically, nature prefers compounds to have a completed outer shell of electrons in order to be balanced. If a compound has an unpaired electron in the outer shell, it will then try to *scavenge* an electron from a nearby compound. When this electron is then stolen, the donating compound becomes damaged. It then, in turn, becomes an ROS, trying to complete its outer shell and causing a chain reaction of damage. Please see diagram below:

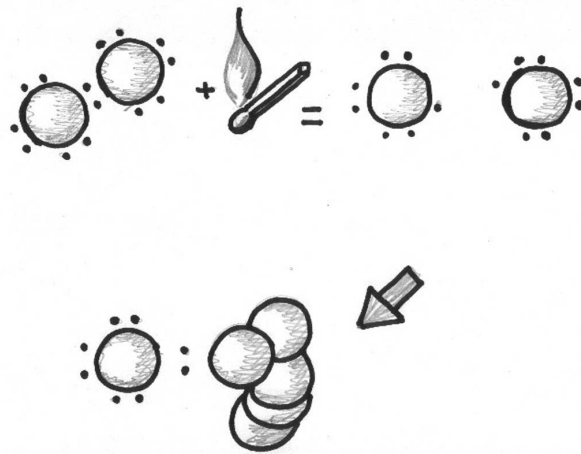


Fig 1.2. Free radicals and reactive oxygen species (ROS) can cause damage like fire. Antioxidants help put the fire out. (C. Rao, 2007)

Most of us are familiar with oxygen. The elemental gas O<sub>2</sub> exists as paired oxygen molecules, which has a complete outer shell of electrons. Normally, oxygen is quite stable when possessing paired electrons as in water, H<sub>2</sub>O. But when the oxygen molecule is split, it becomes an ROS and then tries to scavenge electrons from surrounding structures. Now, these structures may be the cellular membrane, nucleus, mitochondria, or other important cellular components. This damage is microscopic, but it's real and snowballs into the observable, degenerative changes we commonly observe with aging. Indeed, rapid oxidation causes fire. If we look at how these damages occur on a *biochemical* or *cellular* level, we can understand what happens at the next higher *tissue* level. This in turn gives us a clue into what's going on at the larger *organ* or *system* level. Ultimately, this should give insight into what happens to the organism as a whole. As exclaimed by a pioneer in this field Dr. Michael Fossel back in 1999, "Aging is a tug of war that we can win!" I opine that we can slow down or postpone many aspects of aging. It's seems much easier to extinguish a small fire before we become engulfed in the insidious inferno of illness and incompetence.

For example, if we could find out what abnormally happens biochemically inside an aging neuron, we could then start to understand what is going on in the aging brain with mild cognitive impairment or dementia. Armed with this knowledge, we can hopefully find newer ways to slow down or, better yet, prevent this degeneration. Likewise, when we find ways to improve the longevity of the individual heart muscle *cell*, then we can help prevent myocardial infarction and congestive heart failure of the heart *organ*. These benefits then spread to an overall healthier circulatory *system*, both cardiac and peripherally. Because of the mind-body connection, this approach ultimately and synergistically leads to a better-functioning, happier individual as a whole.

This damage is very important to understand from a structural and functional standpoint. If you recall from high school biology, the cell's *membrane* basically determines what comes *into* and what goes *out* of the cell. Additionally, there are many receptors *on* the membrane that determines the many metabolic consequences occurring *in* the cell. There are receptors that can stimulate the cell to grow and produce various hormones, products, or messengers, either beneficial or harmful. It can also trigger apoptosis (its own cellular death) and trigger reactions in the mitochondria and nucleus. ROS cause damage to the mitochondria, causing an impairment of cellular energy production and mitochondrial DNA. In the nucleus, ROS cause damage to the most important DNA or RNA, the blueprints for the cell. It must be appreciated that damage to any of the cellular components

predisposes the cell to early degeneration, death, or even cancer. We certainly don't desire any of these outcomes, but they variably occur with increasing frequency as we age. If one abuses their body by overwhelming it with smoking, alcohol, and other unhealthy acts, then this degeneration is further accelerated. Frequently living life in the fast lane with fast food will only get you there sooner.

So what do we do about this? It is known that *antioxidants* act as scavengers of the ROS. These effectively act as buffers and donate their electrons so that the needed normal-functioning cellular constituents don't have to become damaged. Out of such necessity, the body makes a lot of these naturally. Glutathione, peroxidases, and many others naturally flourish in our younger body. As we age, besides the increasing damage to deal with, we naturally produce less of these scavengers. Therefore, taking supplements may be an added benefit in helping to limit the degeneration as we age.

We will discuss supplements later, but I will give a brief introduction. I believe, and most others do too, that there is no one magic supplement that prevents the ravages of age. Rather, a nice consortium of these probably benefits us more than taking megadoses of only a few. For example, it is probably better to take a daily low-dose multivitamin than it is to take only megadoses of vitamin C or E. Some recent research as the HOPE-TOO trial reinforces this view. Additionally, it is more important to have the proper diet and exercise than to merely rely on a few magic potions to compensate for our misbehavior. At any rate, the *convergence of evidence* I reviewed suggests that taking a multivitamin may help prevent some of the degeneration and conditions we acquire as we gracefully mature. Supposedly, 70 percent of Americans are deficient in at least one vitamin.

The wear 'n' tear theory suggests most age-related inflammation and degeneration result from the damage caused by free radicals at the cellular level. This can then spread like fire throughout the body. Antioxidants may offer some benefit, but they are no replacement for a proper lifestyle.

**C. The Neurohormonal Theory of Aging.** This was promoted by Dr. Daniel Rudman's groundbreaking research in 1990 that concluded, "The overall deterioration of the body that comes with growing old is not inevitable ... we now realize that some aspects of it can be prevented or reversed." It's just a sad fact of life that as we age, the hormones we wish would go up, *go down*. And the ones we would like to go down, *go up!* Tony Soprano might say that this is how



*normal* aging tries to whack us out! Think of the hormones as the musicians in an orchestra that must all play in harmony to keep us humming throughout life. Nature uses these chemical messengers to regulate the millions of duties the body performs. They must play the right song, key, tempo, and be in a dynamic balance. They're also like the legs on the chair you're sitting on; they should be optimally balanced and upright as when new. If not, you may one day scream, "I've fallen and I can't get up!"

As we age, insulin and cortisol go up; and thus the risk for hypertension, diabetes, obesity, osteoporosis, arthritis, and more follow. The hormones that diminish usually include dehydroepiandrosterone (DHEA), pregnenolone, melatonin, testosterone, thyroid, and human growth hormone. (Of course, menopause causes a marked decrease in estrogen and progesterone for women—the aptly named change of life.) These changes cause risks for many other conditions such as the frailty syndrome, hypercholesterolemia, fatigue, depression, insomnia, and many others. It would then make sense that restoring these hormones to optimal levels would help ward off these complications. As we will review later, most of the scientific literature reflects the fact that hormonal replacements do have such dramatic health benefits in the middle-aged, healthy individual. This is ideally when prevention should take place.

I fully believe if you want to beat Mother Nature at her game, then you must learn to play *her* game in order to win. The only true ways to slow down aging would be to undo her modus operandi. The hormones, being the chemical messengers in the body, dictate whether we are anabolic (building up and repairing ourselves) or catabolic (breaking down, a.k.a. aging). Today, there are lots of professionals and industries touting natural remedies when, in fact, they're not when you really think about it. Antiaging is big business with big profits. We must remember that any herb or supplement is still in pill form, made somewhere in some factory, and therefore not truly *natural*. When was the last time you saw pills growing as a leaf or a root on a tree? As that old Parkay Margarine commercial boasted, "It's not nice to fool Mother Nature!" So you must first have a greater appreciation of the scientific facts of aging and its causes to then recognize the many proven, safe methods of achieving optimal health. Right on, brother!

As we age, insulin and cortisol levels tend to increase; and thus the risks for hypertension, diabetes, obesity, osteoporosis, inflammation, and infection. The hormones that variably diminish include DHEA, pregnenolone, melatonin, testosterone, thyroid, and human growth hormone. These changes cause risks for the above and many other conditions such as the frailty syndrome, hypercholesterolemia, fatigue, depression, and insomnia. It then makes sense that restoring these hormones would help ward off these complications.

#### D. Let's Expand on the Age-Management Medicine Paradigm.

To some, slowing down or reversing aging may still seem like quackery. Novel thinking and modalities are commonly met with such skepticism and mockery; so don't feel bad if you're still a little leery. For example, until the late 1970s, the only successful treatment for gastric ulcers was surgery. Many well-meaning surgeons believed that if it's bad or defective, simply cut it out and it's cured." There was little appreciation for why divineness may have put that organ there in the first place. Thousands, as my darling uncle Steve, received the typical vagotomy and antrectomy procedure for treating duodenal ulcers.<sup>2</sup> Their ulcer was now gone, but they suffered some lifelong consequences, as well. The antral portion of the stomach is responsible for the absorption of B<sub>12</sub>, folate, and iron. Many who received these operations suffered from vitamin deficiencies and the so-called dumping syndrome. The latter caused them to have diarrhea soon after eating. In the end, many lifestyles were often more interrupted from the cure than from the actual disease itself. Then, one of the first *miracle drugs*, Tagamet, came into the scene. This was a novel medical treatment that basically replaced the surgery. It effectively reduces the acidity of the stomach and was first greeted with skepticism and reluctance, but eventually gained popularity. Nowadays, it's considered quite safe and is now available over the counter (OTC)—no prescription needed; and you can add your own knife to enjoy.

When we look at gastric ulcer research in the 1990s, we again encounter reluctance with the idea ulcers can be caused by a bacterial infection. Initially, the contemporary medical establishment laughed at this because of the long-held belief that bacteria simply cannot survive in the stomach's acidic environment. It was ridiculous to consider an infection causes an ulcer and even increases risk for stomach cancers. Yet, now, after years and much further research, it's now accepted that

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<sup>2</sup> The vagus nerve is cut for less excitation to the stomach to produce acid; and the antral portion of the stomach is removed resulting in fewer glands to make acid and risk for an ulcer.

*Helicobacter pylori* causes the majority of ulcers in people who do not partake of alcohol or aspirin-like products. Patients with ulcer symptoms typically receive endoscopy with gastric biopsies and cultures to rule out this infection, as many can now be cured permanently with proper antibiotic treatment. For many today, there's no longer a need for lifelong Tagamet therapy.

Historically, many doctors that presented novel diagnostic and treatment options were initially ridiculed. Dr. K. McCully first suggested homocysteine was a modifiable risk factor for coronary disease. He subsequently suffered enormous harassment from his colleagues and even lost his tenure and position. (You'll read more on this topic in the supplement chapter.) There's also the noted obstetrician-gynecologist that help introduced laparoscopy as a less-invasive surgical procedure. Initially scoffed by his contemporaries that used open-type surgeries, he endured challenges from his peers as well. Yet, laparoscopy has now evolved into the preferred method for most surgeries. Anything else would be like operating in the Stone Age at Megasaurus Memorial in Fred Flintstone's town of Bedrock. So you can see it's quite common for novel thinking to be initially ridiculed, even rejected. There may also be some confusion and abuse by inexperienced doctors that initially go along with novel techniques until the proper niche is found. Much is the current state of affairs with using hormonal replacements. Although mostly scientifically proven to help prevent and treat many conditions of aging, there's still much confusion, abuse, and needed debate.

As with all medical doctors, I was trained on the hospital floors and had to work my way up to the top. In medical school, all students learned first about normal physiology followed by the pathophysiology of diseases—like if the Fox Network did a “When Good Organs Go Bad” special. We spend six of our eight years of training studying *sickness* and *disease*. Patients we see are typically in their last six months, or even six days, of life's journey. Therefore, the main exposure is treating the very sick or very elderly. It's then no wonder that these processes are considered a normal part of life. There's relatively little time spent on *prevention* or how to *optimize* a patient's health. As a family physician, I did select a specialty where prevention does play a larger role. Treating the person as a whole, I also enjoy the long-term rewarding relationships. That's not to denigrate the breadth and depth of training that a modern medical school and residency provides an MD. I believe there is no better replacement; however, there needs to be more taught on nutrition, exercise, and disease prevention. My passion, since such formal education, has been on learning more about the nonmedical means to achieve healthier aging.

Most medical training has taken place in large university settings that have long been overwhelmed with treating the very sick and disabled. In order to survive, they have promoted a Band-Aid, pass-the-buck mentality that now permeates all levels of health care. Reinforced by drug firms that sponsor most academic research, this reactive view has been cross-pollinated by our political leaders and corporate profits. It's been an expensive, bitter pill to swallow with many side effects. Overall, America's health today is unacceptable. It's time for a change, although this new paradigm of curing yourself will be met with resistance on many fronts.

The big paradigm shift I'm talking about requires that we look at aging as a *syndrome* itself. As opposed to treating the many complications of aging, let's treat the root cause! Let me explain with a few analogies. Most people are now familiar with AIDS.<sup>3</sup> As a brief review, this disease is a viral infection that compromises the immune system and is usually transmitted via blood or other body fluids. It's progressive, and there's currently no real cure. Many lives have been claimed by HIV since its appearance in the early 1980s; it's now a global epidemic. Yet, when a person gets HIV, he doesn't actually die from the virus itself. Rather, he dies from the *complications* brought on by HIV. This is a very important point to grasp. The viral infection eventually progresses to become AIDS. Now, the immune system is nil, and he suffers from the frailty syndrome<sup>4</sup> and probably dementia, too. There are many other abnormalities such as the wasting syndrome, *Pneumocystis pneumoniae* infection, lymphoma, or other cancers. He may survive one bout of pneumonia today but may encounter a severe case of diarrhea or other malady weeks later.<sup>5</sup> As you can deduce, treating merely the complications doesn't really *effect* a cure. Rather in many instances, this only prolongs the sickness and the inevitable. Of course, the best *cure* for HIV would be to *prevent* the viral infection in the first place by a vaccine or other primary prevention method. But once the

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3 A medical resident in 1994, I was chosen to help revamp the Florida Medical Association's CME course on HIV/AIDS. That same year, my uncle Steve eventually succumbed to the ravages of AIDS.

4 The frailty syndrome closely resembles advanced age or the neglect of a healthy lifestyle. More will be covered in the hormonal chapters. In actuality, human growth hormone replacement has been used to fight the frailty syndrome of AIDS.

5 HIV (human immunodeficiency virus); AIDS (acquired immunodeficiency syndrome). There are many complications of AIDS. This disease is briefly presented as an analogy to the aging syndrome.

person is infected with HIV, the only cure would be to eliminate the virus or its replication—the root cause of the disease.

Another case for this paradigm shift can be made with the disease progeria. In this poorly understood, rare disease, children age at a much faster rate. While only in their teens, they begin to suffer arthritis, heart disease, dementia, and all the other maladies we normal people get much later in life. Given what was presented above, how would we then devise the best cure for progeria? Would we want to treat the many *outcomes* of such premature aging? Or would we try to identify and treat the *true underlying cause* in the first place, say a gene mutation? Of course, the latter makes more sense.

With those examples as a preface, let's delve into what this paradigm shift means to the middle-aged man trying to fight off old age. In today's world, doctors treat you for the *many outcomes* of aging. As you mature, cholesterol generally goes up, so you are prescribed a cholesterol pill. Along with the weight and fat gain, maybe hypertension and diabetes result in three more pills—right into the breadbasket. You then may need inhalers because your lungs got the wind knocked out of them. Maybe depression and back pain has now got you bent over, so that adds a few more pills. Because of their side effects, you may be prescribed more pills. You then get sucker punched by artery disease that demands a bypass, angioplasty, or other quick fix. You may even rebound after a few bouts with pneumonia. Then, you'd stagger to get up from arthritis. As frailty increases, you are forced to chug down an osteoporosis pill. You've not tossed in the towel yet. Then there are the final rounds with dementia, Parkinson's disease, urosepsis,<sup>6</sup> hip fracture, and so on—all the experienced fighters are now ganging up on you.

Despite being punch-drunk, you keep getting tossed back in the ring by your many doctors. You begin to see the spotlights, only they're the ones in the OR. You feel the heat. It's really a fever. The crowd is screaming, but you realize that it's the Code Team working on the patient next to you. The stench of the arena intoxicates you ... well, that's really *your* stench, and you're actually overmedicated. Don't you wish you had a coach like Rocky Balboa had in *Rocky II* about now? Becoming too weak to hold your guard up, you may prefer to get TKO'd than to risk getting paralyzed and winding up in a retirement home.

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<sup>6</sup> Urosepsis is a urinary tract infection that spreads to the blood (sepsis) and is probably the second-biggest infection cause of death in the elderly after pneumonia.

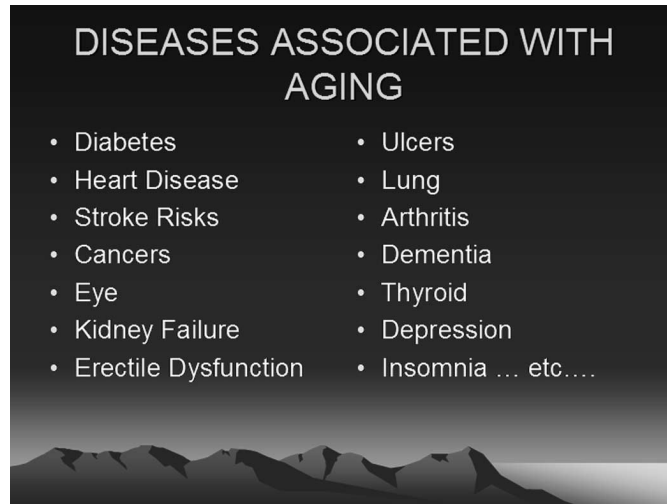


Figure 1.3. Listed above are diseases occurring with increased frequency as we age. In most instances, one disease causes many other conditions to appear and, thus, has a snowballing effect. For example, diabetes causes at least four times risk of heart and peripheral vessel disease, cancers, dementia, and kidney failure. (C. Rao, 2007)

In summary, our current healthcare model of individually treating all these outcomes of *normal* aging is not the best. We now have the research and know-how to promote a new paradigm, but such change on a large scale is inherently slow. We have identified a lot of what occurs as we age: the changes in genetic expression, the degeneration, the decrease in immune function, the increase in inflammation, the increase in frailty, and so on. The frailty and metabolic disorders result from the decrease in bone and muscle mass and the increase in fat mass. The increase in inflammation causes arthritis, dementia, heart disease and peripheral vascular disease, and more. All these conditions are then worsened by what's currently accepted as normal age-related neurohormonal changes. Yet, what can we do to fight back and regain the power to control our destiny? By reading this book, you can grasp your health by the wheel and steer clear of many of life's missiles, much as you did as a kid playing the video game Space Invaders!

It's far better in the long run to treat the true underlying abnormalities than merely trying to alleviate the many increasing symptoms of what prematurely ages us. Since most all pills merely treat the symptoms of chronic diseases, prevention is key.

As introduced in the preface, I feel midlife is a very important yet grossly under-appreciated stage of a man's life. Personally, we all may want to deny it to some degree, maybe even spend a lot of money and time trying to hide from it. Yet, we should embrace it as the window of opportunity it really represents. Yeah, yeah, yeah, we have all heard about pediatrics, adolescent medicine, geriatrics, and gynecology, but no medical specialty has focused on middle-age health as a priority. There's even less focus on men's health and the importance of fatherhood. I would also venture to state that middle age now represents the longest stage in modern men's lives. (This makes sense, especially given the fact that we generally don't live as long as women.) I think a tremendous opportunity to get things healthier is currently being ignored. Midlife is a time when most of us guys are at the top of our game at the workplace. Yet, the warranty that we were given when we were young and disease-free is about to wear out. We may have even lost some friends in their forties or fifties, who died from an unexpected, sudden disease. This can be quite alarming and eye-opening. Ironically, we still may trudge along doing the same daily grind. We put on the blinders and earplugs ourselves in a way, just working for the weekend. Meanwhile, we may be ignoring the many early warning signs of disease. What you don't know *can* hurt you!

Mostly undetectable from the outside, there may be many signs of progressive disease festering inside. This is the opportune moment to effect a lifestyle change that will help you later in life. I do believe that how proactive you are about your optimal health in midlife determines how well you do in the latter half of life. It *can* be the golden years! But you *have* to be proactive about it now. In my practice, I see some men, forty-five years old, that possess the *physiological* age of someone in their early thirties. Yet, I also see some of the same chronological age that, because of having many of the mostly preventable problems mentioned above, their physiological age is over sixty! Ultimately, it's up to *you* to have great health because the other players involved in this decision making are either upside-down or have other agendas.

In most midlifers, there are often signs of subtle, early disease. These are usually ignored by the person or undetected by doctors until they progress to frank, overt disease later on. Then, it may be too late.
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The current health care system we have also contributes to this reactive, fix it only when it's broken mentality. Most people have health insurance during their employable years, which works similar to the following scenario: You must have

a complaint, thus a *diagnosis code*, for insurance to pay for your doctor's visit. So actually, you *do* have to first be *sick* to be seen by a doctor. If you visit the doctor too much, you will then get a lot of diagnosis codes listed on your record, and you subsequently may be dropped for being high risk. This works as any other insurance, be it car or home. Or your business or job may change, and then your new policy states all these *prior conditions* aren't covered. You may now find you're in quite a bind. As an example, one time I saw a middle-aged dentist who wanted to know if he had arthritis. I warned him that if we ordered a sedimentation rate, a lab test for inflammation, I would have to put down "joint pain" as a diagnosis code for the insurance to pay for it. As it turned out, the test was negative—luckily, rheumatoid arthritis was effectively ruled out. However, a few months later, he called up, complaining that his disability insurance had dropped him because he now had a history of arthritis!

The current state of the health-care system is indeed distorted at many levels. If a guy is truly concerned about his health and desires some lab work and a few doctor visits, he then gets a lot of diagnoses written down in his health record. This is actually seen as *negative* behavior, and he is usually penalized in some way by the insurance company because they had to lay out more money for such proactivity. On my side of things, with the decreasing reimbursements for decades by insurance companies, doctors' offices now have to see more patients per day to meet the bottom line. The staff's time is very limited and the patients are put on a strict time schedule—even overbooked, much like in the airline industry. These restraints cause less time for a lengthier evaluation and when combined with the current malpractice insurance crisis, may often result in the overordering of tests to cover the doctor's butt or the likelihood of unnecessary procedures in order to cost shift. This adds to more referrals to specialists and often leads to more frustration and expense. Yet, insurance firms are exempt from antitrust laws and can simply raise their premiums to reflect their increased operating costs. The doctor usually can't, despite office costs skyrocketing over the past ten years. Most of the doctors' fees are decreasing and are unrealistically set by Medicare, with insurances then unfairly paying only a fraction of that. All this sets the stage for spiraling costs with little hope for preserving a good doctor-patient relationship. Some would call that the *perfect storm*.

Included in all this is the possibility of increased medication errors because of the limited time available for the counseling of *nonmedical* ways to treat or prevent disease. According to the October 18, 2006, *JAMA (Journal of the American Medical*



*Association*), an estimated seventy thousand Americans are seen annually in the ER because of adverse reactions from prescribed medications. Patients are now being seen more often by lesser-trained so-called health-care professionals. It's all about *volume*, not *service* anymore. It's a shame less than 5 percent of the health-care dollars spent in this country is for prevention. I believe the only way to truly *contain* health-care costs in this country is to have a *healthier* nation as a whole, including the very young and old. That should be a no-brainer, right? Lastly, I find it very frustrating to regularly see many diseased individuals that could be enormously helped by even minimally improving their lifestyle habits. They too may be looking for the one magic pill or an operation as an easier way out. There must be better ways; and there are—the more proactive, safer, and integrative approaches methods expressed in this book. “The *best* health insurance is to healthier in the first place!” I always say.

Being proactive about your health now will result in less insurance premiums as you age and lower the risks of taking multiple medications. It's a win-win!



Now for some tongue-in-cheek good news; no one has died from “old age” since 1951. Wouldn’t it be great if we did, in fact, find a cure for old age back then! Unfortunately, this is not the case. Rather at that time, federal and state law dictated that a physician can no longer put the immediate cause of death on the death certificate as “old age.” Now most of the time the elderly patient has multiple comorbidities, namely, COPD (emphysema), hypertension, coronary and peripheral vascular disease, risk for blood clots, immune compromise, and many others. This makes it virtually impossible for a physician to know what the elderly patient at home exactly died from. So we basically *guesstimate* what did him in. Research and autopsies have shown at least half of the time what the physician lists on the death certificate doesn’t match what the patient actually died from. Not so surprising, heart attack and stroke appears to be the first and third biggest killer overall. Cancer, all ages combined, happens to be the second biggest killer. However, it’s important to note that for people under the age of eighty-five, cancer is the biggest killer. We will find in later chapters that the age-related increase in inflammation which causes a decrease in immune function, as well as living in a more toxic environment contribute to these statistics.

The paradigm shift in age-management medicine is that aging is a syndrome, a collection of related conditions, which varies by severity and onset for each individual. By identifying the root causes of why and how we age, we can find out better ways to help prevent or delay many of its complications.

Let’s explore the important concepts of *health span* and *life span*. *Life span* is basically the same as physiological age; it’s solely about how long you live. Take for example our grandparents’ generation that was born in the early 1900s; they had a life expectancy of only about forty-seven years. Yet, the ones alive today have survived more than double this estimate. Some researchers now suggest that increasing numbers from our generation may live between 110 to 120 years! I don’t know about you, but if I live to 120, I don’t want to live, act, or feel it. As The Who sang, “Hope I die before I get old!”

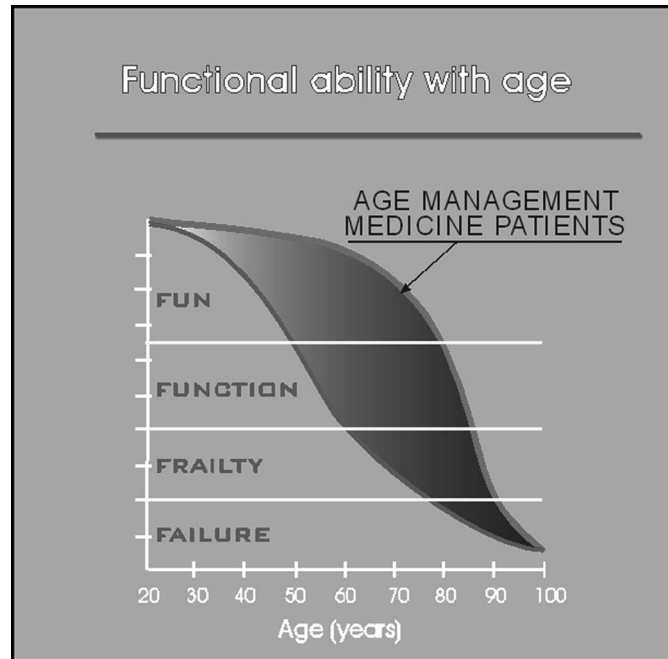


Figure 1.4. Health span curves. How well you take care of yourself determines which of the above curves you will follow as you age. Which curve do you want to ride? (Adapted from Cenegenics©)

*Health span* is basically how *well* you live. It's not mere quantity, but more important, it's the *quality of life*. From talking with many elderly patients, I'm amazed to find most have generally accepted their eventual demise without fear. What's scary to them is *how* they spend their later years. All of us want to live a long time but realize it's more important to live healthier. If you look back a few generations, you'll see most of our forefathers did enjoy a healthy life. This is due in part to their lifestyle. They probably had less stress or learned better ways of dealing with it. Indeed, Gramps had more manually laborious activities combined with a healthier diet. There was less pollution too. For example, my grandfather lived a healthy life up until he was sixty-two. At such time, he probably suffered a stroke or heart attack and suddenly died. Yet, he lived happily at home and was healthy his entire life. He *lived* until the day he died. Not on any pills or suffering from any known medical conditions, he never had any operations. His health span would be represented by curve A in figure 1.5.

This is exactly what Mother Nature selected for him and, for that matter, all of us men. We're basically selected and evolved to live to reproduction age and pass on our genes—to ensure life continues on. Maybe, she'll add a few more years to help raise our young, so they can survive better. At this point, we're done as far as Mother Nature is concerned. We've done all our duties by middle age; now it's best for us to be well ... recycled. Why have bunches of old men just hanging around, doing nothing, and using up valuable resources? While this may be good for the survival of the species as a whole, we baby boomers probably aren't ready to be all that altruistic.

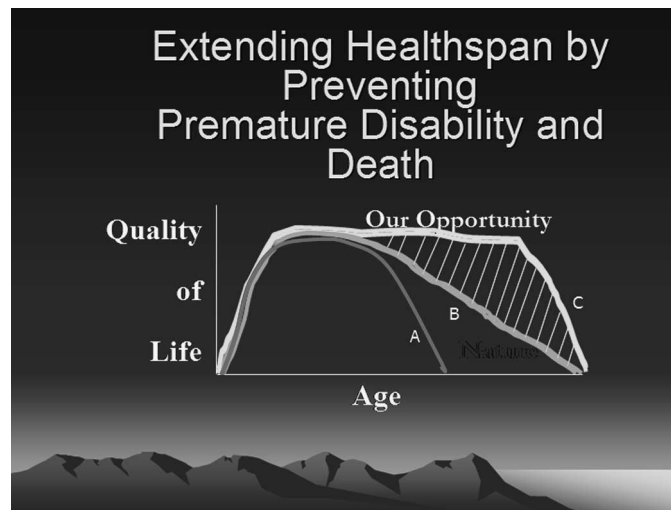


Figure 1.5. Extending health span. Where are you now? Where do you want to go from here?

Now, we come to our parents' health span, curve B. Here, quantity beats quality, man! With all the medical innovations in the past few decades, people are, indeed, living a *longer* time. But are they necessarily enjoying an entirely *better* life? Some do, but many don't. Although we now have effectively increased *life span*, I believe we haven't improved the *health span* as much as we could. I'll tell you what I mean. Granted, a lot of older people have received antibiotics or an operation, which allowed them to live a somewhat longer time. Included in this has been an increased morbidity, or sickness, in their later years. People are living a longer lifetime but a longer *sick-time* as well. Today, most nursing homes and assisted-living facilities are full to capacity. We often read how the health-care system is becoming more strained. Additionally, no one really wants to become dependent on others or be a burden to family. Giving up one's home and spending one's last few

years on Earth debilitated among strangers in a nursing home is quite a depressing ending to life, but it's becoming a common reality. This would be represented by the last part of curve B above. Although a number of years were added, they're more sickly years of declining function and more dependence.

Curve C is really where we should be headed. It represents what I promote—increasing health span as well as life span. Here, we keep the optimal health and functioning of a forty-year-old while in our seventies! In this scenario, the sickly portion of the curve is limited to the very end. This paradigm combines the best parts of the previous two curves and limits the bad. This approach is very aptly called *morbidity compression*. It's all about *living* until the day you die. I think most would rather follow curve C. Believe it or not, this thinking is quite new. The health-care delivery system and the insurance industry don't appreciate it or are willing to support it. Instead of crooning Tim McGraw's catchy tune, "Live Like You Were Dying," I'd rather sing, "Die like you were really living!"

Reinforcing this paradigm were recent findings from the renowned Framingham Heart Study.<sup>7</sup> Basically, men and women who reached fifty with the fewest risk factors for disease had a better chance of a healthier, longer life. Researchers found dramatic increases in cardiovascular disease risk and length of life between participants who reached age fifty with two or more risk factors. Those with two risk factors lived a decade less. "Reducing risk factors to one or none is very achievable," encouraged the author. He added that exercising, maintaining a healthy weight and proper diet, and not smoking may make a difference in life span, risk for disease, and long-term quality-of-life measures. I can find volumes of research that parallel these conclusions. It makes common sense that midlifers enjoying a healthier diet and staying more active would end up keeping their muscle and bone mass up and fat mass down. This also limits inflammation and boosts their immune system. They'll ultimately fare much better than their less-proactive cohorts.

Staying Alive! Elizabeth "Lizzie" Bolden, the world's oldest person according to the Gerontology Research Group, recently died in a nursing home in Memphis on December 12, 2006.<sup>8</sup> There supposedly existed a woman in Chechnya whom many believed reached 124! Before Lizzie, the longest living American was Maude Farris-Luse who reached 115. What was her secret to having such a long life? "Not moping around!" Supposedly, the world's oldest *man* died at 114 in Japan in

7 D. Lloyd-Jones, "Reach fifty with as few risk factors," *Circulation* (2006): 113.

8 Before that, a Japanese woman, believed to be the world's oldest person according to the *Guinness Book of World Records* also reached 116.

2003. He was a teetotaler who drank a glass of milk per day. His predecessor was an Italian that swore his secret to longevity was a daily glass of red wine. Family members stated both men led a very stress-free life.<sup>9</sup> Well, that sounds like good advice from those, besides maybe Star Trek Captain Kirk, that have gone where no man has before. Keep your life stress-free, yet stay busy. Some tea and wine may help out too.

Additionally, the health ministry of Japan announced in 2003 they had well over twenty thousand centenarians. As expected, the vast majority, 84 percent, were women. Japan also holds the record for the world's longest life expectancy—almost eighty-five years for women and seventy-eight for men. However, this accolade is causing the country some problems. It's estimated that one person will be over sixty-five for every two working by 2025, a situation that is bound to place a strain on the economy.<sup>10</sup> I have to add that the Japanese and Okinawans have some of the healthiest lifestyles, including a less inflammatory diet consisting of more omega-3 fats. (You'll read more about that, later.)

The World Health Organization (WHO) recently reported life expectancy in the United States has reached another all-time high, 77.6 years. The average life span was 74.8 years for men and 80.1 years for women, and has been rising steadily since 1900. This increase is mostly due to the advances made in sanitation, antibiotics, and childbirth. The WHO added that deaths from heart disease, cancer, and stroke continue to drop, albeit with some precautions. Apparently, half of the older baby boomers aged fifty-five to sixty-four have high blood pressure; and two out of five are obese. Basically, we are in worse shape than those born a decade earlier. Dr. Julie Gerberding, director for the Centers for Disease Control in Atlanta, reminds us it's never too late to adopt a healthier lifestyle and enjoy a longer, healthier life; yet middle age is a crucial time to focus on disease prevention. This same group is expected to rise from twenty-nine million in 2004 to forty trillion by 2014. Interestingly, the number of those with hypertension and obesity are higher; but because of the many anticholesterol drugs we now have available, the rate of hypercholesterolemia has supposedly dropped.<sup>11</sup> Meanwhile, expenditures on health care rose 7.7 percent to 1.6 trillion dollars in 2002—well over

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9 <http://www.guardian.co.uk>, accessed July 30 and September 30, 2003.

10 <http://www.reutershealth.com>, accessed September 9, 2003.

11 From U.S. Centers for Disease Control, WHO, as reported in *Associated Press* (2006).

\$5,000 per person!<sup>12</sup> That's almost 50 percent more than the next biggest spender, Switzerland. Prescription drugs were the fastest-growing expenditure, rising 11 percent in 2003. Most data indicate baby boomers can expect to live a longer time due to medical innovation, but not necessarily a healthier time in their later years. Smoking, alcoholism, drug use, violence, AIDS, and the fact that our children are becoming more obese with chronic complications as diabetes, will continue to bring on greater personal and societal burdens unless needed changes are made.

This gets down to what I'm talking about. Thanks to many medical innovations, we can now prolong life span. However, because of worsening social, personal, and environmental factors, health span hasn't followed. This is particularly true during the later years of life. In a way, we've exchanged quality for more quantity of life. Nowadays, we have to be concerned about many age-related complications our parents never heard of—dementia, osteoporosis, frailty syndrome, erectile dysfunction, and so on. This adds up to an enormous expense, both socially and personally. By the 1990s, buying the average sixty-five-year-old an extra year of life costs society \$145,000.<sup>13</sup> Most of this is largely for futile end-of-life care. Unless we identify and treat what causes the syndrome of aging in the first place, we're left with merely treating its many complications. This only delays and worsens the inevitable, at best. Additionally, the personal choices we make for a sedentary lifestyle and improper diet result in an earlier onset and increased severity of these complications. As a reflection of the above, death rates from falls in older men have increased almost 50 percent in the past ten years.<sup>14</sup> We guys need to bone up on prevention and personal responsibility if we are to have an optimal quality of life in our later years.

We can extrapolate this even further. As mentioned, scientists today predict middle-aged persons may live to be 120! It's not too far of a stretch to expect these outcomes when genetic engineering, stem cell therapies, and even replacing worn-out body parts with longer-lasting prosthesis become a reality. Personally, I am planning to harvest my bone marrow sometime this year in anticipation. Some predict that with these advancements, people may be able to live even hundreds of years old! Naturally, I have some healthy skepticism about that; yet I keep an open mind. If I live to be that old *chronologically*, I certainly don't want to feel that ancient!

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12 Health Affairs Report by Center for Medicare and Medicaid Services, January 8, 2004.

13 D. Cutler, *NEJM* (October 2006).

14 Stevens J. *CDC Morbidity and Mortality Report*, November 16, 2006.

When it comes down to it, there is no *one* theory that fully explains how we age; it is a combination of all of them. Accordingly, I offer an encompassing view, a better *paradigm*, for looking at our number one asset, our health. However, this new paradigm *must* be accompanied by a change in behavior in order to affect any real good—especially in middle age. One’s health *can* truly be an asset, if optimized, or a *liability*, on the other hand. It takes a commitment on your part as *you* are ultimately the one most responsible for how well you age. Look around you next time you’re at the drugstore that’s having an adult diaper two-for-one sale. Do you want to age normally, or *optimally*?

Everything old may be new again, after all. A lot of what I present in this book will have its roots in many old-time sayings. I will then proceed to reinforce this by recent medical literature. It’s comforting to know these two reflect what I will continually refer to as the *convergence of evidence*: “If you don’t use it, you lose it” and “An ounce of prevention is worth a pound of cure.” Ironically enough, the lack of healthy behavior is causing many problems with the current state of health affairs, both individually and socially. It’s an *energy crisis* all right—only it’s being caused by the lack thereof! Take action and be an example. As one of the ’60s anthems goes, “You’re either part of the solution or part of the problem.” Who knows exactly what the future will hold? Yet we *do* know having a healthier midlife will only improve your chances in later life. As I see it, this *window of opportunity* is the best time. At times, I joke that if you do all the things I say in this book, you’ll still eventually die, but you’ll feel and look a heck of a lot better! Live your life to its fullest.



Chapter 1. MAG feels enlightened and hopeful this book will steer him in the right direction. He definitely wants to avoid getting diabetes and hypertension. MAG wants to become a role model for his kids and wife. Health span and avoiding multiple drugs is what he’s all about.