

CHRONOLOGICALLY
GIFTED

Aging with Gusto

A PRACTICAL GUIDE FOR HEALTHY LIVING TO AGE 123

ERICA MILLER, PH.D.

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DEDICATION

I dedicate this book to people of all ages, from all walks of life who choose to join me on this wonderful adventure called "life." Here's to a long, healthy, purposeful journey until the ripe age of 123! You Can Do It!

ACKNOWLEDGEMENT

I want to acknowledge my editors, Gerri Knilans and Debbie Beavers-Moss from Trade Press Services. I realize it took a great deal of effort during the editing process to maintain my intent and authentic voice, and I appreciate their dedication and perseverance.

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FOREWORD

By Dr. Peter H. Grossman M.D.

In his classic novel *Illusions*, Richard Bach writes: “ Argue for your limitations, and sure enough, they are yours”. If we look at chronological age as purely a number, it is the inevitable advancement of time. However, the physical, cognitive and emotional decline associated with aging, may not be so inevitable.

Today, advancements in computer technology have given mankind the ability to solve problems exponentially faster than ever before. It is not a matter of if, but when, we will see substantial human age extension.

In her book, *Chronologically Gifted: Aging with Gusto - A Practical Guide for Healthy Living to Age 123*, Dr. Erica Miller takes the reader through the research of human life extension and more importantly, teaches us how to make that life extension more purposeful, rewarding and fun. Dr. Miller explains that age, simply for the sake of longevity, is a goal that may be fraught with health, economic,

and social problems. On the other hand, longevity as a byproduct of good health and attitude, where we live biologically in a more youthful state than our chronological age, is not only a desirable goal, but something that is quite achievable.

Presently, many of the tools for substantial life extension exist only in the hands of scientists and government regulation. However, Dr. Miller details the power that we already have within ourselves right now, to age better. Dr. Miller's own life exemplifies her teaching. Exuberant, and positive, she takes control of her destiny.

Dr. Miller explains that beyond science, we possess these tools that will allow us to live happier, healthier, more substantive and subsequently longer lives. *Chronologically Gifted* shows us all how to get started today, on the road to happier, healthier and longer lives. In the words of Dr. Miller, "I can do it, and so can you!"

A handwritten signature in black ink, appearing to read 'Peter Grossman', with a long horizontal flourish extending to the right.

Peter Grossman M.D.

Grossman Burn Center

www.grossmanmed.com

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What Does “Old” Really Mean?

Ask a handful of people to describe what comes to mind when they hear the word “old,” and you might be surprised at the answers you receive. “Old” is one of those words that has both positive and negative connotations, depending on the context in which it appears. Unfortunately, when we apply the word to people, many of those connotations are largely negative. Words like “obsolete” or “weak,” for instance, or phrases like “past their prime” and the always popular “over the hill” may come to mind. These expressions indicate how readily our culture relegates the latter years of life to a period of lamentable decline—not only in physiological health, but also in social prominence, personal originality, and cultural relevance.

“Does the worth of human life diminish with age?” asks Dr. Andrew Weil. “I’m afraid that in the judgment of many in our

society, it does.”¹ No matter where we are in life right now, if we’re not careful, we’ll find that we instinctively default to this generally negative attitude toward the aging process. Moreover, we’ll react to the prospect of aging in a patently unhelpful way—with denial, dread, or even despair. Instead of gearing up for this vital season in life, we’ll find ourselves subconsciously giving up even before we reach those milestones. And that’s a bigger deal than you might think.

According to studies performed by Becca Levy at Yale University’s School for Public Health, a pervasive (even subconscious) negative stereotype regarding aging has a demonstrable effect on long-term health outcomes. In one study, participants were separated into two groups. One group was exposed to subliminal, positive messages about aging, while the other group was not. The results were incredible: participants in the second group—people who were otherwise equal on health, educational, and socioeconomic factors—showed greater declines in a variety of areas than their peers who were in the first group.

There were physiological symptoms, like shakier hands and poorer memory retention, higher rates of cardiac disease, and more difficulty recovering from disability. But there were also behavioral symptoms like a greater propensity to eat in an unhealthy way, a more sedentary lifestyle, and an unwillingness to follow dosage instructions for age-related prescription medications. The net result? A median difference in survival rate of 7.5 years.² That’s staggering! People could live about seven years longer if they would simply refuse to “buy in” to the stereotypical rubbish that tells us that getting older has to mean life is over.

So here's the good news. We can do that!

Once we tune out this pervasively negative cultural message, we find that there are plenty of other words—considerably more positive ones—that people associate with the word “old.” Words like “wise” and “mature,” “seasoned” and “experienced.” Think about it: usually we revere our elders for their accumulation of knowledge and experience, and we naturally gravitate to them for instruction and advice. Even those who haven't accomplished much of special merit exhibit a time-tested combination of cultivated skills and experiential wisdom. It's one that rightly inspires humility in younger people who do well to capitalize on their insights.

So, almost by default, age demands a modicum of respect. “Growing old should increase, not decrease, the value of human life,” Weil affirms. “Just as with bourbon, it has the potential to smooth out roughness, add agreeable qualities, and improve character.”³ If we're smart, we'll embrace that message rather than the cultural mantra of irrelevance and obsolescence.

We can start taking steps right now to help us approach the later years of our lives with optimism and determination. It will help us recognize that we never have to lose our cultural edge unless we let someone else define “old” for us in an unhelpful way. That's why I decided it was time to write this book—to inform and to inspire people about how to do just that. This is a new venture for me; but here I am: a spry eighty-something dynamo, actively and passionately engaged in this mysterious journey we call “life”—compelled to invite others along for the ride. I've made it my personal mission to spread

this contagious exuberance for life. I'm convinced it's what will make it possible for me to die healthy at age 123. After all, people are living longer, healthier lives every day, all over the world. So why not me?

More importantly: WHY NOT YOU?

I decided to write this book because I'm convinced that I can do it. And in the pages that follow, I'll show you how.

I talk to a lot of people on both ends of the age spectrum. Those who are approaching the later years of life are often sadly complacent about the impending limitations of their age, being the first to admit they're a burden and a waste of space. Or they're in such denial about their age that they angrily lash out at anyone who dares classify them as "elderly" or a "senior citizen." Meanwhile, too many of the young people I meet behave as though the decisions they make today have little or no impact on whether they'll live a longer, healthier life. To so many of them, the prospect of getting older seems distantly unreal, like something that happens to others but will never happen to them.

All of these perspectives are unhealthy. They reflect the paradoxical truth of a National Public Radio feature on this very issue. "Everyone wants to live a long time, but no one wants to actually *be* old."⁴ Everyone wants to live well past 100, but no one wants to imagine there will come a time when it means having a less significant life than they do now because they failed to take the steps necessary to prepare for it. But that's why I'm inviting you to hear what I have to say right now. I'm convinced that a huge part of why aging seems to come upon us so suddenly and so overwhelmingly is because we don't

take steps now to give ourselves the best possible chance of living long, healthy, and meaningful lives. We wouldn't need to live in denial over the reality of aging if we had a healthier, more balanced perspective on this beautiful life process to begin with.

I've known many people—and I consider myself one of them—who have chosen not to age this way. I've learned that it's entirely possible to face the aging process with a healthy mixture of acceptance and enthusiasm, and this leads people to live happier (and often longer) lives. I like to call these people the *chronologically gifted*. They regard their age as a gift, the seal of a lifelong journey for which they are profoundly grateful. It's a journey that began at birth and one that they hope to continue through a personal legacy that immortalizes them in the memories of others.

Facing their own mortality, the chronologically gifted are determined to live with significance, passion, and purpose in the here and now. Even as they seize control over their attitude about aging, they surrender the illusion of control over the reality of aging. Somewhere in the mix, they lose their concern over whether they live to see five more years, thirty more years, or fifty. Yet as a group, they still tend to live longer and more rewarding lives than those who constantly preoccupy themselves with thoughts of getting older.

If you choose to, you can be chronologically gifted, too. *YOU CAN DO IT!*

It begins with a decision. If you're ready to make that choice, then now's the time—the earlier, the better. But no matter how old (or young) you are or consider yourself at

the present, your follow-through from this point on is what matters the most. In this book, we're going to talk about how, through a combination of determination and discipline, we can condition ourselves right now to face our final season of life—whenever it ultimately comes—with honesty, gratitude, and enthusiasm.

Before we delve into the “how,” let's first explore the “why.”

Why do we age?

This is a surprisingly difficult question to answer. Biologists, psychologists, philosophers and theologians have wrestled for centuries with the problem of senescence. The process of senescence includes the gradual, functional deterioration that most living creatures undergo as they approach the end of their lifespans. However, not everyone agrees that aging is necessarily a bad process. In fact, the emerging consensus among those who study senescence seems to be that it is to our evolutionary advantage that we age and die.

In this section, we're going to spend a little time talking about some of the major theories of aging. Like most scholars who major in this field of research, however, we won't be trying to understand senescence in order to figure out how to beat it. Instead, we'll be trying to better appreciate the wonder of nature that results in aging and, eventually, makes room for a subsequent generation to thrive in our place. The chronologically gifted embrace senescence and welcome it, not as a specter of fear, but as a benign intervention of nature that contributes to the flourishing of life. Our goal here is to begin our quest toward a longer and more fulfilling life by

fearlessly confronting and unashamedly marveling at nature's wisdom.

There are a number of factors that scientists think might contribute to the aging process. For instance, many talk about the gradual accumulation of cellular damage by unstable oxygen molecules in the body ("free radicals"), which may cause certain cells to stop functioning over time. Others talk about how hormonal changes and gene expressions are regulated by a sort of "biological clock." That measurement becomes active at some point in our lives and accelerates the pace of aging in a manner similar to the way we grow and develop rapidly during childhood, before slowing down in maturity. (Remember, aging is a form of growth.) This could explain the relatively sudden decommissioning of certain physiological processes we associate with senescence. Declining immune system function, in particular, leaves us more vulnerable to infectious disease and autoimmune disorders as we get older.

But whatever the root cause of aging—and no one has the answer to that question yet—scientists generally agree that senescence is a complex process we're only beginning to understand. "No single theory or phenomenon can completely explain why aging occurs," says Mayo Clinic physician Edward Creagan. "Researchers generally view aging as many processes that interact and influence each other."⁵ Some of those processes we have a measure of control over. (We'll talk about those later on.) Others are completely out of our hands, and it's important for us to recognize the difference.

Not long ago, scientists thought that biological cells were inherently immortal. That is, given the right combination of

nutrients and favorable circumstances, a normally functioning population of cells would never have an intrinsic reason to deteriorate and die. Old cells would simply be replaced by new ones, indefinitely. In 1961, however, the American anatomist, Leonard Hayflick, refuted this hypothesis by demonstrating that, even within a favorable growth environment, a culture of human fetal cells would only divide between 40 and 60 times before entering a senescence phase, when cells would slow their rate of division and eventually stop dividing altogether.

Hayflick's experiments, which have been replicated by many others since, demonstrated that genetically cell division seems to be programmed to stop after a certain number of divisions. This number has been termed the "Hayflick limit," and it varies from one species to another. To give you an idea of how it relates to lifespan, consider that a relatively short-lived laboratory mouse (approximately three years old) has a Hayflick limit of 15, while the long-lived Galapagos tortoise (approaching 200 years old) has a Hayflick limit of 110.⁶ That puts humans right about in the middle of the spectrum. Though we're not the longest-living creatures, we do have the longest average lifespan of any mammal.

Hayflick's observations have been corroborated by geneticists, who explain that damage to our DNA occurs after a certain number of cell divisions due to gradual telomere shortening. To avoid getting too technical, let's just describe telomeres as a sort of protective cap at the end of chromosomes that help preserve DNA—the biological coding for life contained in every cell. Each time a chromosome divides, a portion of its telomere is truncated, until eventually the DNA on the chromosome is exposed to damage, and cells can no

longer divide properly. Once cell division halts, old cells can no longer be replaced by new cells. This circumstance helps explain much of the anatomical deterioration we experience as normal biological aging. Also, it clarifies why muscles lose their ability to support our skeletal structures in old age, and why people become more fragile and susceptible to bones breaking over time. It helps us make sense of the way our skin becomes less elastic and why our hair eventually loses color. It also illuminates our understanding of cognitive decline, since deterioration of brain tissue contributes to dementia and Alzheimer's disease.

Some speculate that there are very good reasons why cells have this programmed limit. Senescence provides a natural guard against the development of cancerous growths that result from the unregulated division of cells.⁷ Imagine a world where it was both normal and expected that after a certain number of years everyone would die as a result of developing multiple forms of cancer. It's not a pretty thought. If death is inevitable, it's possible that the relatively slow decay of senescence is nature's wise selection against the more abrupt and painful decline we associate with aggressive cancer.

I certainly don't want to minimize the fact that cancer remains the second leading cause of death in the United States. Many of us will struggle with it as we get older. Nevertheless, I find encouragement in the thought that the same cellular process that is causing me to display the wear and tear of my age may also be nature's way of providing me time to begin coping with the end of life—to process what's going on and to make good decisions about how to tap into my remaining resources.

And then there are the social considerations, of which there are also many intertwining tributaries of thought.⁸ It's possible, for instance, that senescence is an evolutionary trait that promotes the flourishing of a species by causing one generation to “get out of the way” and make room for the next. As we're already beginning to see, medical technology is helping members of the Baby Boomer generation live longer. The combination of high birth rates and high longevity rates is a perfect storm of demand for precious life-supporting resources. If everyone were to live forever—or even if we were all to live to 100—our earth simply couldn't sustain us all. We would revert to animal-like competition and war (even more than we already do) over the scarce resources of this beautiful planet.

Interestingly, many of the educated societies of the world have substantially lower fertility rates than the world's average. As of 2017, the global average is 2.33 children per woman. Compare that with an average of 1.4 children per woman in Japan and Italy. Without discounting the complexity of sociological factors that play into such figures, it shouldn't be lost on us that these are also nations with some of the world's highest life expectancies (83.10 years in Japan, 82.94 years in Italy).

Here's another intriguing social possibility for why we age. Some believe that our biological programming is tied in some mysterious way to child rearing. Perhaps there's some hormonal cue that's triggered once our days of direct child rearing are over. Something signals our bodies that the demands of propagating the species have passed to our children, and the useful period of our own generation is coming

to an end. (Incidentally, this may help explain why grandparents who play a primary role in the care of grandchildren seem to thrive into old age where others decline. Perhaps there are biological cues that retard senescence in those who are still tasked with child rearing.)

Whatever the case may be, it's abundantly clear that aging is a complex natural process that involves a grand design that has more to do with *LIFE* than we usually imagine. Just think about that for a moment. What would it look like for us to age as if we were *LIVING* rather than dying? For those with eyes to see it the way the chronologically gifted do, aging is a way of joyfully connecting with something bigger than ourselves. We can't be in denial about these realities.

We have to face aging with gusto, refusing to become enmeshed in our own personal experiences as though our own lives are the most important aspect in the big picture. Our aging has to do with more than just us, and people who "get" that tend to live longer. Why? Because they don't feel like their years belong to them; they're on loan to them for the sake of a larger purpose. Theirs is not to decide how long to live as much as how to live for as long as they have. So they start putting those years to good use—right here and right now.

If you're ready, let's get started. ***YOU CAN DO IT!***

Might age reversal be possible someday?

We live in an age of unprecedented scientific and technological advancement. Many diseases that used to ravage society are now all but eradicated in the developed West. Many health conditions that once spelled sudden, early death—conditions

like meningitis and heart disease—can now be prevented through vaccines and early detection screenings. Even those chronic diseases for which we lack cures—AIDS and cancer, for instance—can be surprisingly well-managed with modern therapies that prolong patients’ meaningful lives for years, sometimes decades. And it’s only a matter of time before we discover cures for those diseases, too.

As a result of these and other achievements, citizens of developed countries are enjoying longer lifespans than ever before in human history. Today’s average life expectancy is 80 years for men and slightly longer for women. Statistically, very few people live to age 100—only about two in ten thousand⁹—and the majority are women. Jeanne Calment of France was the oldest known human being when she died in 1997 at the record age of 122. Nevertheless, while the math suggests that living past 100 is still relatively rare, it’s also a scientific fact that people are living longer every day, and the population density of individuals living past 80 will only increase with each passing year.¹⁰ Some call this the “silver tsunami,” fearing that our healthcare and social structures aren’t adequately poised to respond to this relatively sudden influx of geriatric citizens.

They may be right, but there are places in the world—the Blue Zones¹¹—where indigenous populations have far greater concentrations of centenarians than most places in the United States. Several of those populations have thrived under conditions that seem considerably less advanced than our modern medical infrastructures. They rely instead upon traditional family care models passed down through the centuries.

Many believe that as we continue to live longer, increasingly we're going to look to the wisdom of people in the world's Blue Zones to figure out how to adjust our societal structures accordingly. This wisdom may gradually change our cultural understanding of what constitutes "old". It is particularly true as social structures emerge to support younger family members caring for older family members and in communal living arrangements and neighborhoods where complimentary interactions between young and elderly people become the norm rather than the exception to the rule.

Still, the question at hand concerns age reversal, and that's where an important distinction comes into play. *Lifespan* has been increasing steadily, but *health span* has not kept pace. That is, while we're living longer, we're not necessarily enjoying our longer lives. "The period of disease and disability at the end of life, the dreaded decline of old age, has actually been getting longer," writes gerontologist Bill Gifford. "The only thing that changes, as we live longer and longer, is that we fall victim to different ailments."¹²

Chronologically gifted individuals don't settle for long life at the expense of their health. They're not interested in living forever if that means a prolonged state of disability and more opportunity for cognitive decline. Frankly, they would rather live functionally meaningful lives until 80 and then drop dead quietly, in their sleep.¹³ So the real question when it comes to longevity is how to extend the health span of our lives, not simply how to live a few more years. Fortunately, researchers are going public with some promising discoveries on that front.

Only very recently has the U.S. Food and Drug Administration (FDA) been willing to give the green light to a study examining the potential anti-aging properties of a drug therapy. The reason for this is simple: aging hasn't been considered a disease, and so drugs targeting the natural process of aging were considered unnecessary and perhaps even inappropriate. Personally, I think the FDA's philosophy on this matter is spot-on. Aging is not a disease in itself, and it's not helpful for us to think of it as such. Understandably, this has had a serious cooling effect on the market for age reversal studies. Even if a researcher was to discover a veritable "fountain of youth" drug, there would be no viable route for taking it to market and thus no profit motive to fund the research in the first place. That may be changing, though.

In 2015, the agency approved a clinical trial of the anti-diabetic medication, Metformin, in order to assess its anti-aging properties. Metformin is an inexpensive drug of first recourse in treating diabetes. Also, it's such a common prescription that the World Health Organization even lists it as an "essential" medication. Somewhat serendipitously, because so many people are already taking the drug, certain interesting patterns came to researchers' attention through epidemiological studies—epidemiology being the scientific study of the patterns, causes and effects of health and disease conditions within defined populations. The patterns revealed a lower incidence of cancer and other health problems among patients on Metformin.

In particular, the 2014 analysis of British patient data demonstrated an intriguing correlation between Metformin and longevity: those who were taking the drug were actually

living 18 percent longer than diabetics who were taking a different class of medications. This showed that it was Metformin itself, and not merely the control of diabetes, that was responsible for the elongated survival. Nir Barzilai, director of the Institute for Aging Research at the Albert Einstein College of Medicine (Yeshiva University), believes Metformin may alter our metabolism to make it look more like that of a centenarian. "It looks like a super-drug ... involved in many things related to aging."¹⁴ Should the clinical trials yield promising results, many believe the FDA may open the gates for additional anti-aging drug therapy research. Funding organizations like Age Reversal Therapeutics, Inc.¹⁵, are standing by to help accelerate the push for bona fide age reversal therapies to become mainstream reality within the foreseeable future.

We're also beginning to learn about some of the more complex anti-aging properties of naturally-occurring substances. These include tocotrienols (members of the vitamin E family) and quercetin (a flavonol found in high concentrations in many fruits and vegetables). When used in combination, these substances may offer scientists the ability to selectively target malignant cells to stimulate senescence (causing apoptosis, or cell death, and reversing tumor growth). Simultaneously these substances are promoting longevity in healthy cells by slowing senescence and removing accumulated "senile" cells from the body and staving off the dump of inflammatory chemicals that come with them. It very well might represent a new approach to fighting cancer and promoting longevity in the form of dietary supplements.¹⁶

Meanwhile, even more exciting discoveries in the field of genetics may offer the key to engineering longer-lived societies. One of the most talked-about (and most controversial) applications of the human genome map in recent years pertains to an enzyme technology known as CRISPER-Cas9. Without getting too technical, let's just say that CRISPR research is real-life "gene hacking" that allows technicians to "edit" a flawed strand of DNA to promote normal function. The potential applications, as you might imagine, are beyond incredible:

The technology has already transformed cancer research by making it easier to engineer tumor cells in the laboratory, and then test various drugs to see which can stop them from growing. Soon doctors may be able to use CRISPR to treat some diseases directly. Stem cells taken from people with hemophilia, for example, could be edited outside of the body to correct the genetic flaw that causes the disease, and then the normal cells could be inserted to repopulate a patient's bloodstream.

In the next two years we may see an even more dramatic medical advance. ... For years, scientists have searched for a way to use animal organs to ease the donor shortage [for transplant patients who would otherwise die before a donor was located]. Pigs have long been considered the mammal of choice ... but a pig's genome is riddled with viruses called PERVs (porcine endogenous retroviruses), which are similar to the virus that causes AIDS and have been shown to be capable of infecting human cells. ... Until recently,

*nobody has been able to rid the pig of its retroviruses. Now, by using CRISPR to edit the genome in pig organs, researchers seem well on their way to solving that problem.*¹⁷

These advances sound like science fiction. As a result, it raises all kinds of ethical questions, but the technology to engineer longer life is already within reach of today's scientific community. We're on the cusp of being able to literally "edit out" genetic diseases and to treat many of the conditions that would otherwise lead to premature death. Meanwhile, CRISPR may offer hope for revising our DNA to more closely resemble that of centenarians in the world's Blue Zones. The result will enable us to become more genetically predisposed to live longer, enjoy better lives and remove much of the apparent luck associated with living to 100 (and beyond).

So, is age reversal possible? Possibly, but only time will tell. But whether that's even desirable will depend on whether our health spans can keep pace with the longer lifespans these technologies might enable. (Fortunately, the strategies described in this book will give you the best shot at that.)

Should the chronologically gifted person hinge his or her life on this hope that science fiction medicine will soon become therapeutic reality? **ABSOLUTELY NOT.**

I hate to burst that bubble, but if you're holding out for miracles, then you're on the road to disappointment. The first step to becoming chronologically gifted is shedding the illusion. Make no mistake: I love reading about this stuff. I subscribe to health and wellness magazines. I read up on

popular science and life extension literature, and I frequently talk about these topics with friends. But you won't find me staking my future on it.

It's encouraging that scientists are better understanding the biology of senescence. It's wonderful that researchers and funding organizations are taking greater interest in viable age reversal therapies. Also, it's inspiring to imagine what new options might be available to 80-year-old people in the next ten or twenty years to make living a long and healthy life as a centenarian more the rule than the exception. I unashamedly hope and trust that I'll live to see those advances in technology.

Nevertheless, the chronologically gifted perspective on life has little or nothing to do with the science of age reversal per se. It garners certain immediately practical insights from the latest research—especially regarding nutrition and exercise—but beyond that, being chronologically gifted is more about an attitude adjustment that leads to meaningful lifestyle change. It's not about riding the technological wave with the hope of being first in line for some innovative rejuvenation therapy.

More to the point, the chronologically gifted don't have time to wait around for science to solve the "problem" of aging—because they don't regard aging as a problem in the first place. They are living their best years now, whether science keeps up or not. They know the facts: genes are responsible for no more than 20 percent of our longevity; the remaining 80 percent is up to us. Genetics are important, but we are not our genes. Even with the biological odds stacked against us, we can successfully overcome the maladies that might otherwise cut our lives short through energetic, healthy lifestyles and

personalized, proactive medical care. We can determine at any age to reverse our functional deterioration and live our best years now—with or without our genes' cooperation.

It all begins with attitude.

So now we understand some of the biology—enough, I hope, that we're in agreement that there's not (yet) a magical way to halt or reverse the aging process. We're making tremendous strides, but anyone who thinks they can avoid it entirely is grievously mistaken. "The denial of aging and the attempt to fight it are counterproductive," counsels Dr. Weil, "a failure to understand and accept an important aspect of our experience."¹⁸ So step one in my program for becoming chronologically gifted is simple: *admit that you're getting older.*

Stop fighting it.

Embrace it.

Own it.

Love it.

You might wonder how it's possible to love the aging process, but really it all begins with attitude. I'm not asking you to love the limitations that aging might bring. My younger readers don't yet know this, but it's not fun having to stop for a breather while other, younger peers run on ahead of you. It's not fun having to make more frequent trips to the bathroom.

But my older readers can take heart because there's good news: being chronologically gifted doesn't mean you have to pretend to be young! Isn't that a relief? Aren't you glad to hear that it's *okay* to be old—to act your age? And for my younger

readers, there's good news, too. Being chronologically gifted means it's *okay* to get older. You don't have to cling to your youth as though there's nothing left to look forward to once the gray hairs outnumber the colored ones. In fact, on that day, you'll actually have more to enjoy about life than you can possibly imagine from where you are right now.

Now don't misunderstand me. I'm not saying that older people can just aggressively tell the world, "I'm old...deal with it!" The world is going to move forward with or without us as we age. If we want to continue having a meaningful opportunity to participate in life, then we're going to need a healthy mind and a healthy body. We won't always be young, but we'll always be growing. So let's focus less on the number our age represents, and more on the fact that we're continuously evolving— all the way to our last breath. This need for meaningful development is something that 20-year-olds and 80-year-olds have in common. In their own, age-appropriate ways, both groups are on their way to becoming a better version tomorrow of who they are today.

That's right. No matter what our age is, we only thrive inasmuch as we continue growing into better, more well-rounded people. I use that word "better" in its basic qualitative sense. Each time we acquire a piece of knowledge or improve upon a skill that helps us deepen relationships, appreciate our experiences, and leave a more robust legacy, we've made ourselves better people than we were before. It doesn't matter how small the change is as long as it's a true change. Period. And that's the goal we have to keep before us if we hope to live the way the chronologically gifted do. We have to get up each morning asking ourselves what we can think, say, and

do that will help us go to bed that night feeling good about ourselves. And when we lay down for rest at the end of one day, we should do so excitedly looking forward to our next day's journey, confident in our personal relevance, engagement, and sense of life purpose.

The day we decide to stop growing is really the day we begin to die. For some people, that happens way too early in life, even while they're still relatively young and still involved in their careers. For other people, it never happens. Up until the end, they're on the road toward a vision of their better selves.

In a sense, those people never really die. They just stop breathing one day. And that's how I plan to go, too—content and healthy (at age 123).

Let's get to work!

We've barely scratched the surface of topics we're going to explore in this book, but it's not too early to start thinking about practical ways we can put what we're learning to good use. Before we begin delving into the insights we can glean from others' work in the field, it might be a good idea to spend a little time—perhaps a week or more—reflecting on your own reasons for wanting to live to 100 (and beyond). Getting a handle on the thoughts that are driving you to become chronologically gifted will help us do so with focus and momentum. At the end of the book, you'll have a chance to check in with yourself and see whether and how some of thoughts, ideas and perspectives have changed.

Suggestion #1: Think hard about why you want to live longer.

Everyone is hardwired with a survival instinct. It's the evolutionary feature that makes human beings—and all animals—reluctant to take unnecessary risks, to flee from danger, and to take steps to protect themselves when they feel threatened. Also, it's partly responsible for the resistance to the effects of senescence. For those of you who are not careful, it can lead to a stubborn denial of the reality that you're facing some limitations as you get older. If you experience severe depression and become suicidal, you are suffering from, among other illnesses, a malfunction of this basic facet of your humanity.

Yet, chances are, the mere fact that you are taking the time to read this book, suggest that you're not ready to die yet. You might be struggling to articulate a good reason for continuing to live. If that describes you, by all means continue reading. Equally important, I hope you will get in touch with a professional counselor. Depression is a serious matter, and aging can make it worse. There's no shame in admitting that you need help. One of the characteristics of the chronologically gifted is their ability to assess when they need help and to get it—without getting hung up on whether they “do” or “don't” need help.

There are two basic reasons why people want to live longer. Either they have something to live for, or they're simply afraid to die. One of these attitudes is helpful, and the other is not.

Everyone fears death to some degree. Even those who claim not to be afraid of death usually have some doubts that make them uneasy, and this is both natural and healthy. But the difference between the chronologically gifted and everyone else in the world is the way they're so busy living for something that they spend very little time worrying about when they're going to die.

So the first exercise we'll do together is a really simple one. Ask yourself, "*Why do I want to live to a ripe old age?*" The question may sound obvious. But as you're probably discovering, it's a haunting question that's hard to articulate an answer to—even for those who just know they have a lot to live for.

Language is a very powerful tool, which is why this exercise is so important. Identifying your motivations will help clarify them, which will help you capitalize on opportunities for improving them over the course of our time together. If you find that you're answering the question in terms of seeking a purpose for your remaining years, then you're already well on your way to becoming chronologically gifted. If, however, you find that fear is dominating your thoughts, then you're not alone. It's time to face that fear for what it is. Put it out

there, and name the elephant in the room. Don't be ashamed, but do realize that by the time you're done, you'll probably find that fear of death is no longer the most compelling reason you hope to live the longest life possible.

Suggestion #2: Make a list of things you think you're getting too old to do.

Be honest here. This is extremely important because when you reach the end of this book, I'm going to ask you to revisit this question to see what, if anything, has changed about your self-awareness. This exercise is equally important for younger readers. If that's you, please don't skip over this section. While you may struggle to think of anything you're getting too old to do, it would be a mistake to assume there aren't activities you've already consigned to the years behind you. And this is precisely the point of doing this exercise: to reveal how arbitrary many of those decisions are—especially the ones we've made without quite realizing it!

The simple fact is that there are many activities that older people are not especially suited for, at least not in the manner they might have been in their younger years. There is nothing inherently unhealthy about admitting that you're too old to do something that you used to enjoy doing. Nor is there anything wrong with deciding for yourself that there are certain age-appropriate activities that are reserved for younger bodies. But there is one question I'd

challenge you to answer as honestly as you can: does your present perception of your limitations line up with biological reality, or is it essentially the product of insidious social conditioning? Are you really *too old* to sign up for ballet classes at 30? To go back to school at 50? Or to start your own business at 65?

Social conditioning applies to younger folks more than you may think. There's a tremendous amount of pressure to grow up as quickly as possible and never look back. For example, I'd like to suggest that adults can still have good-humored pillow fights and costume parties (with or without children). Adults can still shamelessly enjoy rides on the merry-go-round or spin in circles staring up at the stars before falling onto the soft grass—just to feel the world turn.

Children may not have the maturity that comes with adulthood, but neither are they burdened with the world's cares the way most people are. Let's not be too quick to dismiss the fact that even by age 30, there are many behaviors society tell us we're *too old* for that have nothing to do with biological reality—and could actually help us live longer.

Now, there are real limits to what we can and should do as we age, so spend some time honestly listing out a few concerns that are most important to you. It probably won't be hard for you to think of at least two or three, but don't feel badly if you

immediately think of five or ten. (Keep in mind younger readers, these don't necessarily have to be activities you're already *too old* for. Your list could include things you worry that someday you will be *too old* for.) It's healthy to purge these thoughts and get them out there where you can face them honestly. The goal is simply for you to list clearly what your perceived limitations are (or someday might be), so that you can ask yourself: are they real or merely self-imposed?

Write out your list, but don't dwell on the items right now. Put your list away somewhere, confident that some of what you have written will probably change by the time you understand better what it means to be chronologically gifted. But make no mistake—some of it won't change, and that's okay, too. Why? Because even if you're spot-on about what you're too old for now (or will be someday), in the future, you will have a much healthier, more optimistic attitude about those limitations—and what you can do right now to delay their onset and reduce their impact.

Suggestion #3: Make a list of activities you're not willing to give up at any age, no matter what.

This exercise is for the younger readers too. It might be helpful for you to frame this question in terms of, "What am I determined not to give up on, no matter how old I get?" Okay, this is a much more enjoyable

exercise than the last one—and I hope that this list will be at least three times as long as your previous list. This suggestion is different because it invites you to think past the possibility of limitations and look for ways to embrace what really matters out of life at any age.

Make this a two-part endeavor. First, list everything that comes to mind when you think of what makes your life worth living. Be specific, too. Don't just write: "my career," "community," or "travel." Instead, write ideas like: "feeling a sense of personal fulfillment in my career," "being involved in something important in my community," or "making it a point to have at least one new adventure every year."

If you find that you could go on and on, that's rewarding! But don't. Stop after about 15-20 minutes of reflection. Then go back over the list you've just written, and circle your top three. That's going to be tough, of course, because it will feel like you're limiting yourself. But don't think of it that way. Instead, think of it as a way of focusing on three items—a manageable number—that at this time give your life its greatest joy.

Now for the hard part. I want you to spend the next week thinking about the three items on your list. By the end of the week, see if you can come up with one way that you're already short-changing your enjoyment of those activities. For instance, to continue with the career example, perhaps upon

further reflection you would find that fear of failure is keeping you from applying for a major promotion that would unlock new opportunities for you. Maybe you've become so comfortable in your routine that you're afraid to leave your dead-end job and change careers. Or perhaps you've been contemplating an innovative start-up idea, but you haven't given yourself permission to follow your dreams.

The goal of this exercise is to begin focusing on the facets that make your life meaningful and start thinking creatively about ways that you can amplify your enjoyment of them and launch new adventures—at any age. Even the happiest people in the world have opportunities to enjoy more of their lives than they do right now. **YOU CAN DO IT!**

Suggestion #4: Be Gifted. Spend some time in front of the mirror. Fall in love with yourself all over again.

It may sound like I'm encouraging you to be narcissistic here, but I promise that's not the point of this exercise. I'm simply calling our collective bluff. It's no secret that as we get older we become more and more reluctant to honor the faces and bodies we see in the mirror. We become more camera-shy, and we prefer lovemaking in the dark (especially us girls).

Younger readers who may notice relatively few of the signs of aging on their bodies would do well

to spend this time reminding themselves that the body they see now will one day look different. That's okay, because the person residing within that body will be more well-rounded than the person looking in the mirror today.

Chronologically gifted individuals have a healthy sense of self-love. It's a kind of love that makes them feel confident in their own skin—wrinkles and all. It's a kind of love that invites others to look on them without fear of offending them with comments that give away their age. After all, age is just a number, and it's one of the realities they love about themselves! (Just imagine living in such a way that younger friends felt no need to dance around the topic of age. How refreshing would that be for you?)

This week, stop and stare at yourself in the mirror a few times each day. As you notice the signs of aging, come up with a reminder. Tell yourself, "I'm not just getting older. I'm learning to live better." Let the features that reveal your age be the ones that remind you of the wisdom and maturity that you prize as a result of your life experiences. Fall in love with the person looking back at you in the mirror because that's the person who has a lot to offer the world.

The bottom line

Aging is not optional, but growth is. I'm convinced that we have far more power over how we age than society conditions us to believe. And that's what this book is all about. "Most of what we call aging, and most of what we dread about getting older," observe experts Chris Crowley and Dr. Henry Lodge, "is actually decay. [...] You will get older, no matter what. But you do not have to *act* old or *feel* old. That's what counts. We haven't figured out a way to last forever, but aging can be a slow, minimal, and surprisingly graceful process."¹⁹

If you're with me this far, then congratulations! You've already taken the first step toward becoming chronologically gifted. You've decided you don't just want to live longer, but you want to live better. That means focusing on each day you're blessed to have left, beginning right here, right now. You may not be sure about what you need to do next, and perhaps you're even feeling a little overwhelmed. That's perfectly all right. It means you're starting to get the picture of what you've been missing out on in life before now. But don't worry! You're already living your life more fully simply by bringing it into your consciousness. You've already taken one life-giving step away from the dull, mindless existence into which our culture so seductively lures us. You may die tomorrow or you might die sixty years from now (or more), but you can be confident of this much: you'll leave this world more complete now than you would have if you had expired even a few hours earlier.

Take comfort in knowing that everything you do from this point on takes you one step closer to living the kind of mindful, joyful, seize-the-day life you decide to live. Let each

topic we discuss in this book become a springboard for deeper engagement with the life inside of you—the timeless part of you that is desperate to express itself, despite the best efforts of an age-fearing culture to suppress it.

Are you ready?

Okay, then. Let's dance.