

JOYSPAN

THE ART
AND SCIENCE
OF THRIVING IN
LIFE'S SECOND HALF

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*To Betty and John Parker, who taught me to dive into life.
To my love, Todd Burnight, who swims with me through every tide.
To Beau, Claire, and Elle Burnight, who inspire us to float,
breathe, and enjoy the water.*

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Introduction

People ask all the time: What's Betty's secret?

Betty is my ninety-six-year-old mother. She lives on her own, is as sharp as ever, belly-laughs with friends, and never forgets a birthday or condolence card. Family, neighbors—even strangers—can't get enough of her.

But here's the thing—Betty has never been particularly athletic, enjoys dessert, sips the occasional cocktail, and is the first to admit she didn't always have the best attitude when she was younger. So how is she thriving in her later years?

Spoiler alert: It's not her genes and it's not just luck.

Her secret isn't perfect health or a life free from hardship. In fact, it's not a secret at all—it's science.

As a gerontologist, I've spent decades researching the factors that enable people to thrive in the second half of life. In this book, I share the proven strategies that have helped Betty maximize well-being in longevity—and that will help you do the same.

When we talk about longevity, we often focus on lifespan—how long we live—or healthspan—how many of those years are in good health. But what's the point of a long, healthy life if you're not enjoying it?

That's where joyspan comes in—the key to a fulfilling long life. It's about more than just physical health; it's about cultivating internal strength—the ability to grow, connect, adapt, and give, all life long.

We are all aging. Whether you're twenty-three or a hundred and three, the best time to invest in your joyspan is right now.

Let's get started.

A NEW WAY TO LOOK AT AGE

Anyone who says, "Age is just a number," has not reached the high numbers. Aging is not easy, and "forever young" is not a plan. Regardless of how many burpees you can do or protein smoothies you chug, the passing of time brings challenges. Roles that you relished change, words on the menus seem to shrink, necks sag, diagnoses arise.

On the other hand, aging is not the downhill slide that people believe it is. A multibillion-dollar antiaging industry profits when you feel awful about yourself and fear aging like the plague. The tragedy of aging is not that we will all grow old and die, but that aging has been made unnecessarily, and at times excruciatingly, painful and humiliating. Aging does not have to be this way. When it comes to longevity, the primary focus has been upon lifespan, the length of life.

More recently, the scope has expanded beyond years of life to *years of life in good health*, or healthspan. This is a welcomed shift, because we all want to live as healthy as possible for as long as possible.

But there's a catch. A long life, even a long life in good health, doesn't mean much if you don't like your life. As geriatrician Dr. Louise Aronson observes, "We've added a couple of decades, essentially an entire generation, onto our lives, and we haven't figured out how to handle that."¹

What we've been missing is a practical vocabulary and approach to maximizing the quality of our long lives. We need a science-based, how-to guide for creating long lives characterized by inner well-being. It's not enough to have a long lifespan and healthspan; we want what I call a long *joyspan*.

WHAT IS JOYSPAN?

Joyspan is the experience of well-being and satisfaction in longevity. Because the focus is upon well-being, I tried out the term “wellspan” with my patients. After more than a few people thought I was saying, “wealthspan,” I started calling it “joyspan”—it’s been a perfect fit. The American Psychological Association defines *joy* as the feeling that arises from a sense of well-being or satisfaction. Experiencing joy is different from feeling happy. Happiness comes and goes and is often dependent on external circumstances. Joy can be experienced even in adverse situations. More akin to contentment than to ecstasy, joy may show up in the form of a smile, but many times it does not. You cannot always ascertain someone’s joy by observing them. One older woman looking at the trees through her window may be lonely and miserable, while a different older woman looking at the same trees may be experiencing great joy.

My mother, Betty, is enjoying a long joyspan. She practices what I preach: a research-based, proven approach to maximize well-being in longevity. Joyspan requires knowledge, intention, and effort and is achievable regardless of where you are starting out today. Your current approach to longevity is no doubt incomplete. In everyday media we are inundated with advice on maximizing physical fitness, but very little on how to maximize internal fitness and emotional well-being. Joyspan brings to light the robust research findings on psychological well-being, which are too often tucked away in academic journals. This book is what you need but have been missing.

To thrive in old age means to live a fulfilling, purposeful, and satisfying life despite the challenges that accompany aging. It involves maximizing physical health, cognitive function, emotional well-being, social connections, and a sense of meaning. Thriving doesn’t mean being free of all health problems or challenges; rather, it emphasizes resilience, adaptability, and the ability to find joy and value in

life. People don't thrive in longevity by mistake or luck. People who thrive in longevity actively maximize the quality of their lives. But how? What does the research say about HOW to thrive in life's second half? As a gerontologist, I scoured the findings of thirty-five years of empirical testing on psychological well-being in longevity. The research was conducted by experts from around the globe and points to hundreds of predictors. But the deeper I dug into the findings, the more I recognized a profound underlying pattern. The hundreds of predictors found in thousands of studies on what is necessary to thrive in longevity consistently group into four essential elements. The research showed that people with long joyspans actively commit to four critical actions:

- **Grow:** They continue to explore and expand.
- **Connect:** They put time into new and existing relationships.
- **Adapt:** They adjust to changing and challenging situations.
- **Give:** They share themselves.

Each of these elements is nonnegotiable for well-being in longevity, and you can improve in each area. Joyspan matters because without it, a long life is a drag.

MY PATH TO JOYSPAN

When I completed my PhD thirty years ago, I was in the oxymoronic position of being the youngest doctor of gerontology in the country. To me it made perfect sense—in fact, it felt like I was born a gerontologist. To start out, I came as a surprise to my middle-aged parents and my siblings, who were high school age. I was the only four-year-old in preschool whose sister was married. When kids made fun of old people, it felt personal to me. Sometimes I'd ride out the jabs in

silence; other times I'd stand up for my people: the gray, the wrinkled, and the fabulous.

I taught geriatric medicine and gerontology for nineteen years at the University of California, Irvine School of Medicine. At UCI's Senior Health Center, I had a front-row seat to observe people, and their families, navigate old age. What struck me most was the radical differences in how people experienced their own aging process. For some, it is a frustrating, degrading, painful trajectory of ever-increasing decline. For others, there is visible delight, spirituality, and joy in occupying their eighth, ninth, and tenth decades.

The vast majority of my career has focused upon the former group, those suffering in old age. What I've seen has burned my eyes and left scars on my heart. Blue-eyed Mrs. C., who endured searing physical pain and profound loneliness. Proud Mr. R., who had to choose between needed medication and a meal. Miss T., who cared lovingly for her brother with Down syndrome until she developed Alzheimer's disease, and the two were found in conditions that haunt me to this day.

Dr. Laura Mosqueda is my mentor, friend, and a gifted geriatrician. She and I had the privilege of creating and codirecting the nation's first Elder Abuse Forensic Center, which investigates cases of elder abuse. What we learned from thousands of cases of elder abuse and neglect is that no one is immune to finding themselves in dire situations in old age.

We learned that loneliness kills, and that isolation is a key risk factor. We came to understand that neglect and mistreatment don't occur just in dilapidated shacks, but also behind the closed doors of beautiful homes. Suffering in old age is not a "they" problem; it's an "us" problem. We found that after the abuse, neglect, or financial exploitation occurs, it is the older adult who feels shame instead of the perpetrator—which is heartbreaking and infuriating. Other times, there is no one at fault, only an awful no-win situation with suffering all around.

Many days I drove home from work in tears, my blouse doubling as a tissue. Laura and I received the National Crime Victims' Service Award from the US attorney general, and though I should have been proud, I remember feeling awful on the flight home. I had an image of myself sitting at the base of a skateboard ramp. I was doing my best to bandage up people when they hit the elder abuse pavement at the end of the ramp, but scars and suffering remained. I realized that the real goal was to get to the top of that skateboard ramp and provide people with the equipment they needed for the experiences of later life.

The purpose of this book is to fortify you and those you love for these unprecedented long lives. I want you to thrive during your entire life.

ABOUT THIS BOOK

I've divided *Joyspan* into three sections.

Part 1 explains why your joyspan matters. Chapter 1 defines joyspan and highlights joyspanners who have preceded you. Chapters 2 and 3 delve into how joyspan affects your lifespan and healthspan.

Part 2 explains what you need to do to strengthen your joyspan. Chapter 4 is a deep dive into the first essential element of joyspan, lifelong growth. Chapter 5 provides practical information on how to create and strengthen your community and connection in the second half of life. In chapter 6 you will learn how adaptability contributes to joyspan and how to maximize your adaptability. Chapter 7 shows how giving back unlocks your life purpose and provides meaning.

Part 3 reveals how to create your joyspan for a life you will enjoy living all the way to the end. Chapter 8 shows you how to fill your joytank, while chapter 9 gives you the tools you'll need when your joyspan dips. I examine common struggles such as feeling like a burden, mobility and health obstacles, and loss.

Within each of the three parts, you'll see recurring elements. *Joyspanners* are mini-profiles of adults embodying the elements of joyspan. *Joy Practices* offer activities and exercises to go deeper into your exploration of what creates a long joyspan. Finally, *Joyspan Matrices* are examples of how real people are applying the four elements of joyspan.

I've been thinking about old age for a long time. Thirty-three years ago, I wrote this poem in response to my English professor's prompt: "What do you care about?" What I cared about, what I still care about, was older people. The poem, called "We Are They," ends this way:

Yet somehow, we row closer still, toward the mighty river's end.

The moans they are among us now, at last we understand.

We are they, and we can make choices now, here in gentler tides, while we are miles up the river.

What I want you to gain from reading this book is hope. A good and joyful second half of life is an inside job. Just as the physical self is made up of cells, the inner self is made up of thoughts. According to the National Research Foundation, humans have around sixty thousand thoughts per day. Like cells, thoughts are often small and seemingly innocuous. Taken together, however, thoughts become the inner self. As we grow older, we can't hide behind a fresh face or body. The inner self takes center stage, and it can be glorious. I know because I've seen the radiance of joyspan in thousands of older adults. I want that for you.

PART I

Why Your Joyspan Matters

CHAPTER 1

What Is Joyspan?

I had two grandmothers, Eda and Charlotte.

“Don’t ever get old, Kerry,” Gram Eda told me. She was only sixty-four. “Back in the day, I was actually useful.” Eda believed that growing older was all downhill, and she made her decisions based upon that belief.

Eda stopped cultivating relationships with family and friends. Visits consisted of us sitting around staring at her while she talked about her unfair life, saying, “I got a bad break, losing Theodore, and then becoming crippled with this damn arthritis.” I could hardly wait until it was time to leave our visits.

Eda could not accept the older version of herself. She had a lot to give but couldn’t see it. For example, I longed to have her take an interest in me and to tell me about her younger self. Her stories were left untold, and memories were never created. Eda *believed* older would be awful, and she was right. Although she lived eighty-one years, her joyspan was less than sixty years.

My maternal grandmother, Charlotte, held a very different view of aging. Like Eda, Charlotte lived alone on a small, fixed income after her husband’s passing. She saw aging as the opportunity to do more living. “Kerry,” she said one day, “you may join me on my walk tomorrow, but I leave right at seven a.m. Be ready to go or I’ll go

without you.” I was ready. The walk took us to a hidden greenbelt covered with tiny grazing bunnies. She exposed me to the fresh quiet of morning, a world I usually slept through.

Charlotte made it a point to get outside every day. She was equally committed to continued intellectual growth. She took notes when she watched the news. “I like to know which leaders are from which countries, and what they are doing,” she’d explain. My mom saved these TV notes—the names Pierre Trudeau (Canada) and Isabel Perón (the first woman president of a world country, Argentina) scrawled in her curly penmanship. As Charlotte’s longtime friends began to predecease her, she created a women’s reading group to discuss books, share meals, and listen to music. Charlotte only had one child, my mother, Betty, yet she was rich with family. She often telephoned Betty, her three grandchildren, their spouses, and her eleven great-grandchildren. When she could no longer walk unassisted, Charlotte adapted her daily workouts to her walker. In her late eighties, Charlotte grew frail, but she always saw her value, always knew she had something to give. The focused attention and encouragement she gave me impacted the trajectory of my life. Charlotte *believed* being older would be just fine, and she was right. Her joyspan was as long as her lifespan—eighty-nine years.

We remember Charlotte with fondness, and Eda with sorrow. How do you wish to be remembered? What specifically enables some people to thrive in longevity while others languish? The attention they give to cultivating their joyspan.

INTRODUCING JOYSPAN

Joyspan is the experience of psychological well-being and satisfaction in longevity. It is the response to the question: *Why* do you want to live longer? For what? For whom?

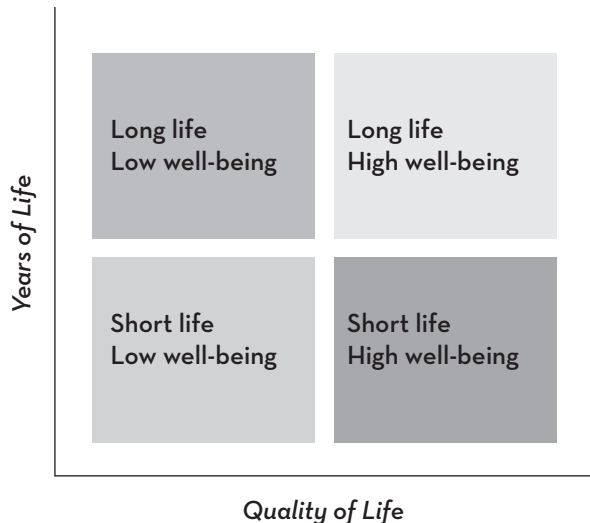
In a world obsessed with living longer, Joyspan is about living better.

We've been missing a practical vocabulary and approach to maximizing the *quality* of our long lives. Joyspan is a science-based “how-to” for creating a long life characterized by inner well-being. The goal is to live as long as possible with as much quality of life as possible.

Longevity is not just a number of years (lifespan).
It's not even the number of years lived in good health (healthspan).
It's how many years you enjoy living (joyspan).

How do years of life intersect with quality of life? Let's think about it with a simple diagram. The “Years of Life” axis is divided into two categories: long life and short life; and the “Quality of Life” axis is divided into two categories: high well-being and low well-being. The resulting four quadrants are summarized in figure 1.

FIGURE 1. The Length and Quality of Your Life



Because we are interested in longevity, let's focus on the upper squares of the quadrant, representing people with long lives. There are two options: (1) the upper left quadrant: a long life with low well-being; and (2) the upper right quadrant: a long life with high well-being. In other words, suffering or joyspan. That's an easy one; you opt for the upper right quadrant, all day, every day. You opt for joyspan.

But how? What are the predictors of joyspan according to the research? Thousands of studies in the fields of gerontology, psychology, sociology, neuroscience, biology, epigenetics, and philosophy have posed this question.

In her seminal 1989 paper, "Happiness Is Everything, or Is It?," Dr. Carol Ryff laid the foundation for the Psychological Well-Being model (PWB model), offering a multidimensional perspective on what it means to live well beyond mere pleasure-seeking.¹ The PWB model was influenced by existential, humanistic, and developmental psychology—particularly the work of Carl Jung, Erik Erikson, Abraham Maslow, and Viktor Frankl. The PWB model identifies six core components that predict positive functioning throughout life:

1. **Autonomy:** The ability to make independent choices and resist social pressures.
2. **Environmental mastery:** Competence in managing everyday life tasks and challenges.
3. **Personal growth:** A continued openness to new experiences and development.
4. **Positive relationships with others:** Developing deep, meaningful social connections.
5. **Purpose in life:** A sense of direction, meaning, and future-oriented goals.
6. **Self-acceptance:** A realistic view of oneself, acknowledging both strengths and weaknesses.

The Psychological Well-Being model has been tested extensively in projects such as the MIDUS (Midlife in the United States) survey and the Survey of Midlife Development in Japan. These studies focus on how well-being evolves across the course of a life, exploring the roles of life transitions, social roles, and health changes. Findings confirm that even as physical health declines with age, many older adults report high levels of personal growth, purpose, and self-acceptance, suggesting resilience in psychological well-being. This finding holds true in studies in other countries as well. For example, the international Survey of Midlife Development found that cultural differences shaped certain aspects of well-being (for example, autonomy), but purpose, relationships, and self-acceptance remained important across all contexts.²

Taken together, thousands of studies from around the world confirm that psychological well-being is dynamic, meaning that it can be changed, and it can be maintained or even enhanced with age, especially when individuals stay engaged, maintain social connections, and find new sources of meaning.

The joyspan model builds on the foundation of the Psychological Well-Being model, with an additional element shown to predict well-being in later life: adaptability. Developed by Israeli researcher Dr. Hod Orkibi, the creative adaptability framework is the capacity to generate cognitive, emotional, and behavioral responses to changing and stressful situations.³ His research reveals the power of adaptability in older adults to foster psychological flexibility and well-being in later life. As we grow older, adaptability helps us manage transitions like retirement or health challenges through proactive engagement and emotional regulation. Findings reveal that older adults with higher adaptability skills experience greater resilience and personal growth.

————— JOY PRACTICE: —————
The Joyspan Inventory

How is your joyspan? Take the Joyspan Inventory by circling your answers to the eight questions below. Be as honest as possible—this is just your baseline. You can improve it!

GROW

1. *For me, life has been a continuous process of learning, changing, and growth.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

2. *I think it is important to have new experiences that challenge how I think about myself and the world.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

CONNECT

3. *I have experienced many warm and trusting relationships with others.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

4. *I enjoy mutual conversations with family members and friends.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

ADAPT

5. *I try to think about stress from a new perspective.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

6. *I adopt new behaviors to help me through changed circumstances.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

GIVE

7. *People would describe me as a giving person, willing to share my time with others.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

8. *I have a sense of direction and purpose in my life.*

Strongly agree	Somewhat agree	Slightly agree	Neither agree nor disagree	Slightly disagree	Somewhat disagree	Strongly disagree
7	6	5	4	3	2	1

To score, add up the numbers of the answers you circled.

GROW = _____

CONNECT = _____

ADAPT = _____

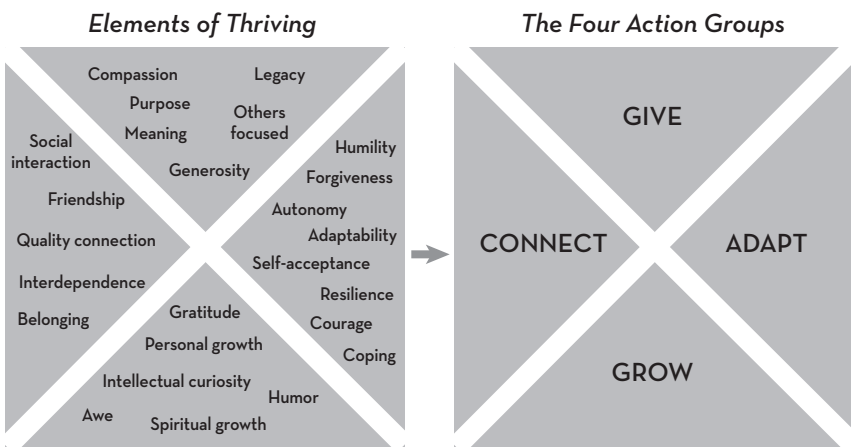
GIVE = _____

The higher the score, the better. Take note of your lowest and highest scores. See if they change over time.

THE JOYSPAN MATRIX

The Joyspan Matrix is how you take action. The definition of a matrix is an environment in which the elements of something develop. The Joyspan Matrix is the environment in which the four elements of joyspan develop. The Joyspan Matrix consists of the four essential actions: Grow, Connect, Adapt, and Give. As depicted below, each of the four elements is based on research into the topics shown in figure 2.

FIGURE 2. Four Actions Associated with Thriving in Longevity



The Four Actions Groups of Thriving

For example, the element *Connect* is drawn from the research showing the importance of social interaction, friendship, quality relationships, belonging, and interdependence. Each of the elements is captured in an action word to highlight your active role in maximizing your joyspan (see figure 3).

Each of the elements is essential to Joyspan and each can be improved—even radically improved.

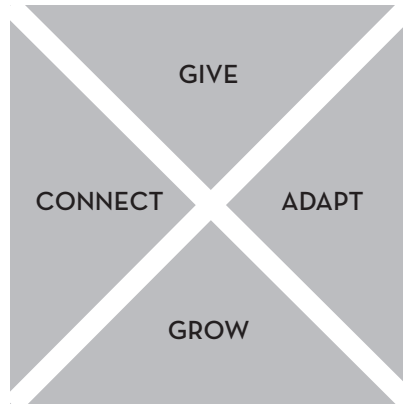
GROW is your determination to continue developing as a person.

CONNECT is your dedication to building relationships with other people.

ADAPT is your desire and ability to adjust to life's inevitable challenges.

GIVE is your willingness to share yourself to enrich the lives of others.

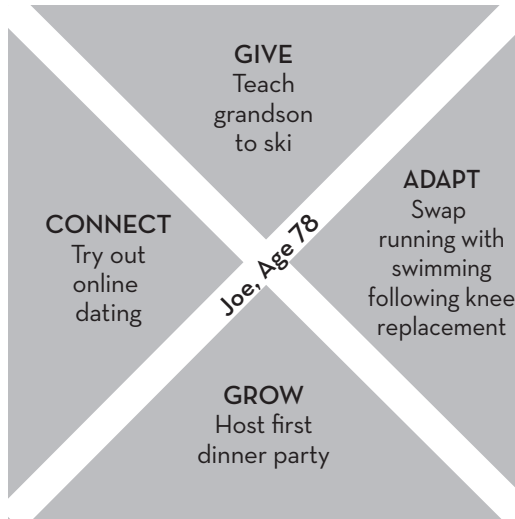
FIGURE 3. The Joyspan Matrix



Like physical fitness, your emotional and psychological fitness—your joyspan—takes daily attention and effort. Figure 4 is a joyspan matrix in action from the life of my friend Joe. Like everyone, Joe's joyspan matrix is dynamic and always changing. This was Joe's matrix two years after the death of his wife, Laura.

You will find additional real-life examples of the Joyspan Matrix in action below. As you read through these real-life examples and then go on about your life, you'll start to become aware of these four

FIGURE 4. Joyspan Matrix in Action: Joe, Age 78



critical action elements in your own life. Often, you will find yourself strong and active in some elements and lagging in other elements. That's normal, and with this framework, you'll be able to identify where you need to put in additional effort. For example, you may find yourself actively growing, connecting, and adapting, but realize you aren't actively giving of yourself. When you become aware of this, you will be able to take more action in giving and watch your joy rise.

WHAT IS JOY?

Joy is the experience of contentment, gratitude, and meaning, regardless of our external circumstance. Joy is not simply feeling happy. Joy encompasses quality of life and the ability to contribute to the world with a sense of meaning and purpose. Archbishop Desmond Tutu explained, “While happiness is often seen as being dependent on

external circumstances, joy is not.” Joy, by definition, cannot be the goal. “If you . . . say ‘I want joy,’ clenching your teeth with determination,” advises the Dalai Lama, “this is the quickest way of missing the joy bus.”⁴

“Joy does not simply happen to us. We have to choose joy and keep choosing it every day.”

—Henri Nouwen, *Dutch Catholic priest,
professor, and writer*

The concept of joy has ancient roots, with some of the earliest references to it found in religious texts, philosophical writings, and poetry. In the Sumerian text *The Epic of Gilgamesh* (2100 BC), passages describe moments of joy through friendship and celebration and mark one of humanity’s earliest reflections on interpersonal joy. *The Rigveda* (1500–1200 BC), part of the Indian Vedas, includes hymns that celebrate joy, bliss, and gratitude toward the divine. Concepts like *ānanda* (bliss and joy) are central to both spiritual fulfillment and cosmic harmony. In the Hebrew Bible (1000 BC), joy is seen as a gift from God, connected to faith, worship, and righteousness. Psalm 16:11 states: “You make known to me the path of life; in your presence there is fullness of joy.”⁵ The *Tao Te Ching* by Laozi (sixth century BC) suggests that simplicity and contentment lead to joy. The work advocates for a peaceful life, removed from excess and ambition. The teachings of the Buddha (fifth–fourth century BC) emphasize joy (*pīti* in the Pali language) as a mental quality associated with spiritual practice. The joy from meditation and insight is considered integral to achieving enlightenment.

All these ancient texts, along with millions of writings on joy created since then, highlight different forms of joy—whether through

divine connection, human relationships, or inner peace—and reflect how joy has been regarded as an essential part of life for millennia.

“Live in joy, in love, even among those who hate. Live in joy, in health, even among the afflicted. Live in joy, in peace, even among the troubled.”

—*Dhammapāla*

If we look through the prisms of neuroscience, philosophy, psychology, sociology, and evolution, we find additional ways to think about joy. Neuroscientists, for example, have demonstrated how joy activates key areas in the brain, which impacts behavior and emotional well-being. A part of the brain called the nucleus accumbens plays a vital role in experiencing joy, which in turn impacts neurotransmitters associated with pleasure and reward. Joy is linked to the release of both dopamine and serotonin. Specifically, dopamine surges in this region during positive experiences, reinforcing behaviors that lead to joy and motivate individuals to seek similar rewarding activities in the future. Functional MRI studies reveal that joy activates regions such as the prefrontal cortex and the amygdala, two parts of the brain that govern emotions and positive experiences.⁶

From a philosophical perspective, thinkers like Aristotle considered joy to be part of eudaimonia (a meaningful, flourishing life), connected with virtues rather than fleeting pleasure. In existential philosophy, joy is associated with moments of authenticity and transcendence in which individuals feel fully aligned with themselves or life’s purpose (e.g., Kierkegaard’s work on joy rooted in faith).

In a branch of psychology called positive psychology, joy contributes to mental thriving, and studies show that joy enhances resilience

and social bonds. Theorist Barbara Fredrickson suggests that joy can broaden thought processes and encourage creative exploration.⁷

From a sociological vantage point, joy can be communal, as seen in celebrations or rituals where individuals feel uplifted by shared experiences (e.g., festivals and sports events). Different cultures value and express joy uniquely. For example, “*joie de vivre*” in French culture emphasizes savoring life’s pleasures, while some Eastern cultures associate joy with contentment and harmony. In evolutionary science, joy is shown to encourage social bonding and cooperative behavior, which are essential for survival and community building. Children exhibit spontaneous joy, often tied to play and exploration, which fosters cognitive and emotional growth.

JOY IN SPIRITUALITY

Joy in spirituality is described as a deep, transcendent experience that arises from connection—with God, nature, art, and meaningful human interactions—beyond the fulfillment of personal desires. Joy reflects a sense of unity, presence, and peace, often cultivated through mindful engagement with the seen and the unseen parts of life. For example, nature instills a sense of joy and wonder by reconnecting us with the rhythms of the earth. As John Muir beautifully remarked: “In every walk with nature, one receives far more than he seeks.” Joy is not just about individual gain but about aligning with something larger than oneself.

Loving interactions, when meaningful and authentic, elicit joy that transcends personal desires. I first typed the sentence as “loving human interactions” but then our dogs walked up to me, and after a big hug, I corrected the sentence. Sociologist Brené Brown, in her research, emphasizes that joy arises from vulnerability and authenticity in relationships.⁸ Joy is found in moments of shared love—whether in community, friendship, or small acts of kindness.

Art has long been seen as a source of transcendent joy, capable of stirring emotions and connecting individuals to deeper meanings. Philosopher Friedrich von Schiller suggested that engaging with beauty through art fosters an elevated state of joy, liberating the mind and soul from mundane concerns. Consider his work “Ode to Joy,” which inspired Beethoven’s Ninth Symphony—a testament to how artistic beauty can elicit collective joy and shared human experience.

**“Joy collected over time fuels resilience—
ensuring we’ll have reservoirs of emotional
strength when hard things do happen.”**

—Brené Brown, researcher and writer

Both religious and secular spirituality emphasize mindfulness—the practice of being fully present in the moment—as a path to joy. Philosopher Alan Watts suggested that joy is inherent in the experience of living fully in the present, unburdened by regrets or worries about the future. He explains that the real secret of life is to be completely engaged with what you are doing in the here and now. He advises that instead of calling it work, we can realize it is play.⁹ Mindfulness in daily activities opens the door to simple, everyday joys, reinforcing the idea that joy is accessible when we are fully present.

Secular spirituality points to the profound fulfillment of cultivating joy that goes beyond material or self-centered pursuits.

Joy matters. Joy is a profound emotional experience that transcends circumstances, enhancing well-being, personal growth, and social connection. Joy bridges internal fulfillment with external engagement, whether through personal achievements, spirituality, or shared moments of celebration. Joy matters all life long and is especially important in later years when we experience more challenges.

Now that you have a broad understanding of joy, how do you apply it to your joyspan? Let's start with your mindset.

HOW THE TWO AGING MINDSETS IMPACT JOYSPAN

Regardless of your current age, you hold one of two mindsets: aging as decline or aging as continued growth.

The decline mindset believes everything gets worse as you grow older and then you die. Sadly, this mindset is the most prevalent. From the time we were toddlers we've been fed a steady diet of "Old is bad" messaging. Remember Hansel and Gretel? The story teaches us that old women are ugly witches who will boil and eat you. The impact of negative attitudes on aging is staggering. The World Health Organization (WHO) estimates that 6.3 million cases of depression worldwide can be attributed to the effects of ageism. Internalized ageism is a risk factor for depression, anxiety, and suicidal ideation.¹⁰

Research shows that people can alter their largely unrecognized assumptions about growing older and assume more control over them. Those who expect lifelong growth fare better than those who expect aging to be all decline. More than four hundred scientific studies have demonstrated the impact of individuals' beliefs about aging. Dr. Becca Levy and her team at Yale University have proved that those with positive beliefs about aging lived seven and a half years longer than those who held negative beliefs about aging! And it's not just the length of our lives but the quality that is impacted by our beliefs. Dr. Levy found that people with positive age beliefs maintained better physical and functional health over an eighteen-year period.¹¹

The growth mindset sees aging as a time of continued progress in becoming who you are. This mindset recognizes not only the challenges and losses of growing older but also the opportunities and strengths.

Take my neighbor Dee, who is eighty-one. A few days ago, I saw her on her front porch while I was walking the dogs, and she waved me over so she could tell me all about her sore hands, the “absolute drivel” on TV, and how bad the hot weather makes her feel. Because Dee sees her life as a downward free fall, she’s stopped showing up for it. She does not pursue her former interests, reach out to friends, or challenge herself. Why bother? If you believe there is nothing you can do to impact your life as you grow older, it makes sense to stop putting in the effort. The long hours spent in her recliner have seriously weakened her legs, which she blames on the curse of being old. Our conversations never have room for topics beyond her discomfort. Despite our many conversations, Dee doesn’t know anything about me other than the fact that I have two golden retrievers. There isn’t any space for me to share my life, because her life, as miserable as she finds it, is the topic that dominates her mind. Dee definitely holds a decline mindset.

I often run into another neighbor, Joan, who walks the same loop I do. I absolutely love it when I run into Joan. She is eighty-two and just radiant. Soon after our middle daughter was diagnosed with a brain tumor, I saw Joan and she noticed right away that something was off. She asked me what was going on in a way that felt safe for me to share. She listened intensely, then suggested ways to adjust to this “new normal.” Joan has had so many new normals. Always very interested in something—a new plant she’s potted, a new recipe, an interesting book, an upcoming art exhibit—Joan has a growth mindset. Growing older is about, well, growing, about becoming. Joan knows that interior strengths can continue to develop throughout life. I once told Joan how much I admire her attitude, and she laughed, saying, “I find life fascinating. I’m still growing now, just as I have in every other phase of my life.”

The chart below summarizes how the two aging mindsets impact, either negatively or positively, your joyspan.

	<i>Decline Mindset</i>	<i>Growth Mindset</i>
<i>Aging Expectations</i>	Growing older results in decline in every area of life.	Growing older results in decline in some areas and improvement in other areas.
<i>Perspective on Control</i>	The quality of my life is out of my control.	The quality of my life is up to me.
<i>Level of Effort</i>	Minimal—why bother when effort is fruitless?	Effort can improve quality of life.
<i>Reaction to Obstacles</i>	Gives up in the face of challenge.	Persists in the face of challenge.
<i>Relationships</i>	How can you help me?	How can I help you?

Could Dee move from a decline mindset to a growth mindset? Yes. I have seen the benefits of the mindset shift in action. Moving to a growth mindset improves, and very literally saves, lives. But given the power of antiaging messaging, a decline mindset path is far more commonly traveled. Most people don't know there is a choice, so they head in this direction by default. With a decline mindset, you see yourself as less valuable and less capable and so others believe that is true of you. Health challenges reinforce your belief that it is all downhill. The passing of loved ones further confirms that age is stacked against you.

In contrast, on the growth mindset path, people capitalize on what they do better as they age. Those traveling this way are not clinging to youth but decisively striding toward learning and development. They proactively challenge the belief that growing older inevitably leads to decline in all facets of life. Instead, the continued growth path focuses on the opportunities and improvements that come with experience and maturity.

———— JOY PRACTICE: ————

What's Your Aging Mindset?

Answer these four questions to see if you lean toward a **growth mindset** or a **decline mindset** around aging. For each question, choose the option that best reflects your belief.

How do you view getting older?

- a. An opportunity for continued growth and expansion.
- b. A time of physical, mental, and social decline.

How do you approach challenges that come with aging (setbacks or health issues)?

- a. They are a normal part of growth and are just new obstacles to work around or adapt to.
- b. Setbacks and challenges are signs that I am slowing down and losing capability.

What role do social connections play for you as you age?

- a. It's essential to stay connected and meet new people.
- b. It's natural for social life to shrink with age.

What is your attitude toward physical activity?

- a. Staying active is key to maintaining health and joy.
- b. Exercise becomes too hard or less important as you get older.

RESULTS

MOSTLY "a." ANSWERS:

You have a **growth mindset** around aging! You view getting older as an opportunity to continue learning, adapting, and connecting with

others. You believe that aging is just another stage for personal growth and fulfillment.

MOSTLY “b.” ANSWERS:

You lean toward a **decline mindset** around aging. You may see aging as a time of loss and reduced capacity. Recognizing this mindset can be a first step toward shifting to a more positive view of aging, focusing on the opportunities still available.

Shifting from a decline mindset to a growth mindset involves intentional changes in both attitudes and actions. Awareness is the first step—catch yourself in the act of saying, thinking, or hearing negative comments about aging, such as *I’m too old to learn that; I can’t wear that; I’m having a senior moment*. You’ll be surprised how many anti-aging comments you’ll hear in your own head. Next, proactively replace the negative and self-limiting beliefs with empowering assertions of what is possible. Instead of dwelling on what you can no longer do, shift your attention to what you *can* do. This mindset strengthens resilience.

Practice gratitude, which reshapes your internal dialogue and helps you adopt a more accurate, more optimistic view of aging. Get out there and engage in mentoring, creative projects, or paid or volunteer work. Remind yourself of what you *can* do to improve lives, and do it. Hang out with positive influences—people who inspire a proactive approach to making the most of their long lives.

YOU CAN HAVE A GREAT JOYSPAN NO MATTER WHERE YOU ARE NOW

Longevity is determined by your genetics. Right? Wrong.

It’s easy to feel limited by family history, but research shows that what we do every day—exercise, meaningful connections, healthy

eating, and stress management—outweighs genetic predispositions. For instance, people with genetic risks for diseases like heart issues or dementia can delay or even avoid them with proper habits.

That's because genetics influences only about 25 percent of how long we live, while *lifestyle choices* determine a whopping 75 percent.¹² This means your daily actions and decisions hold incredible power in shaping not just your lifespan but also the quality of those years. Choosing to remain active, engaged, and optimistic plays a critical role in fostering longevity and mental well-being.

“Your habits have more power to shape your health than your genes ever will.”

—Kerry Burnight, gerontologist and self-quoter

We are not passive participants in the aging process. Each choice can build resilience, adaptability, and purpose—qualities that extend life and add vitality. Instead of focusing on what genetics might limit, embrace the power of your actions. Aging with a growth mindset isn't just about avoiding decline—it's about continuing to thrive by exploring, learning, connecting, and giving back. The path to longevity lies not in hoping for good genes but in nurturing your body and mind through each phase of life. With small but meaningful shifts, you can shape the future you want, no matter your starting point.

At fifty-nine, Cindy was in a rut. She had thrived in her career as a physical therapist, raised five successful sons, and enjoyed an active lifestyle. But now that her children were grown and her career had slowed, she felt purposeless, like her energy was fading, that her looks were no longer a source of confidence. Cindy wondered, “Who am I now, and what's the use, anyway?”

Her turning point came during a conversation with her great-aunt

Eloise, who was then eighty-nine. Eloise told her, “You’ve spent years investing in others. What would happen if you invested in yourself? Could you start with one simple change?”

Unconvinced but wanting to satisfy her aunt, Cindy began exploring activities she thought might be fulfilling or even fun. She signed up for a photography class, using her camera to capture beauty in ways she hadn’t noticed before. She joined a yoga group, not to excel but to nurture her body, and discovered joy in flexibility and mindfulness.

Cindy also reconnected with her community by mentoring young physical therapists. Helping others reignited her sense of purpose, and every new connection built her confidence. Over time, she embraced her evolving self—not as a diminished version of who she *was*, but as someone constantly growing into *the best version of herself*. Now in her eighties, Cindy reflects on her journey with pride. “Life is a series of chapters,” she says. “The story doesn’t stop—it just gets richer.” Her story shows that fulfillment isn’t about clinging to the past but embracing the opportunities in every stage of life. Cindy’s choice to shift her mindset transformed her future, and she is enjoying a long joyspan.

Now that you understand why your joyspan matters, in the next few chapters we’ll see how it matters to your lifespan and your healthspan.

JOYSPANNER: Dick Van Dyke

Dick Van Dyke is an American actor, comedian, singer, and dancer whose career has spanned more than seven decades. Born on December 13, 1925, in West Plains, Missouri, Van Dyke became a household name through his versatility and charm, leaving an indelible mark on television, film, and stage.

Here are some examples of why and how he had a very long joyspan.

GROW: Showcasing his continued growth, Van Dyke at age ninety-one performed in *Mary Poppins Returns* (2018). “It lit me up,” he says. “I still danced on a table, just much more carefully this time.”

CONNECT: Van Dyke maintains close relationships with his four children as well as his “friends from work,” such as Julie Andrews. He married his second wife, Arlene Silver, at age eighty-seven.

ADAPT: Throughout his life, Van Dyke has been open about challenges, including struggles with alcohol addiction and mental health. His 2011 autobiography, *My Lucky Life In and Out of Show Business*, reflects both resilience and gratitude. He emphasizes how laughter, dance, and a sense of play help keep him going.

GIVE: Van Dyke’s a cappella group, the Vantastix, performs frequently at benefits to raise funds for children’s programs and community initiatives to address homelessness.

CHAPTER 2

How Your Joyspan Affects Your Lifespan

Meet identical twins Josephine and Janice. Genetically they are exactly the same, sharing 100 percent of their DNA. Josephine lived to be ninety-seven and, up until the very end, worked part-time in a hospital gift shop and drove her 1995 white Oldsmobile to meetings of her four bridge groups, to church, and to the grocery store. Janice lived to be seventy-eight and, unlike her sister, suffered chronic medical conditions and dementia that severely curtailed her activities. Why did these genetically identical twins age so differently and have such different lifespans? How much of our lifespan is dictated by our genes?

“Lifespans are not like height, a trait that is strongly inherited,” said Dr. James Vaupel, former director of the Laboratory of Survival and Longevity at the Max Planck Institute for Demographic Research. “How tall your parents are explains 80 to 90 percent of how tall you will be. But only 3 percent of how long you will live can be explained by how long your parents lived.” Contrary to popular opinion, your genes are not destiny. Like Josephine and Janice, identical twins die at different times—on average, more than ten years apart.¹

Research on thousands of twin pairs like Josephine and Janice reveals that around 25 percent of the variation in lifespan can be attributed to genetic factors. This estimate—approximately 26 percent for men and 23 percent for women—has been confirmed by multiple studies. Even more compelling, analysis of millions of family trees, derived from eighty-six million public genealogy profiles, puts the heritability of lifespan closer to 16 percent.² The evidence suggests that while genetics contributes to longevity, it accounts for only a fraction of the outcome. Twin studies, family history research, and genealogy analyses converge to form a striking conclusion: Lifestyle and environmental factors play a more significant role than inherited genes. This underscores the importance of cultivating emotional well-being, adopting healthy habits, and maintaining social connections to maximize the years we have.

Lifespan is not a matter of good fortune in the genetic lottery. Instead, it is shaped by the choices we make every day—how we move, the relationships we nurture, and how we care for our mental and emotional health. This finding—empowering individuals to influence their aging journey—lies at the heart of joyspan.

How long you'll live is determined by a complex mix of factors: genetic predispositions, disease, nutrition, your mother's health during pregnancy, diet, exercise, stress levels, temperament, social connection, substance abuse, subtle injuries and accidents, and simply chance events, like an auto accident or a randomly occurring mutation in a cell gene that ultimately leads to cancer. While we cannot change the genes we inherit or predict accidents, we have a profound opportunity to shape our destiny through how we live.

In this chapter I will explain how joyspan affects your lifespan by delving into the difference between lifespan and life expectancy, the detrimental impact of the antiaging culture, what you do and do not have control over, and research on how psychological well-being affects lifespan.

LIFESPAN VS. LIFE EXPECTANCY

When people talk about aging, they tend to use the terms “lifespan” and “life expectancy” interchangeably, but they are not the same thing. Here is a breakdown of what each term means, how they differ, and why these differences are important for understanding your mortality.

Lifespan is the total amount of time an individual or a species can live, measured from birth to death. This concept can be applied to individuals, populations, or species, and reflects the *potential* maximum duration of life. Maximum lifespan is the longest recorded age reached by any individual of a species. In humans, the oldest verified person as of this writing was Jeanne Calment, a French woman who lived 122 years and 164 days.³ Maximum lifespan means the biological limits of human longevity, shaped by factors like genetics, cellular aging, and environmental constraints. Lifespan is focused on the total number of years lived, and in its purest form, it is about the limits of human biology and survival.

Studies have put the human lifespan limit somewhere between 125 and 150 years. Researchers in Singapore, Russia, and the United States used a computer model to estimate that the limit of human lifespan is about 150 years. These researchers took blood samples from more than seventy thousand participants up to age eighty-five and looked at short-term changes in their blood cell counts. The number of white blood cells a person has can indicate the level of inflammation in their body, while the volume of red blood cells can indicate a person’s risk of heart disease or stroke, as well as cognitive impairment, such as memory loss. These calculations predicted that for everyone—regardless of their health or genetics—resilience failed completely at 150, giving a theoretical limit to the human lifespan.⁴ But before you start planning for your 150-year-long life, keep in mind that it is a theoretical model.

Life expectancy is a statistical measure of how long a person or population is expected to live, based on historical data and current

conditions. It is an average prediction rather than an individual outcome and reflects trends in mortality at specific ages or over time. Life expectancy is calculated using mortality rates across age groups to predict how long, on average, a person is expected to live. The formula accounts for factors like infant mortality, accidents, and chronic diseases that affect survival rates at different life stages. Life expectancy varies by geographic region, sex, and socioeconomic status. Globally, the human life expectancy is seventy-three. There is considerable variability in average life expectancy by country, though, with Japan at 85 years, New Zealand at 84 years, Canada at 83 years, the United Kingdom at 81 years, the United States at 79 years, Mexico at 76 years, Russia at 73 years, and Chad at 54 years.⁵

Life expectancy changes with age because with each age you attain, you've avoided causes of death. Dr. Marie Bernard, former deputy director of the National Institute on Aging at the National Institutes of Health, explained, "If you make it to age 65, the likelihood that you'll make it to 85 is very high. And if you make it to 85, the likelihood that you'll make it to 92 is very high."⁶

Across the world, women live an average of five years longer than men. Globally, the average life expectancy is seventy-four years for women versus sixty-eight years for men. The gender gap in life expectancy begins at birth: Newborn boys have higher death rates than newborn girls, as they're more vulnerable to diseases and genetic disorders. The gap continues in youth, when boys have a higher death rate than girls, typically due to violence and accidents. As we grow older, men have higher death rates than women from chronic health conditions, which are partly due to higher rates of smoking, alcohol, and drug use. In the past, gender differences in infant mortality were the leading cause of the disparity in life expectancy. But now, differences at older ages are a larger contributor to the gap in life expectancy.⁷ The small, everyday choices we make in our lives impact our life expectancies and they matter at every age and stage.

Inequality in life expectancy exists not only by gender but also by socioeconomic status and racial disparities. People of color have consistently had a lower life expectancy, and the COVID-19 pandemic exacerbated this fact. Reducing these disparities is literally a matter of life and death. To improve life expectancy across communities, we need to reduce inequalities in health insurance, increase access

KEY DIFFERENCES BETWEEN LIFESPAN AND LIFE EXPECTANCY

	<i>Lifespan</i>	<i>Life Expectancy</i>
<i>Definition</i>	Total number of years a person lives	Predicted average number of years a person will live
<i>Measurement</i>	Individual or biological limit of survival	Statistical average for a population or cohort
<i>Scope</i>	Focuses on maximum potential (how long life can last)	Focuses on average outcomes (how long people are likely to live)
<i>Example</i>	Jeanne Calment lived to 122 years.	In 2024, life expectancy at birth: 64.1 in Africa 72.3 in Russia 73.5 in Mexico 79.1 in the United States 81.7 in the United Kingdom 82.8 in New Zealand 85 in Japan*

* World Bank (2024). *Life expectancy at birth, total (years)* [Data file]. Retrieved from <https://data.worldbank.org/indicator/SP.DYN.LE00.IN>.

(continued)

	<i>Lifespan</i>	<i>Life Expectancy</i>
<i>Determinants</i>	Biological and lifestyle factors	Biological and lifestyle factors and health care, public health, socioeconomic factors
<i>Predictive Value</i>	Not predictive—looks at achieved lifespans	Predictive—estimates future survival rates
<i>Unit of Analysis</i>	Individual or species	Population or cohort
<i>Implication for Policy</i>	Highlights the biological limit of longevity	Informs public health strategies to increase survival

to care, and eliminate discrimination and bias. Beyond the health-care system, this includes tackling economic stability, neighborhood and physical environment, education, food security, and community safety. A society is judged in part by how it treats older adults and the place it gives them in community life. Until everyone can maximize the length of their life, we have not succeeded.

Lifespan and life expectancy are both about how many years you will live: quantity. These are important numbers because to live a *good* long life, you need to, well, live. But a long lifespan is not the end of the story. With all the focus upon quantity of life, the *quality* of life, or joyspan, has been overshadowed—especially when it comes to the multibillion-dollar antiaging industry.

OUR ANTIAGING CULTURE

The antiaging noise is deafening. We are bombarded with the message that growing old is unacceptable, something we must try to stop. We are urged to swallow the latest supplements, slough off dead skin

cells, smear on facial serums, do cold plunges, take warm saunas, and exercise at 0 dark hundred. Antiaging sells by generating fear and insecurity, and the brainwashing starts early. We're fed a steady diet of "Older is ugly and scary" messaging from toddlerhood. One of my earliest memories was how scared I was of the old woman in the story "Snow White and the Seven Dwarfs." She was an evil witch who created a poisonous apple to give to the little girl. In the picture book I studied the warts on her nose, her sharp nails, and her scowling expression. At three years old, message received: Old is bad. Don't get old.

We live in a society that worships youth, fresh faces, lithe bodies, the new, the cool, the hip. Greeting cards are full of put-downs about being older, older characters on TV are depicted as bumbling idiots, and everywhere you turn the message hammered into us is that young is good and old is bad.

Prejudice on the grounds of a person's age—*ageism*—is the last acceptable form of discrimination. Only it isn't acceptable.

The antiaging industry is based on convincing us that we are not okay as we are. Our skin is not tight enough; our teeth are too yellow; we are too flabby, not radiant enough, not young enough. Enough for what? The goal is to elicit enough fear to cause you to act and try to buy youth. Global spending on antiaging products and treatments is significant and growing. In 2024, the market was estimated to reach approximately \$68 billion, driven by increasing awareness and consumer demand for solutions addressing wrinkles, skin rejuvenation, and hair restoration. Projections indicate the market will expand further, potentially reaching \$141 billion by 2034.⁸ We spend billions of dollars every year to try to be worthy of love and respect. The reality is that we are already worthy of love and respect.

Do you remember how old you were when you first experienced ageism? I do!

During COVID, our three grown kids had returned home. Amid

Zoom meetings and wiping down groceries, our twenty-one-year-old daughter, Claire, offered to teach us a dance. Wearing tie-dyed pants and a colorful T-shirt, I danced until sweat poured down my face. She then posted our dance video on social media. All the comments were along these lines:

“OMG, how cute your mom is—hilarious.” Cute? Hilarious? The comment wasn’t about the dancing, it was about my age—I was in my early fifties. I was seen as a silly older person doing a dance. As I was reading these comments, I accidentally flipped the phone camera around and got an extreme close-up of my face and neck. Oh, the chins!

My internalized ageism was telling me how unacceptable and unattractive it was that my skin bunched up under my chin. I decided to record a video about ageism and posted it on social media. Despite having only a handful of followers, half a million people watched it and thousands of comments poured in.

“I can’t stand that I’m losing my looks.”

“I’m terrified to think what lies ahead.”

“Getting old sucks.”

Fear was the common denominator. The most damaging aspect of living in an ageist society is how we turn the ageist beliefs inward. Ageism becomes internalized ageism. We all live with internalized ageism. Once you start to become aware of it, you hear it everywhere. Just yesterday, a friend said, “I hate getting old, watching it all slide, my body, my looks, my ability to do it all.” She had internalized the belief that young is good and old is bad. She believes that since she is no longer young, she is no longer . . . good. We accept the assertion that old is weak, unattractive, less than. These beliefs are not limited to our external selves but extend to the core of who we are—our competence, our value, our relevance. On TV, in movies, or in greeting cards, older people are depicted as tottering, blithering, clueless,

grumpy, selfish, and embarrassing. Those messages and images take root within us and provide a negative guide as we grow older. Now *we* are the tottering, blathering, clueless, grumpy, selfish, and embarrassing side characters. This mindset leads us to limit our aspirations, goals, and opportunities. We refrain from pursuing new interests and advancements because we believe that we are no longer capable or relevant.

Recognizing how pervasive and harmful ageism is will help you break free of the self-fulfilling prophecy of internalized ageism. It's a bit like seeing behind the curtain in *The Wizard of Oz*. Pull back the antiaging veil, and you will see companies who trade on fear. With heightened awareness, you will start to notice when people around you fall for it. You will hear comments such as "I am showing my age," or "I am having a senior moment," in a different way. Advertisements of young women obsessing about their skin will seem like a waste of precious time. Rather than compliment someone for looking "young," you will see that "young" needn't be the goal. You'll skip the antiaging birthday cards. You will reclaim your age, reclaim your life.

But be forewarned, you will face a powerful current of people swimming in the other direction. People spending their lives trying not to age, trying not to die. Why not try to live instead?

———— JOY PRACTICE: ————

Test Your Own Ageist Beliefs

For each question, choose the option that best reflects your belief.

You are coming upon a milestone birthday; how are you feeling?

- a. Argh!! I feel sick about the thought of being this old.
- b. I don't love it, but it's not the end of the world.
- c. I'm getting ready to celebrate.

If you hear a friend describe an older person as cute, what do you think?

- a. I wouldn't think anything of it; old people are so cute.
- b. I can see it might sound a bit patronizing, but it's not meant with any harm.
- c. It is patronizing and I don't say that.

How do you feel about antiaging marketing?

- a. Great! To look good, we need products to cover up the signs of aging.
- b. That marketing isn't ideal, but people do want to look young.
- c. People don't need to fight aging; it's a natural process and looking good does not need to mean looking young.

Do you use any of these phrases?: You can't teach an old dog new tricks; I'm too old for this, I'm having a senior moment; You look good . . . for your age.

- a. I sure do!
- b. I seldom do.
- c. I never do.

RESULTS

MOSTLY "a." ANSWERS:

Uh-oh, you hold negative views toward aging that you may want to examine and adjust. Endorsing a negative view of aging has been shown to result in a reduction of seven to ten years of life.

MOSTLY "b." ANSWERS:

You may have some biases to examine in order to free yourself from ageism.

MOSTLY “c.” ANSWERS:

You value older adults and see aging positively. Great! This will impact both the length and the quality of your life.

HOW JOYSPAN IMPROVES LIFESPAN

An innovative and seminal study in gerontology sought to show how joyspan improves lifespan by tracking the physical, cognitive, and emotional health of 180 nuns over their lifetimes. Lead researcher David Snowdon and his team analyzed autobiographical essays the nuns wrote in their early twenties. Results showed that the nuns who conveyed gratitude, enthusiasm, and joy lived on average seven to ten years longer than those who expressed neutral or negative emotions. The findings demonstrated that one’s emotional outlook in youth has long-term effects, possibly building psychological resilience against chronic stressors. Interestingly, even when lifestyle factors such as smoking and alcohol consumption were controlled, the positive effect of emotional well-being remained a strong predictor of longevity. The nun study highlights that joyspan—the cultivation of continued growth, social connection, generosity, and adaptability—acts as a buffer against cognitive decline and supports health well into old age.⁹

These findings were replicated by a larger and longer longitudinal study, the Harvard Study of Adult Development. Researchers tracked the lives of two groups—Harvard sophomores and inner-city Boston men—over eighty years, analyzing the impacts of various life factors on health and happiness. Social connection played a more significant role in predicting lifespan than socioeconomic status, wealth, or professional success. Those with strong social bonds and joyful relationships also exhibited lower levels of stress hormones, such as cortisol, which are known to accelerate aging and damage cardiovascular

health. Conversely, loneliness and emotional distress were found to increase the risk of early mortality.¹⁰

Building upon these landmark studies, a large meta-analysis of studies found that people who regularly experience positive emotions tend to engage in healthier behaviors, including exercise, balanced diets, and better sleep routines. These individuals are also more likely to maintain strong social relationships. Positive emotions reduce the production of stress-related hormones, improve immune system functioning, and enhance cardiovascular performance. By fostering emotional resilience, happiness helps individuals cope with adversity more effectively, minimizing the health risks associated with chronic stress.¹¹ The cumulative effect of frequent positive affects creates a joyspan, which not only improves day-to-day life but also contributes to a longer lifespan.

Here are the main mechanisms through which joyspan can influence lifespan.

Stronger Social Connections

Relationships are a key component of joy. People with strong social ties—whether through friendships, family, or community—experience more joy and meaning in life. Loneliness and social isolation are significant predictors of early mortality, with research showing they are as harmful to health as smoking fifteen cigarettes a day.¹² Social connections improve emotional well-being and act as a buffer against stress, encouraging people to live longer, healthier lives.

Resilience and Coping

As people age, they encounter challenges such as health problems, the loss of loved ones, and reduced physical abilities. Joyful individuals exhibit greater emotional resilience, helping them recover from setbacks more easily. Resilience protects mental health, reducing the risk

of depression and anxiety, which are linked to poorer health outcomes and shorter lifespans. Resilient people stay engaged with life even in difficult times, leading to greater life satisfaction and longevity.

Slower Cognitive Decline

Joyful living contributes to better cognitive health by promoting mental engagement, curiosity, and social interaction. Positive emotions help protect the brain from cognitive decline, reducing the risk of Alzheimer's and other forms of dementia. Maintaining purpose and meaning—important aspects of joyspan—has been shown to improve cognitive longevity, keeping the mind sharp well into old age.

HOW TO CULTIVATE JOY TO IMPROVE YOUR LIFESPAN

Gratitude practice: Regularly reflecting on things you are thankful for enhances emotional well-being.

Exercise and play: Physical activity releases endorphins, improving mood and increasing joy.

Social connections: Nurture friendships and family relationships to build emotional resilience.

Mindfulness and meditation: These practices reduce stress and increase present-moment joy.

Meaningful work and hobbies: Engage in activities that bring purpose and fulfillment.

Acts of kindness: Helping others generates a lasting sense of joy and connection.

Laughter: Spend time with people or engage in activities that make you laugh—laughter has measurable health benefits.

THE DOWNSIDE OF A LONG LIFE WITHOUT JOYSPAN

Even if we can't live forever, advances in medicine, public health, and lifestyle choices have extended our lifespans. For far too many, a longer life just means more suffering. Jill C. lived to be ninety-four years old and is a reminder that longevity alone does not guarantee a meaningful or satisfying life.

Jill and George married in their twenties and raised their three children together. Jill often felt more like a manager than a mother, ensuring that everyone was fed, clothed, and on time. Jill shared that her marriage lacked emotional intimacy but that she didn't put in the time to foster really close friendships with other women. When their children moved away, she didn't find new interests or activities to fill the void. Instead, she spent her days cleaning, cooking, and watching television alone in the evenings.

"As I grew older, I wondered, what else is there?" she told me in her late eighties.

Jill's emotional isolation worsened as the years went by. She avoided conversations about feelings, even with her grown children, who found her distant and difficult. When friends or family expressed any feelings, Jill felt like a disconnected spectator. She neglected her emotional well-being, and her joyspan was far shorter than both her healthspan and her lifespan.

By the time she reached her seventies, she no longer heard from two of her children. Her youngest son visited out of obligation, but they were not close either. After her husband's death, her days were monotonous, marked only by visits to the grocery store and medical appointments. She resisted joining community activities because that "seemed desperate." When I asked what she meant by that she explained that she saw membership groups as forced friends for

people who didn't have friends, a take that is as inaccurate as it is self-limiting.

Her long life gave her ample time to reflect, but instead of joy or gratitude, Jill was filled with regret. She regretted not pursuing her passion for painting, a joy she abandoned in her thirties. She regretted not expressing love more freely to her children and not building meaningful friendships. Even in the face of these regrets, Jill did not opt for change or growth. She told herself, "It's too late now."

Though she lived into her nineties, Jill's life was not enriched by her extra years. Her physical health remained relatively good, but her emotional well-being was in constant decline. She avoided joy as if it were a luxury she couldn't afford, even though joy was the one thing that might have made her long life meaningful.

THE IMPACT OF A LONG LIFE WITHOUT JOY

Loneliness and Isolation

The World Health Organization warns that loneliness and social isolation are among the leading causes of poor mental health in older populations. Older individuals who lack meaningful relationships are at a higher risk of depression and cognitive impairment, with some studies showing that loneliness increases mortality risk by 26 percent.¹³ Without interventions to foster social engagement, longer lifespans may lead to more years of emotional suffering.

Mental Health Decline

A long life lived without joy has significant mental health repercussions. Depression is prevalent among older adults, and many do not receive adequate mental health care due to stigma, limited access, or

underdiagnosis. The psychological impact of feeling “left behind” in a rapidly evolving world, along with diminished social roles and ageism, can result in decreased self-worth and despair. As individuals grow older without meaningful engagement, their risk for mental health disorders such as anxiety and suicidal ideation increases.

Economic Strain

Beyond health-care expenses, the economic cost of unfulfilled aging includes the loss of contributions from older adults who could otherwise engage in productive or voluntary activities. Encouraging lifelong learning, community involvement, and intergenerational interaction can help mitigate these losses. However, without addressing the emotional needs of older adults, their potential contributions remain untapped, limiting society’s ability to benefit from their experience and wisdom.

The greatest downside of a long life without joyspan is suffering. For Jill, and so many others like her, small changes in factors known to increase psychological well-being could have resulted in significantly more joy. Things that you can do today will impact your well-being in longevity. In charting your second half of life, you won’t have control over everything, but you’ll have more than you think.

WHAT YOU DO AND DO NOT HAVE CONTROL OVER WHEN IT COMES TO LIFESPAN

Human lifespan is determined by a complex interplay between genetic, environmental, and lifestyle factors. While certain aspects are within our control, others are governed by biology and chance.

People love to blame genes, but the truth is that genes are not the most important part of the equation for most of us. Genes are responsible for around 25 percent of the variation in lifespan and the remaining 75 percent is the result of our beliefs, attitudes, choices, and behaviors.¹⁴ The key to life expectancy and healthy aging is to engage fully in life—mentally, physically, socially, and emotionally.

What Is Not Under Your Control

Genetic Factors

Genetics plays a relatively small role in predicting how long you'll live, but it does play a part. Genes involved in repairing DNA, regulating metabolism, and managing oxidative stress influence longevity and how well the body ages. For example, variants in the FOXO3 gene have been associated with exceptional longevity by improving cellular repair mechanisms and stress responses.¹⁵

Biological Aging

Aging is an unavoidable biological process, driven by cellular aging, declining stem cell function, and cumulative molecular damage.

Accidents and Random Events

Unpredictable occurrences, including accidents, natural disasters, and sudden medical events, such as strokes or cardiac arrest, also affect lifespan. These events fall outside personal control and can occur despite the best health practices. In fact, studies show that external risks, particularly in the form of sudden trauma, account for a small but significant portion of premature deaths worldwide.

Environmental Exposures

Although you can make conscious efforts to reduce exposure to harmful pollutants, environmental risks cannot be completely avoided. Air quality, water contamination, and exposure to infectious agents all have measurable impacts on health and lifespan. For example, long-term exposure to air pollution increases the risk of respiratory diseases and reduces life expectancy by several years.¹⁶ The COVID-19 pandemic demonstrated how pathogens, even in highly developed societies, can drastically reduce life expectancy on a global scale.

What Is Under Your Control

Your Social Connections

Loneliness is a risk factor for early mortality. Loneliness increases stress-related hormones like cortisol. The Harvard Study of Adult Development revealed that quality relationships is one of the most important predictors of longevity and well-being. People with strong social connections experience lower levels of stress hormones, reduced inflammation, and better cardiovascular health. Social activities and group involvement have also been linked to lower risks of depression and dementia in older adults.¹⁷

YOUR SOCIAL CONNECTIONS ACTION ITEMS

- Be proactive in cultivating and maintaining social connections.
- Engage in group activities such as volunteering, clubs, or classes.
- Pursue lifelong learning to challenge your brain and connect with other people who are interested in ongoing growth.

Your Attitude

Your attitude significantly impacts your lifespan. Yale researcher Dr. Becca Levy found that individuals with positive self-perceptions of aging live years longer than those with negative perceptions.¹⁸ How you view your life's purpose also impacts your lifespan. In Japan, “*ikigai*,” or a sense of purpose in life, has been linked to lower mortality rates in Japanese populations. Purposeful living not only motivates individuals to engage in healthier behaviors but also buffers against stress and reduces the risk of depression and anxiety. Optimism, another key factor, has been associated with improved immune function and lower mortality from heart disease and stroke.¹⁹

YOUR ATTITUDE ACTION ITEMS

- Cultivate a sense of purpose by setting meaningful goals.
- Practice gratitude and mindfulness to foster a positive mindset.
- Engage in community involvement, hobbies, or work that provides fulfillment.

Your Smoking and Alcohol Consumption

Avoiding tobacco and limiting alcohol consumption are powerful steps you can take to increase your lifespan. Smoking remains a leading cause of preventable death, responsible for eight million deaths annually, according to the World Health Organization. The good news is that quitting smoking yields immediate and long-term benefits. Within twenty-four hours, blood pressure normalizes, and within a few weeks, lung function begins to improve. Even individuals who quit smoking later in life experience significant health improvements,

including a 40 percent reduction in cardiovascular mortality within five years of quitting.²⁰

Excessive alcohol consumption is linked to increased risks of liver disease, cancer, and cognitive decline. The safest strategy for longevity is to limit or avoid alcohol altogether, as even moderate drinking can increase the risk of certain cancers.

YOUR SUBSTANCE USE ACTION ITEMS

- Quit smoking: Use evidence-based strategies such as nicotine replacement therapy, behavioral counseling, or medications like bupropion, a drug prescribed to help people quit smoking.
- Alcohol moderation: Limit alcohol intake to within recommended guidelines or explore nonalcoholic alternatives.
- Avoid secondhand smoke: Prolonged exposure increases the risk of heart disease by 25 to 30 percent even in nonsmokers.*

* U.S. Department of Health and Human Services (2006). *The health consequences of involuntary exposure to tobacco smoke: A report of the Surgeon General*. Centers for Disease Control and Prevention.

The key to optimizing lifespan lies in focusing on modifiable factors. Although genetics and aging processes are beyond individual control, lifestyle choices like diet, exercise, and stress management can add both years to life and life to years. Additionally, fostering strong social bonds and participating in preventive health care further boost longevity. Dr. Pinchas Cohen, dean of the Leonard Davis School of Gerontology at the University of Southern California, says that living longer in the future is certainly possible; over the course of the twentieth century, human life expectancy rose from around age fifty to more than eighty years. But he continues, “Death is not

optional; it's written into our genes. There's absolutely no evidence that [living forever] is possible, and there's absolutely no technology right now that even suggests that we're heading there."²¹

Scientific advancements may, in the future, extend our control over biological aging, but for now, practical habits remain the best tools we have.

TRYING TO BEAT AGING

Bryan Johnson is a forty-seven-year-old tech entrepreneur who spends more than \$2 million a year on his antiaging protocol. He eats dinner at 11:30 a.m., goes to bed at 8:30 p.m., takes no vacations in the sun, eats meticulously crafted diets, works out for hours per day, and receives plasma infusions, undergoes high-tech medical tests, and takes in excess of one hundred supplements every day.

According to Johnson, "Most people assume death is inevitable. Not anymore." While Johnson's commitment and resources are extreme, he is not alone in his zealous pursuit of youth. In 2024, he hosted the Don't Die Summit, which attracted over ten thousand attendees, in ten cities, at \$170–\$599 per ticket. Featured discussions and activities included cryotherapy, intravenous nutrient drips, genetic testing, sleep optimization, and microdosing psychedelics.

Hype aside, is it possible to reject aging and avoid death? Even if we could live forever, would we want to?

THE KEY TO LONGER LIFE EXPECTANCY

Why did identical twins Josephine and Janice experience such different lifespans despite their identical genetics? Their joyspans impacted their lifespans, and vice versa. Born minutes apart, their early years

were filled with the same laughter and mischief. As they grew, subtle differences began to emerge in their emotional resilience, attitudes, and approaches to life that would eventually determine the very shape of their lives.

In elementary school, Josephine was optimistic and curious. She loved school, not because it came easily, but because she liked learning and had fun with the other kids. When faced with difficult subjects, Josephine would ask questions and reach out to teachers for help. Janice approached challenges with fear and frustration. She withdrew from academic difficulties and saw failures as personal shortcomings. While Josephine joined clubs and made friends easily, Janice felt left out.

These patterns grew as the girls got older. Josephine leaned into connection, growth, and adaptability (see figure 5), while Janice grew more rigid and critical.

After high school, Josephine pursued nursing and thrived in the busy hospital environment, where every day was different. She embraced change, and when things didn't go her way, she adjusted. Her openness and generosity extended to her colleagues, who admired her disposition even during stressful shifts.

Janice held several office jobs but felt unfulfilled. She stayed on in positions she didn't enjoy. At work, she kept to herself. While Josephine found purpose in her career, Janice saw work as a necessary evil. Over time, her attitude wore her down, contributing to chronic stress and dissatisfaction.

Josephine's warmth translated into deep friendships. She maintained close connections with friends from childhood, nursing school, and even neighbors from different stages of life. These friendships provided a rich tapestry of support, laughter, and meaning. She would host small gatherings and made herself available when a friend was in need.

Janice struggled to form lasting friendships. Though she envied

Josephine's social circle, she often felt others were judging her. Her insecurity caused her to pull away. When friends reached out, she declined invitations and, over time, her social world shrank.

In their later years, the sisters' differences became even more apparent. Josephine remained active well into her eighties and nineties. Even as her body slowed, she found joy in small things—a good book, a sunset, or a cup of tea with a friend. When her eyesight began to deteriorate, she switched to audiobooks. When arthritis made it difficult to garden, she planted herbs in small indoor pots. She approached aging as an opportunity to explore new ways of living fully.

Janice's pessimism and rigidity increased as she grew older. When arthritis made it difficult to move, she stopped exercising altogether. She developed diabetes in her sixties and struggled with heart disease in her seventies. Janice died at age seventy-eight, after years of battling dementia and chronic illnesses. At Janice's memorial service, Josephine was one of four people in attendance.

FIGURE 5. Joyspan Matrix in Action: Josephine, Age 97



Josephine lived independently until the end, passing in her sleep at ninety-seven. Her friends and family gathered to celebrate her life, sharing stories of her kindness, humor, and generosity. “She made the world brighter,” one of her grandsons said during the eulogy. Her home was filled with small reminders of a life well-lived—her paintings, books she had loved, and photographs of friends and family.

Josephine enjoyed a joyspan as long as her ninety-seven-year lifespan.

———— JOY PRACTICE: ———— Self-Reflection Exercise

For this exercise, grab your journal. Draw a line down the middle of a page, and in the left column, create a list of reasons you would like to live as long as possible if you could. On the right column, list the reasons you *don’t* necessarily want to live much longer. Be as honest and specific as you can. Study your lists and ask yourself what assumptions you are making on both sides. Is this a different list than you would have created at age twenty? Will your list still look the same at age ninety?

This chapter examined how joyspan increases years of life. In the next chapter, we examine how joyspan also increases the years of life in good health. Contentment, fulfillment, and purpose not only enrich life but also add years to it—a win-win for both emotional well-being and longevity.

JOYSPANNER: Eileen Kramer

Australian dancer, choreographer, artist, and writer Eileen Kramer was born in 1914. She spent decades traveling, performing, and creating art internationally. Even at 109 years old, she continued to choreograph, publish books,

and collaborate on films. Kramer's lifelong creativity is an inspiration for living a fulfilling and vibrant life at any age. She exemplified how continuous growth, deep connections, adaptability, and generosity can shape a meaningful and vibrant life.

GROW: Eileen joined the Bodenwieser Ballet in her twenties, which was considered late for a dancer. Her ballet years led to choreography, visual arts, and writing well into her tenth decade of life.

CONNECT: Throughout her adult years, she worked with diverse cultures in places like Paris, Karachi, and New York, collaborating with musicians like Louis Armstrong and Ella Fitzgerald. She also maintained artistic partnerships with younger generations through shared projects.

ADAPT: After sixty years of traveling, she returned to Australia at age ninety-nine to continue creating, choreographing new dance works, and making films. When COVID-19 hit, she had to change the way she worked with other people. So she turned to her phone even more than usual and discovered how to use Siri.

GIVE: Her generosity shone in her commitment to dance, not just for personal expression but also for sharing with others. During the pandemic, she contributed new works and inspired many through storytelling and performance.

Kramer's life demonstrated that joy and purpose emerge from continual learning, meaningful relationships, openness to change, and contributions to others' lives. Her legacy serves as a testament to the power of creativity and connection, inspiring people of all ages to embrace life fully.

CHAPTER 3

How Your Joyspan Affects Your Healthspan

Betty was an only child. Throughout her life she longed for a sibling and envied the closeness of sisters. She imagined sharing secrets and clothes and having someone to lean on throughout life. In college, she found what she had been searching for in Lynn. The two became inseparable and Lynn became the sister my mother had always wanted.

Betty and Lynn each married, and they both had three children, whom they raised side by side. The friends shared bake sales, college send-offs, children's weddings, and parents' funerals. They were similar in most ways. One small difference between them became deeply significant over time. Betty was mindful of daily health decisions—nothing extreme, just thoughtful. Lynn, on the other hand, opted for whatever was easiest. She skipped workouts, ate processed food, favored Cokes to water, and didn't bother with regular doctor check-ups or dental cleanings.

Betty is not a health fanatic. She loves a slice of pie or the occasional dry martini. But she is vigilant about certain habits. She stretches each morning, cooks healthy meals, takes daily walks, slathers on sunscreen, and keeps up with dental and medical appointments.

Lynn felt like life was too short to fuss over such things. If she wanted dessert, she'd eat the whole slice, and probably a second. Sunscreen, water intake, exercise, and doctor appointments weren't a priority. She'd chide Betty, saying, "Aw c'mon, live a little. You really think one more little whatever (cola, slice of cake, cigarette) matters?" For many years, the differences in their habits didn't seem to be significant. They were both healthy and happy, and to me "Aunt Lynn" seemed cooler as a result of her relaxed approach.

By the time Betty and Lynn reached their sixties, small differences began to emerge, almost imperceptibly at first. Betty's energy remained steady—she still walked most mornings, stayed active in her garden, and looked forward to tennis with her friends. She wasn't without her share of aches and pains, but she managed them and stuck to her routines.

Lynn, on the other hand, started to slow down in her sixties. A nagging stiffness in her joints turned into chronic pain. Her energy waned, until getting up off the couch or going to the grocery store felt exhausting. "I just need to rest more," she'd say when Betty invited her out. Lynn's body was catching up with her choices.

For both Betty and Lynn, the little things accumulated over time—to the benefit of Betty and the detriment of Lynn. When they reached their late seventies, Lynn could no longer walk or transfer from her chair to her bed or to the restroom, and she required full-time care. Lynn passed away shortly after her eightieth birthday. Although her lifespan was eighty years, her healthspan was seventy years. On the other hand, Betty is now ninety-six and still going strong.

But what about their joyspans? Lynn's joyspan was shorter than Betty's. Lynn's joyspan was around seventy-two years as compared to ninety-six years and counting for Betty. Lynn's reduced healthspan impacted her joyspan in the final years of her life, as she lived with a great deal of pain and shortness of breath.

WHAT IS HEALTHSPAN?

Healthspan is the amount of life spent in good health. Lifespan is the *quantity* of years and healthspan is the *quality of those years*. Healthspan is often thought of as being about the physical, but physical health is only one-third of the health equation. Your healthspan encompasses your physical health, your cognitive health, and your emotional health. All three are crucially important, intertwined, and dependent upon one another. To extend healthspan, you need to give your cognitive and emotional health the same attention that you give to your physical health.

This section explores all three aspects of healthspan by reviewing what's normal and how to be proactive when it comes to your physical, cognitive, and emotional health in longevity.

PHYSICAL CHANGES: WHAT'S NORMAL AS YOU GROW OLDER?

Your muscles. You lose about 10 to 15 percent of your muscle mass and strength over your lifetime. Muscle loss happens because of a reduction in muscle-building hormones and changes to your muscle fibers. Severe muscle loss, sarcopenia, is *not* a natural part of aging. It's often the result of a lack of physical activity or another health problem. The condition affects as many as 13 percent of people ages sixty to seventy. That number goes up to 50 percent after age eighty.¹ The good news is that you can avoid or delay a lot of age-related muscle loss. The key is regular resistance, or strength, training. If you maintain your strength, you're more likely to live independently, fall less, and recover from serious injuries faster.

Your bones. At every age, our bones break down and rebuild daily.

When you reach middle age, the breakdown happens faster than bones can rebuild and they can become more fragile. Bone weakness is more common in everyone starting at age fifty, but your odds of low bone mass are higher if you're female because of drops in estrogen. Female bones are also smaller and less dense than male bones. Older people are more likely to develop osteopenia, or low bone mass, which can be an early warning sign of osteoporosis, a condition where your bones are very weak and can break easily. Talk to your doctor about bone loss. You might not have any symptoms until you get hurt. In general, you should get your bone density checked starting at age sixty-five if you're a woman and seventy if you're a man.

Your senses. It is normal for the lens in your eyes to harden, which makes it difficult to focus on objects close-up, such as menus. It is also normal to experience some hearing loss, especially with high-frequency sounds. Both visual and hearing impairment can impact not only the quality of life but also your cognition. So it is important to have routine eye exams and hearing tests for early intervention to correct vision with glasses or contacts and hearing with hearing aids.

Your skin. Skin becomes thinner and less elastic over time. We make less collagen and elastin and lose fat in certain areas. Bruises and scratches may take longer to heal. You also sweat less as you age. You might not be able to cool yourself off quickly if you get hot. Skin cancer is the most common type of cancer, so check yourself for new or unusual moles or freckles or other growths and have your doctor check you as well.

Your heart. It is normal for the shape and strength of your heart and blood vessels to change over time. Blood vessels get thicker and stiffer with age. That makes it harder to push blood through your body. Your blood pressure might go up or not stabilize as quickly. The aging process doesn't cause heart and blood vessel problems for everyone, however. High blood pressure is the most common heart condition for people seventy-five and older. And heart disease is the leading cause of death for both men and women. Symptoms of heart

disease include shortness of breath, chest pains, or feeling like your heart skips a beat. Tell your doctor if you experience these symptoms.

Your digestive system. Your metabolism slows as you age. It is also common for muscles in your lower throat to weaken so the flap that keeps food in your stomach might pop open more often, resulting in heartburn. Compared to when you were younger, your blood sugar might spike more after a meal. That's not a big deal usually, but unmanaged high blood sugar can lead to diabetes. Food might move through your intestines a little slower, which leads to constipation. For these common changes, it is critical to stay hydrated, eat plenty of fiber, and get enough physical activity.

PHYSICAL HEALTH: WHAT YOU CAN DO

- **Regular exercise:** Aim to move your body every day. Get at least thirty to sixty minutes of moderate to vigorous aerobic exercise five days a week (e.g., walking, swimming, cycling, dancing). Work on your strength two or more days per week (e.g., weights, resistance bands, push-ups, squats), and work on your balance and flexibility two to three times per week (e.g., yoga, balance exercises).² If you want to feel well, you need to make all three types of exercise a habit. If you don't stretch, your body will tighten up, making it hard to walk. If you don't work on muscle strength, you'll lose muscle and have a hard time getting out of a chair. If you don't get aerobic exercise (walk, bike, swim, dance, etc.), your heart will grow weaker, and you'll always be tired.
- **Nutrition:** Chose nutrient-rich meals and snacks. Fruits, vegetables, whole grains, healthy fats, and quality proteins can lower the risk of chronic diseases. Adequate protein intake is crucial for muscle maintenance. If you are fifty or older, aim for an intake of 1.0–1.5 grams of protein per kilogram of body weight

to help maintain muscle mass and prevent age-related muscle loss.³ Getting a good mix of protein sources—lean meats, fish, eggs, dairy, beans, and plant-based sources—can help make sure you get both protein and other essential nutrients.

- **Sleep:** Sleep experts advise us to get seven to eight hours of sleep each night to support our physical recovery, cognition, and mental health. The research is powerful, but the reality is that many of us struggle with sleep as we grow older. Getting sunlight in the morning has been shown to help, as does limiting caffeine, as well as creating a bedtime ritual (in a dark, quiet, cool room).
- **Preventive health care:** Scheduling regular checkups with health-care and dental professionals goes a long way in identifying health risks. For many conditions, early intervention makes all the difference.

COGNITIVE CHANGES: WHAT'S NORMAL AS YOU GROW OLDER?

Cognitive health is your ability to think, learn, and remember effectively. Research shows that certain cognitive abilities, particularly those related to accumulated knowledge and experience, often remain stable or even improve with age. Vocabulary, for example, tends to increase with age, as older adults continue to acquire and use new words over time. This is supported by longitudinal studies that demonstrate older adults often perform better on vocabulary tests compared to younger adults.⁴ Creativity and reasoning, particularly in areas requiring insight and life experience, can also strengthen with age. With age we get better at what researchers call “wise reasoning,” which involves recognizing others’ perspectives, acknowledging the variability of life, and dealing with social conflicts in ways that are beneficial to long-term social harmony.⁵

Other parts of the brain, such as your processing speed and recall,

tend to decline with age. It is normal for our brains to lose mass as we grow older. It's also normal for our brains to receive less blood flow, and the connections between nerve cells slows. These age-related changes may have some unwanted side effects. For example, your attention span might get a little shorter and some things might be harder to recall. You may find yourself searching for words and experiencing that "on-the-tip-of-the-tongue" feeling. Memory slips can feel scary but don't necessarily mean you will experience cognitive impairment.

Also known as dementia, cognitive impairment is *not* a normal part of aging. "Dementia" is an umbrella term used to describe a collection of symptoms that a person may experience from a variety of diseases including Alzheimer's disease, vascular dementia, Lewy body dementia, frontotemporal dementia, and Huntington's disease. Dementia is often referred to as "senility" or "senile dementia," which reflects the incorrect belief that serious memory decline is a normal part of aging. Though dementia is not a normal part of aging, it's more common as people get older. Globally, dementia affects around 5 to 7 percent of people age sixty and older, with rates climbing to nearly 40 percent among those over age ninety.⁶ Factors proved to increase the risk of developing dementia are: age, high blood pressure (hypertension), high blood sugar (diabetes), being overweight, smoking, drinking too much alcohol, being physically inactive, being socially isolated, and depression.⁷

COGNITIVE HEALTH: WHAT YOU CAN DO

Here's what you can do to improve your cognitive health and lower your risk for cognitive impairment:

- **Reduce your stress:** Chronic stress and inflammation can harm the brain over time, contributing to neurodegenerative diseases. When you experience long-term stress, your body

continually releases stress hormones like cortisol. High levels of cortisol over time can damage parts of the brain involved in memory and learning.⁸ Incorporate meditation, yoga, and journaling into your daily habits, and talk to a trusted counselor or clergy to lower your stress.

- **Keep learning:** Cognitive function is influenced by neuroplasticity, the brain's ability to form new neural connections, and declines without mental stimulation. Reading, working puzzles, learning new languages or dance steps, and playing musical instruments can keep the brain sharp.
- **Connect:** Social isolation is a risk factor for cognitive decline, with studies showing that staying socially engaged slows brain aging. Regular interactions with friends, family, and community members strengthen cognitive resilience and lower dementia risk.
- **Exercise for brain health:** Physical activity increases brain-derived neurotrophic factors, proteins essential for brain plasticity and learning.
- **Dietary interventions:** Foods rich in omega-3 fatty acids, antioxidants, and polyphenols (e.g., fish, berries, and green tea) protect the brain from oxidative damage.
- **Sleep:** Adequate sleep has a profound impact on brain health, promoting neurogenesis (new brain cell growth) and enhancing memory.

EMOTIONAL HEALTH: WHAT'S NORMAL AS YOU GROW OLDER?

The World Health Organization defines *emotional health* as the ability to cope with life's challenges, form meaningful relationships, manage emotions, and contribute to society.⁹ This definition emphasizes not only the absence of mental illness but also the presence of positive

mental states that enable individuals to realize their full potential, demonstrate resilience in the face of adversity, and actively participate in daily activities and their communities.

Research on emotional health and aging reveals that as they get older, people tend to have improved emotional regulation, meaning an increased ability to manage negative emotions and prioritize positive experiences. This “positivity effect” is a shift in attention toward positive stimuli, such as happy memories or favorable interpretations of events, that becomes more pronounced with age. Dr. Laura Carstensen’s socioemotional selectivity theory argues that as people grow older and perceive their time as limited, they place greater importance on emotionally meaningful activities and relationships rather than novelty or career advancement. This shift fosters emotional well-being and life satisfaction in older adults. Compared to younger individuals, older adults report fewer negative emotions and a greater sense of emotional control. Even in stressful situations, older individuals are less likely to experience emotional volatility than younger adults, which has been attributed to their experience in managing interpersonal conflicts and emotional stressors over time.¹⁰

On the other hand, aging often brings major life transitions such as widowhood, retirement, chronic illness, and relocation. These transitions can increase social isolation, which, in turn, is linked to increased risks of depression and anxiety. Depression and anxiety in older adults is often underdiagnosed, as its symptoms—fatigue or reduced interest in activities—can be misinterpreted as “normal” signs of aging. Ensuring access to mental health care is critical for addressing these issues. Interventions like cognitive behavioral therapy and mindfulness-based stress reduction have proved effective in managing mental health challenges among older adults.

Emotional health plays a critical role in healthspan, contributing not only to individual well-being but also to cognitive and physical health. While it is normal to experience increased emotional stability

and resilience, the risks of loneliness and depression remain significant challenges.

EMOTIONAL HEALTH: WHAT YOU CAN DO

Here's what you can do to maximize your emotional health:

- **Manage stress:** Mindfulness meditation, breathing exercises, and nature walks reduce stress and enhance emotional balance.
- **Cultivate positive emotions:** Practices like gratitude journaling and acts of kindness boost happiness and emotional well-being.
- **Stay connected:** Meaningful relationships with friends, family, or community groups are essential for maintaining emotional health.
- **Find purpose:** Engaging in activities that provide meaning—whether through work, volunteering, helping care for grandchildren, or creative expression—boosts well-being and longevity.
- **Seek support:** Therapy or support groups can help manage mental health challenges, ensuring emotional well-being throughout life.

———— JOY PRACTICE: ———— How Are Your Healthspan Habits?

Answer the following nine questions to take inventory of your current actions and attitudes related to healthspan. For each of the questions, rank yourself 1 to 5, with 1 being the worst and 5 being the best.

Do you move your body every day?

Circle your self-rating: 1 2 3 4 5

Do you eat intentionally?

Circle your self-rating: 1 2 3 4 5

Do you prioritize your sleep?

Circle your self-rating: 1 2 3 4 5

Have you stopped/never started smoking?

Circle your self-rating: 1 2 3 4 5

Do you avoid/limit alcohol consumption?

Circle your self-rating: 1 2 3 4 5

Do you embrace growing older?

Circle your self-rating: 1 2 3 4 5

Do you keep challenging yourself?

Circle your self-rating: 1 2 3 4 5

Do you proactively cultivate friendships?

Circle your self-rating: 1 2 3 4 5

Do you expect the best in your aging?

Circle your self-rating: 1 2 3 4 5

Now add up your ratings from all nine categories. The maximum score is 45 points and the minimum score is 9 points.

INTERPRETATION:

- **40–45 points:** You are actively engaging in behaviors and mind-sets that promote an extended healthspan. Keep it up!

- **21–39 points:** There are significant opportunities for improvement—focus on areas where your scores are lower.
- **9–20 points:** Your current habits and attitudes may be limiting your healthspan. Small changes in these areas can have a significant impact on your well-being.

Reflect on areas where improvement is needed and consider ways to enhance your physical, cognitive, and emotional well-being. Remember, even small adjustments—like increasing your daily movement or adopting a more optimistic outlook—can contribute meaningfully to a longer, healthier, and more fulfilling life.

HOW DOES JOYSPAN IMPROVE HEALTHSPAN?

A robust and growing body of research demonstrates that a longer *joyspan* can significantly impact *healthspan*. Joy is a biological and behavioral asset that extends healthspan by influencing multiple aspects of well-being. From lowering stress levels and enhancing immune function to encouraging healthy habits like exercise, sleep, and nutritious eating, joy has far-reaching effects on both mental and physical health.

Joyspan, cultivated through growth, connection, purpose, and adaptability, should be viewed as an essential component of preventive health care. By fostering joy and emotional well-being, you can proactively enhance your long life. Here are the biological mechanisms through which joyspan improves healthspan.

Cortisol Levels

Positive emotions, such as joy, help regulate the body's stress response by lowering cortisol levels. Chronic stress elevates cortisol, which

can impair immune function, increase inflammation, and contribute to the development of chronic conditions like cardiovascular disease, diabetes, and depression. Joyful experiences promote relaxation and emotional balance, which reduce stress and protect long-term health.

Immune Function

Joy has been linked to stronger immune function. Positive emotional states trigger the release of neurotransmitters like serotonin and dopamine, which not only enhance mood but also improve immune response. A well-functioning immune system is essential for fending off infections and preventing the onset of chronic illnesses, thereby contributing directly to healthspan.

Cardiovascular Health

Studies show that people who maintain emotional well-being through joy and optimism are at lower risk for cardiovascular disease. Positive emotions lower blood pressure, improve heart rate variability, and decrease systemic inflammation, which reduces the likelihood of heart disease and stroke—two leading causes of mortality worldwide.

The Women's Health Initiative study examined morbidity, mortality, and chronic disease among ninety-five thousand women over an eight-year period. All of the women were free of cardiovascular disease and cancer at study entry. Participants with more positive emotions were less likely to develop coronary heart disease, were less likely to die from heart-related causes, and had lower total mortality due to all causes across the eight years of study. Positive emotional states were shown to be protective against stroke, carotid artery blockage, and rehospitalization.¹¹

Physical Activity

People with higher levels of joy and positive emotions move more. Physical activity not only contributes to muscle strength and cardiovascular health but also supports mental well-being by releasing endorphins and other mood-enhancing chemicals. This feedback loop ensures that both physical and emotional health are maintained, creating a reinforcing cycle of healthy behavior.

Better Sleep Hygiene

People with more positive emotions are more likely to experience high-quality sleep, which is crucial for healthspan. Poor sleep is associated with increased risks of obesity, diabetes, and cognitive decline, while good sleep strengthens immunity, regulates metabolism, and enhances cognitive function.

Nutritious Diet and Healthy Choices

Positive emotional states encourage healthier eating patterns. Studies show that joyful individuals tend to consume more nutritious diets and avoid harmful behaviors such as excessive drinking or smoking. These habits prevent the onset of chronic diseases, further extending healthspan.

Connection

One of the strongest links between joyspan and healthspan is the role of relationships. The eighty-year Harvard Study of Adult Development found that individuals with fulfilling social connections experienced better mental and physical health over their lifetimes.¹² Strong relationships reduce loneliness—a major risk factor for mortality—and

provide emotional support, helping people cope with challenges more effectively. The presence of joy in relationships also enhances mental resilience, which guards against depression and cognitive decline.

Resilience

Joy promotes emotional resilience, the ability to recover from stress and setbacks. Resilient individuals are less likely to develop stress-related illnesses and more capable of maintaining health through difficult times. This is critical for healthspan, as it reduces the risk of chronic diseases often associated with long-term stress, such as hypertension and depression.¹³

Healthspan is not everything; it's the power of small choices compounded over a lifetime. It is never too late, nor ever too soon to upgrade your physical, cognitive, and emotional health habits to lengthen your healthspan. Whether you start early or begin later, every choice matters. Starting where you are now, you can choose water over soda, an apple over Doritos, and movement over the couch. Today you can stretch, call a friend, take a walk, and schedule a doctor visit. None of this is revolutionary or complicated. Small choices, continued over your remaining lifetime, will shape your health.

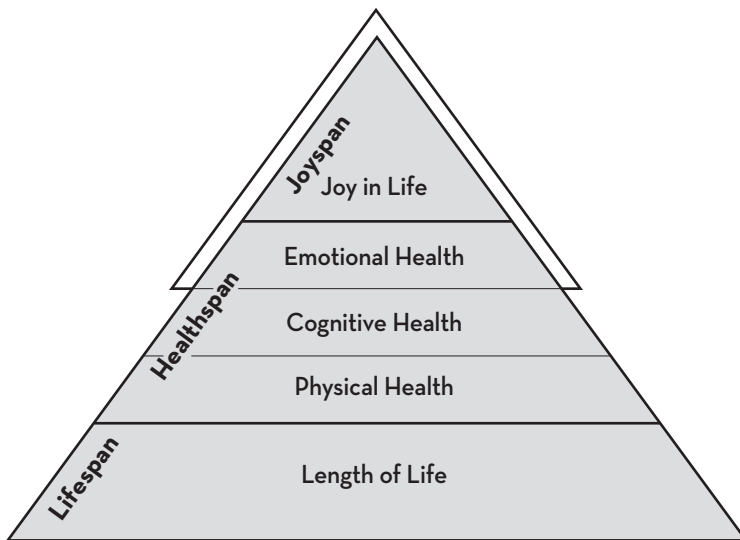
In the next section we'll examine the interplay among the three aspects of longevity: lifespan, healthspan, and joyspan.

THE LONGEVITY PYRAMID: HOW LIFESPAN, HEALTHSPAN, AND JOYSPAN STACK UP

The Longevity Pyramid (see figure 6) offers a more comprehensive view of longevity and is a blueprint for understanding the multifaceted nature of healthy aging. It underscores the importance of moving

beyond simply extending lifespan to ensuring that people enjoy long, healthy, and meaningful lives. Achieving joyspan requires intentional effort across all dimensions of health. Governments, health-care systems, families, and individuals must work together to foster environments where people are able to thrive at every stage of life.

FIGURE 6. The Longevity Pyramid



At the base of the pyramid lies **lifespan**, the total number of years a person lives. Lifespan provides the foundation upon which to build quality-of-life measures.

The second, narrower section of the pyramid is **healthspan**—the period of life spent in good health without significant disease or disability. Healthspan is divided into the three core dimensions: physical, cognitive, and emotional health. Together, these dimensions create a robust healthspan, ensuring not just survival but thriving across various aspects of life.

At the top of the pyramid is **joyspan**. It sits atop healthspan,

representing the ultimate goal of living a contented and meaningful life. Joyspan refers to the portion of life characterized by continued growth, purpose, connection, and adaptation. It extends beyond health to include spiritual well-being, meaningful relationships, and the ability to find pleasure in everyday activities. Importantly, joyspan can exist even in the presence of health challenges, loss of loved ones, physical illness, and disability.

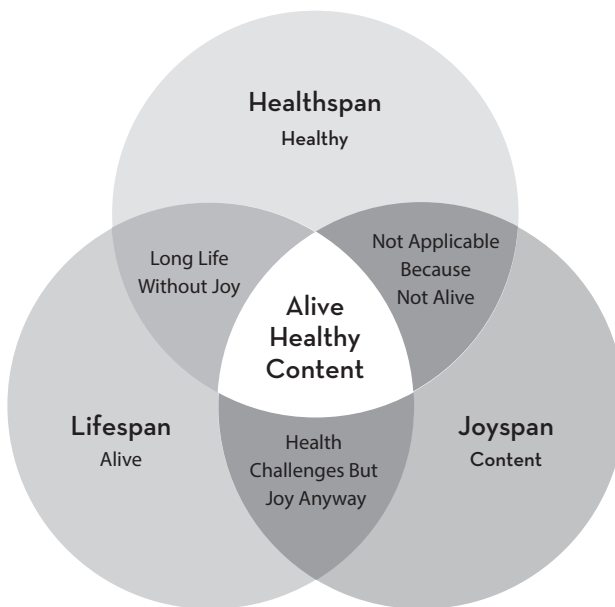
Achieving joyspan requires the integration of all levels—emotional stability, cognitive engagement, and physical health—to create a foundation on which joy and satisfaction can be built. Without these supports, it becomes harder for individuals to experience happiness consistently, even if they live long lives.

The pyramid structure illustrates:

1. **Interdependence of dimensions:** Each layer builds upon the previous one, meaning that lifespan without healthspan may result in years spent in poor health, and healthspan without joyspan may mean a lack of personal fulfillment. This interconnected approach suggests that a meaningful life requires attention to multiple dimensions of well-being.
2. **Shifting priorities with aging:** As people age, priorities tend to shift from simply extending life (lifespan), to maintaining independence and cognitive function (healthspan), and, ultimately, to finding joy and purpose (joyspan). This shift aligns with Dr. Laura Carstensen's socioemotional selectivity theory, which suggests that older adults prioritize emotionally meaningful goals as they age.
3. **Holistic aging strategies:** The diagram challenges the traditional focus on physical health by highlighting the importance of cognitive and emotional well-being. Policies and health-care systems should adopt holistic aging strategies, supporting mental, emotional, and physical health equally.

Next let's consider how the elements of the Longevity Pyramid intersect using a Venn diagram of lifespan, healthspan, and joyspan. The **lifespan** circle (see figure 7) focuses on being alive: A long life is traditionally a desirable goal. At the middle left of the intersection, most people would agree that living a long, joyless life would be undesirable.

FIGURE 7. The Intersection Among Lifespan, Healthspan, and Joyspan



The **healthspan** circle addresses how long a person stays healthy, free from significant disease or disability. The intersection of healthspan and joyspan is “not applicable” because without lifespan (i.e., being alive), there can be no health or joy.

The **joyspan** circle emphasizes emotional well-being and fulfillment. As depicted in the lower center part of the intersection, a life with joy and purpose can make even the challenges of health problems more bearable.

At the center of the diagram, the optimal state is the intersection of being alive, healthy, and joyful. This intersection represents the goal: a life where all three dimensions—lifespan, healthspan, and joyspan—are in harmony. Achieving this state requires intentional effort across multiple areas:

1. **Maintaining physical and mental health** through proper nutrition, exercise, and preventive health care.
2. **Nurturing joy and purpose** by engaging in meaningful activities and fostering social connections.
3. **Living long enough to enjoy the benefits** of both health and joy through a focus on healthy aging practices.

This model emphasizes a holistic approach to well-being, suggesting that focusing too heavily on any one area can lead to an unbalanced life. For example:

- Lifespan without joy results in a long but empty life.
- Healthspan without joy leaves individuals physically well but emotionally unfulfilled.
- Joy without health demonstrates that while joy can persist through adversity, physical suffering limits life's opportunities and experiences.

The takeaway is that policies and personal strategies should aim to optimize all three dimensions: not just living long (lifespan) but living well (healthspan) and happily (joyspan). A life well-lived requires more than survival. It requires that we go beyond just treating illnesses (healthspan) or extending years (lifespan) and also focus upon optimal emotional health, living with joy, contentment, and purpose.

ATTITUDES AND ACTIONS FOR BETTER HEALTH

From the moment she became a mother thirty-one years ago, Elise always prioritized her family. Yes, she knew she could take better care of herself, but with all the demands of her four kids and their schedules, who had time? When she was fifty-nine, her husband, Pete, was diagnosed with Parkinson's disease. Witnessing his health challenges was a wake-up call. She realized that if she wanted to support him fully and be there for her family long-term, she needed to prioritize her own well-being.

Elise started small. She committed to a walk a day. She started to feel more energetic than she had in a decade and slowly added strength training and flexibility exercises on Mondays, Wednesdays, and Fridays. She noticed an improvement not only in her energy but also in her mood and focus.

Next, Elise decided to swap out processed foods for a balanced diet rich in fruits, vegetables, whole grains, and lean proteins. She adopted elements of the Mediterranean diet, using olive oil in her cooking and enjoying healthy fats from nuts and avocados. Not only did she feel more energized, but she also noticed her skin clearing up and her digestion improving.

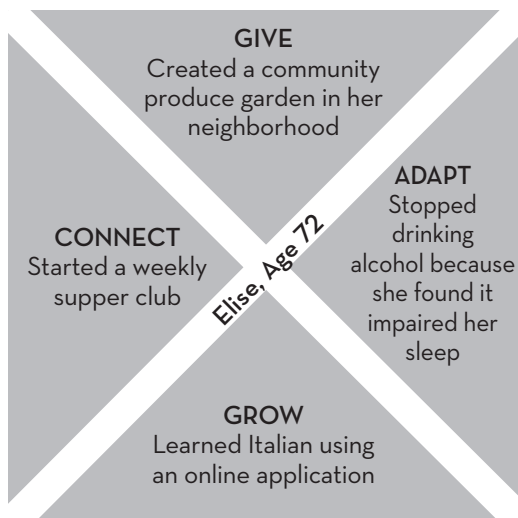
One of the biggest challenges for Elise was adjusting her sleep habits. She knew all too well that sleep would help her brain stay sharp and her body stay resilient. She created a calming bedtime routine, avoiding screens and heavy meals in the evening. Sleeping still wasn't easy, but she started to find that her Apple Watch showed an increase in time slept. As another possible way to see if she could improve her sleep, Elise also decided to limit her alcohol intake. She had always enjoyed a glass of wine with dinner but wondered if reducing alcohol would help her feel better physically and mentally. It did. She switched to sparkling water with a slice of lemon at social gatherings and found she could enjoy herself just about as much without the alcohol.

Elise worked on looking at the aging process differently than she had in the past. She tried mindfulness exercises, focusing on self-acceptance, and called herself out when she found herself saying things like “I’m too old for that.” She found that these practices reduced the strain she’d felt in “fighting aging,” which helped her feel more at peace with herself and her life.

To keep her brain active, Elise made an effort to challenge herself regularly. She took up painting, started reading new genres of books, and even tried learning a new language. These activities kept her curious, engaged, and excited about personal growth. Elise made a point of reconnecting with old friends and actively seeking new connections, attending community events and joining a book club. These friendships brought joy and support, reinforcing the positive impact of social connections on her well-being (see figure 8).

Finally, Elise chose to expect the best in life. She started to notice how many negative and worried thoughts swirled around in her head. When

FIGURE 8. Joyspan Matrix in Action: Elise, Age 72



she noticed them, she would intentionally counter the worry with a reassuring thought. When her mind said, “My son’s job seems unstable—what if he loses his job?” she would tell herself, “Don’t borrow trouble. He has a job today, and today he is happy; if anything changes, he will be able to address it. He is thirty-two and capable.” This shift not only helped her manage stress but also encouraged her to keep up with her healthy habits, knowing they would enhance her quality of life.

Through these changes, Elise transformed her life. By focusing on her healthspan and joyspan, she became more present, engaged, and resilient—ready to face the future with strength and positivity.

Like Elise, we can all make intentional improvements in our health habits. What one small change will you start with?

———— JOY PRACTICE: ———— One Small Change

Find a quiet place where you can write undisturbed for five minutes. Bring your journal or a piece of paper and allow yourself to answer these four questions freely and without judgment:

How well am I taking care of my body?

Am I challenging my brain through new learning and experiences?

How am I feeling emotionally?

What one small change will I start today to improve my healthspan?

For the last question, be specific in your answer! For example: “I will walk for fifteen minutes every morning; or I will call a friend or family member once a week; or I will read for twenty minutes before bed instead of scrolling on my phone.” Close your entry by writing about how this small change will enhance your life and lead to other improvements.

JOYSPANNER: Tao Porchon-Lynch

Born in 1918, Tao Porchon-Lynch was a French Indian American yoga teacher who inspired the world with her passion for movement and wellness. She taught and practiced yoga into her tenth decade, embodying the intersection between lifespan, healthspan, and joyspan.

GROW: Porchon-Lynch became a yoga instructor at age fifty and taught for more than fifty years. Committed to trying new challenges later in life, she cowrote a memoir, *Dancing Light*, sharing her philosophies on life, growth, and resilience.

CONNECT: Porchon-Lynch was deeply connected to her students and community. She had a magnetic personality and an infectious enthusiasm for life. She traveled the world to lead workshops and formed close bonds with students of all ages.

ADAPT: Even after double hip replacements, Porchon-Lynch continued to practice and teach yoga. It was neither easy nor painless, but she found a way to adapt her practice to her new hips.

GIVE: Porchon-Lynch's stated purpose in life was to show her students that they already possessed everything they needed. She loved helping her students unlock this physical and spiritual freedom.

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This book is not intended as a substitute for medical advice of physicians. The reader should regularly consult a physician in all matters relating to his or her health, and particularly in respect of any symptoms that may require diagnosis or medical attention.

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