

Disrupt Aging: Implications of Living 100

www.aarp.org/living100



AARP[®]
Real Possibilities

#DisruptAging

Imagine yourself at 100.

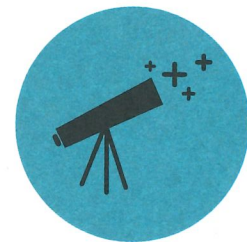
Hard to picture, isn't it?
Now imagine living 100 being
the new norm—a world where a
century of life can be expected.

Today, we're diving into this
paradigm shift. This book will
be your guide along the way.

Welcome! Let's get started.

1

Learning about Living 100



Disrupt Aging: Implications of Living 100

A significant portion of the global population is going to live longer than expected. Maybe to 100 and beyond. Including, perhaps, you.

Our goal, however, is not to live longer—but to make the most of a longer life.

Source: Human Mortality Database

In countries aging the best,*
half of 10-year-olds today
may live to be 104.



* Study cites life expectancy data from female populations in Chile, Japan, New Zealand (Non-Maori), Norway, and the United States.

REFLECT

Consider what it means to have more time—more lifespan.

What's one dream you have for yourself in your later years? Write out that dream in as much detail as possible.

The Evolution of Longevity

Over the last century, life expectancy has practically doubled. This rapid rise is hard to believe—not to mention unprecedented in human history. Let's dive deeper into how we got here, and what exactly has made longer life possible.

We would like to thank James W. Vaupel and Francisco Villavicencio in compiling and processing the data used for the graphics in the presentation.

Sources: CDC, 2012; CDC, 1999; *Annals of Internal Medicine*, 2008; CDC, 1999; PLOS One, 2015; Environmental Protection Agency; CDC, 2015; CDC, 2016

Life expectancy
in 1900:

47

Life expectancy
in 1950:

68

Life expectancy
in 2000:

77

Early 1900s

Clean water in cities decreases infant mortality.

1920s

Widespread food pasteurization and refrigeration improve nutrition.

1940s

Penicillin becomes widely available to treat deadly disease.

1950s

Polio is curbed as vaccines begin to prevent life-threatening illness.

1954

Brown v. Board of Education expands access to high school and college, increasing life spans.

1960s

Regulation of environmental pollution begins, making air and water cleaner.

1980s

Increased use of seat belts reduces car deaths.

2000s

"Smoke-free zones" decrease tobacco use and exposure to secondhand smoke.

REFLECT

Take stock of how you live your life today.

If you knew you'd live to 100, what changes
would you make to your life now?

To what degree would you change your approach to:

(check one that applies)

Your career and how you earn.

- I **wouldn't change** my current approach.
- I would **slightly tweak** my current approach.
- I would **radically change** my current approach.
- I **don't know** if I would change my current approach.

Your education and how you learn.

- I **wouldn't change** my current approach.
- I would **slightly tweak** my current approach.
- I would **radically change** my current approach.
- I **don't know** if I would change my current approach.

Your social life and how you connect with others.

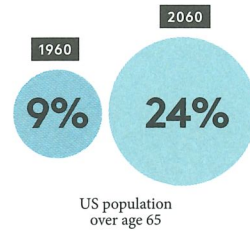
- I **wouldn't change** my current approach.
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Taking this Forward— Synthesize, Reflect, Act

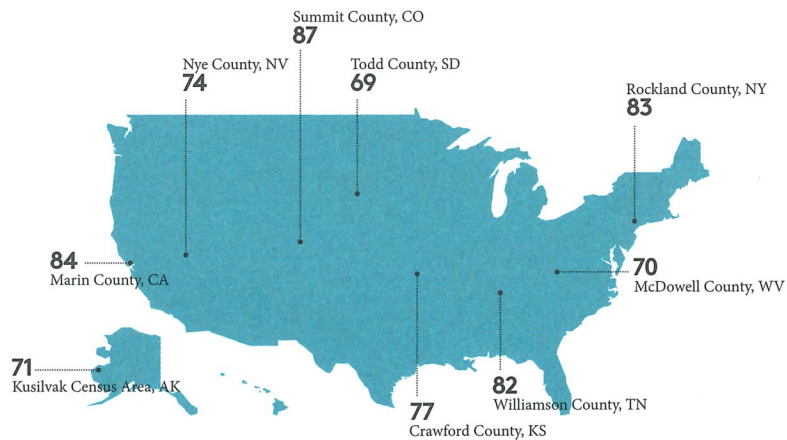
Longer life spans will influence our major life decisions—how we will work, manage our finances, maintain our health, plan for retirement, and take care of our families. Longevity presents us with an exciting opportunity to redesign how we all live as we age.

BY 2060

The percentage of the US population over age 65 will have nearly tripled.

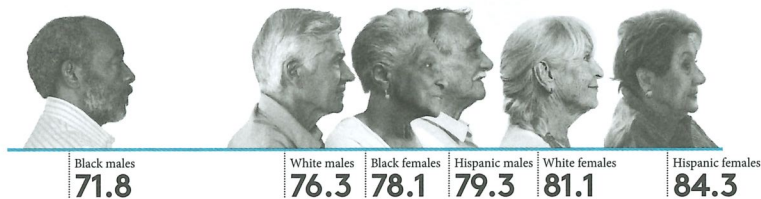


When viewed by county, US life expectancy can vary by as much as 20 years.



Race and gender create significant disparities in US life expectancy.*

*Data did not include measurements for other race and ethnicities.



How Does Living 100 Change the Way We Earn?

Money matters—especially in a longer life. But we aren't talking enough about it. Let's start by talking facts.

Sources: US Bureau of Labor Statistics, 2017; Employee Benefit Research Institute, 2016; Pew Charitable Trusts, 2015; Gallup Poll, 2017; National Endowment for Financial Education, 2017

41% of American households headed by people 55–64 have no retirement assets.

74% of employed Americans say they plan on working past retirement age.



Today, nearly **20%** of Americans over 65 are continuing to work—up from 12% in 1990.

96% of Americans experience four or more shocks to their income by the time they reach 70.

60% of American households faced an expense or loss of income for which they did not budget, in the past year.

REFLECT

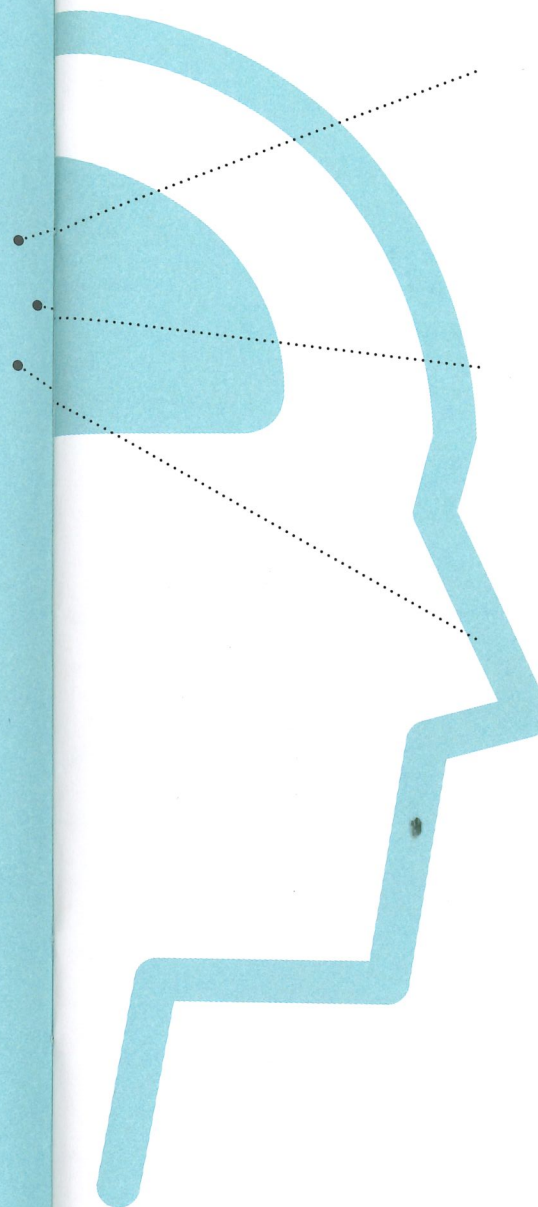
Think of your financial role model.

How do you hope to emulate them? What is the first step you will take today to get on track?

How Does Living 100 Change the Way We Learn?

Getting older doesn't mean we stop learning. Here's some food for thought.

Sources: *Dialogues in Clinical Neuroscience*, 2013; *Psychological Science*, 2013; Pew Research Center, 2016



The brain's neuroplasticity enables us a lifetime of learning.

Even as we age, the brain maintains its ability to change and rewire itself as we learn new things.

Trying new things can help keep our brains healthy.

Research shows new, cognitively demanding activities enhance memory—and that, without it, our brains risk slowing down.

We seek out ways to learn outside of the classroom.

Nearly half of American workers pursued extra training in the last year to maintain or improve their job skills.

REFLECT

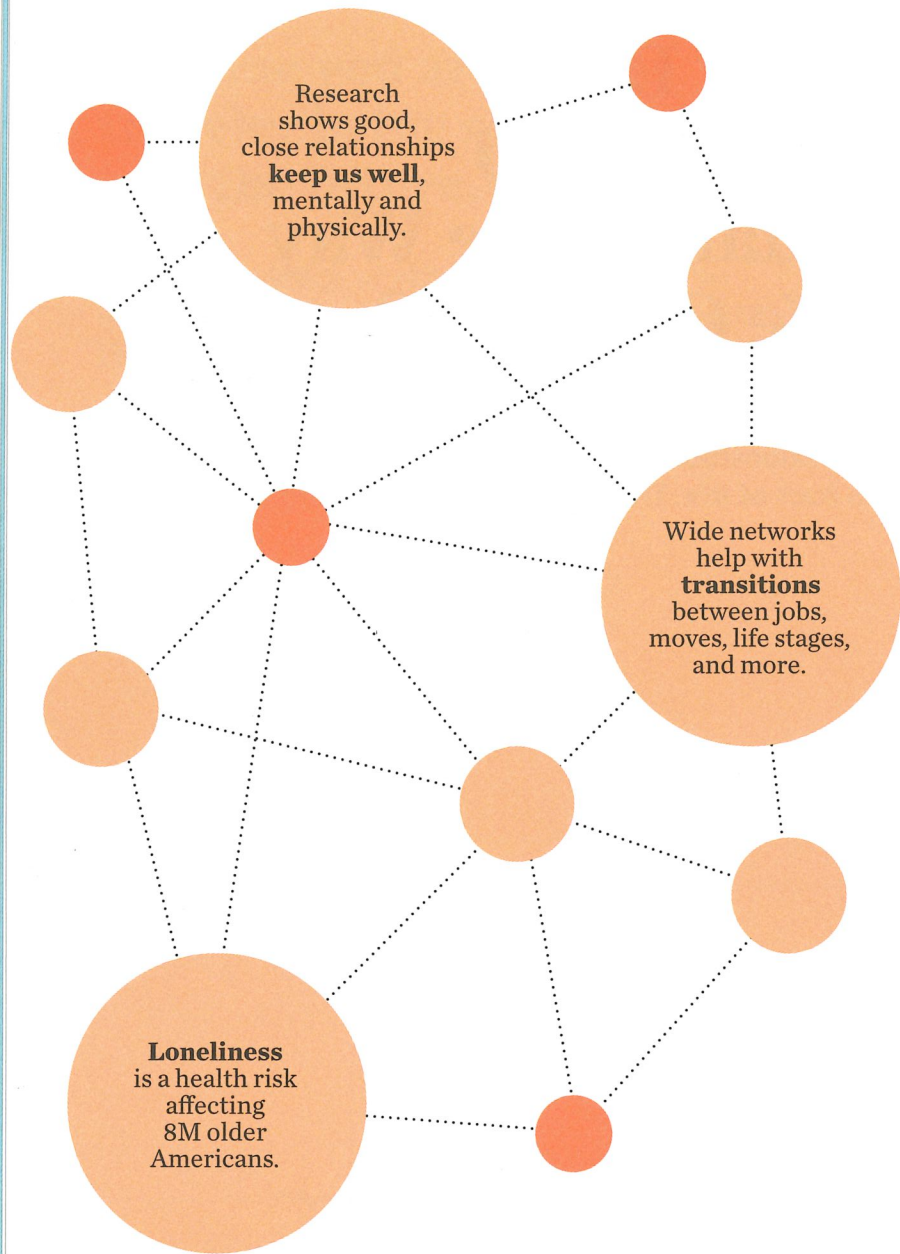
Imagine you are a time traveler being sent years into the future.

**What knowledge or skill would you want to learn beforehand to prepare for a new world?
How would you go about learning it?**

How Does Living 100 Change the Way We Connect?

Relationships and connections are more than a fact of life. They are essential to aging well.

Sources: Robert Waldinger, Director of the Harvard Study of Adult Development, 2015;
The 100-Year Life, 2016; AARP, 2017



REFLECT

Think of someone in your life you'd like to be closer to.

What will it take to make that connection?

How Does Living 100 Change Our Approach to Health?

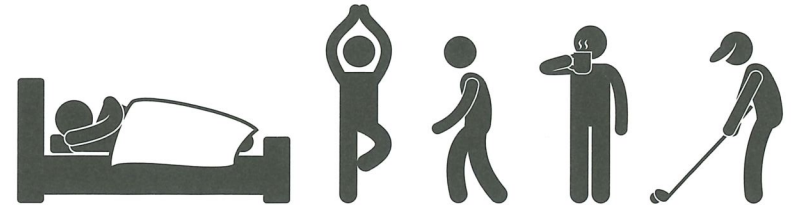
Getting older is likely to bring health challenges—but perhaps not as many as we think. We don't have a crystal ball, but we do know the choices we make today can help (and compound) as we age.



The CDC recognizes routine chores, like gardening, as a form of daily exercise that can boost long-term health.¹



Meditation can be effective in reducing stress.²



Running is shown to protect learning and memory mechanisms in the brain from stress.³

¹ U.S. Department of Health and Human Services (HHS), 2008 ([Link](#))

² *Psychoneuroendocrinology*, 2016 ([Link](#))

³ *Neurobiology of Learning and Memory*, 2018 ([Link](#))

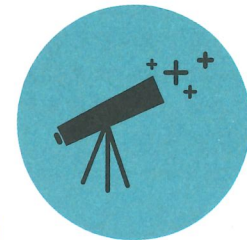
REFLECT

Our approach to health needs to stand the test of time.

What's one thing you do for your health today that you can practice your entire life? What impact would that have on your future self?

2

Applying Living 100





As we age...

Our outlook on aging living can make or break us.

THE IMPACT



Health

Our outlook can guard against cognitive decline.

A positive attitude toward aging contributes to better future health and a lower risk of dementia, even among those with high-risk gene.

Preventive Medicine, 2004; PLOS One, 2018



Wealth

Ageist stereotypes at work can become self-fulfilling prophecies.

Studies show that, in the workplace, knowing you're being stereotyped can negatively affect your performance and motivation.

Frontiers in Psychology, 2016



Self

Getting older can mean doing what we always dreamed of, like starting a business.

A 2009 survey found there were twice as many successful high-growth start-up founders over 50 than under 25.

Kauffman Foundation, 2009

THE TAKEAWAY

Think positively—because it matters.

ADVICE FROM REAL PEOPLE

“I recently stopped dyeing my hair and embraced my natural grey. I figured if I was cool with dark hair, I’d be even more so now. It’s a good lesson for my kids: My hair doesn’t change who I am.”

“I like sharing my experience with my grandkids. I had a career in costume design, so I can show them how to make outfits they can wear to school. It warms my heart to see how much they love it.”

“At 61, my aunt was elected to state congress. She said her age gives her wisdom and tenacity to be a strong public servant. She’s enjoying her later years, having shifted from raising a family to representing a whole community.”

THE RESEARCH

People who view aging positively tend to live longer.

“Older individuals with more positive self-perceptions of aging lived 7.5 years longer than those with less positive self-perceptions of aging.”

Journal of Personality and Social Psychology, 2002.

Having negative views on aging increases your likelihood of ending up in the hospital.

“Subjects over age 70 were assessed over 10 years. Those who held more negative age stereotypes were associated with a 50% greater likelihood of experiencing a hospitalization.”

Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 2015.

When we change how we view our lives, our bodies follow suit.

“Female room attendants working in seven different hotels were told that the work they do (cleaning hotel rooms) is good exercise. As a result, compared with the control group, they showed a decrease in weight, blood pressure, body fat, waist-to-hip ratio, and body mass index.”

Psychological Science, 2007



As we age...
Our brains slow down if we stop learning.

THE IMPACT



Health

There's no singular "must-do" activity for brain health.

Research shows engaging in cognitively stimulating activities of any kind can reduce the risk of brain decline as we age. No evidence shows one activity is more effective than another.

Global Council on Brain Health, 2017



Wealth

Lifelong learning helps us stay relevant at work.

About 35% of American workers say they lack the education and training they need to get ahead, and 45% report they have pursued extra training to maintain or improve their job skills in the past year.

Pew Research Center, 2016



Self

Lifelong learning unlocks lifelong growth.

Researcher Carol Dweck's now-famous "growth mindset" is the belief that abilities are learned, not fixed. This belief alone is shown to lower stress and help us perform better.

Harvard Business Review, 2016

THE TAKEAWAY

Flex your learning muscles every day.

ADVICE FROM REAL PEOPLE

"Lots of my friends have started traveling alone. They say it's so empowering and exciting to tackle unfamiliar situations in new places."

"I started a Facebook group for my friends and me to share articles we find interesting. It's since grown to over 200 people. It's a source of learning for me and helps me see lots of new viewpoints."

"I've always kicked myself for not learning a second language, so I'm using Duolingo on my commute to learn French. I now see I can fit learning into my routine—and I look forward to it."

THE RESEARCH

School and work keep our brains active. When that regular activity goes away, we risk losing brain function.

"Reduced schedules of brain activity is a main factor that creates a self-reinforcing downward spiral of degraded brain function in older adults."

Progress in Brain Research, 2006

Doing new, cognitively demanding activities keeps our brains healthy.

"Sustained engagement in cognitively demanding, novel activities enhances memory function in older adulthood."

Psychological Science, 2013

Even as we age, it's possible to increase our capacity to learn.

"Although there is some neural deterioration that occurs with age, the brain has the capacity to increase neural activity and develop neural scaffolding to regulate cognitive function. It's called neuroplasticity."

Dialogues in Clinical Neuroscience, 2013



As we age...
**Good, close relationships
 keep us well.**

THE IMPACT



Health

Family support can boost mental and physical health.

Research shows family support reduces depressive symptoms associated with discrimination and everyday stress in African American men.

Journals of Gerontology: Series B, 2018



Wealth

When our intimate relationships are going well, we do better at work.

Research shows the absence of troubles at home gives people greater emotional, cognitive, and physical vigor at work, leading to improved outcomes related to income, promotion, and job satisfaction.

Journal of Occupational and Organizational Psychology, 2014



Self

Good, close relationships need to be cultivated intentionally.

The amount of time spent in the company of our friends, extended family, and children plateaus by our mid-50s. From age 40 until death, we tend to become more isolated.

Bureau of Labor Statistics, 2015

THE TAKEAWAY

Get closer to your close ones.

ADVICE FROM REAL PEOPLE

“I write my grandmother every month. She just loves beautiful cards, and sending them is delightful for me. It’s deepened our relationship.”

“My childhood friends and I text each other one question: What’s something that made you excited recently? Having this one simple habit makes it easy for us to stay involved in each others’ lives.”

“Every Saturday morning I do a group video chat with my family in Bahrain and Canada. I hold myself to it, even when I’m busy. It always grounds me and makes me feel close to them.”

THE RESEARCH

Good, close relationships in later years keep us healthy.

“The people who were the most satisfied in their relationships at age 50 were the healthiest at age 80.”

Robert Waldinger, Director of the Harvard Study of Adult Development, 2015

A happy marriage helps us weather life’s ups and downs.

“For both men and women, marital satisfaction buffered day-to-day links between poorer perceived health and a decline in happiness, but time spent with others did not.”

Psychology and Aging, 2010

Loneliness is more damaging to our health than obesity.

“Research on the risks of loneliness and social isolation is similar to that of research on obesity 3 decades ago. Current evidence indicates that heightened risk for mortality from a lack of social relationships is greater than that from obesity.”

Perspectives on Psychological Science, 2015



As we age...

Widening our social circles gives us new opportunities.

THE IMPACT



Health

Loneliness is a health epidemic.

Social isolation is a risk factor for earlier death, with an impact similar to that of smoking tobacco.

American Journal of Public Health, 2013



Wealth

Having a wide social circle is shown to help us find our next job.

Finding a new job is likely to be essential, as we're now spending more years in the workforce. As of 2017, almost 20% of Americans over 65 have continued to work—up from 12% in 1990.

American Sociological Review, 2017; US Bureau of Labor Statistics, 2017



Self

Midlife transitions can be overwhelming.

Experts say building a wide social circle, whether it's built purposefully or serendipitously, is a common theme among those who land successful transitions as they age.

The 100-Year Life, 2016

THE TAKEAWAY

Get out there. Meet new types of people.

ADVICE FROM REAL PEOPLE

“I like hosting parties that bring new people together. When I host, I ask everyone to bring two acquaintances I don't already know. It exposes me to lots of new people and perspectives.”

“Every month I host a ‘brain trust’ that brings friends together to brainstorm around specific challenges we want to solve. It unites the people in my network in unexpected ways.”

“I recently decided to switch careers but didn't know anyone outside my industry. I went to an event I found on Meetup.com and ended up meeting a new friend who let me shadow them at their work.”

THE RESEARCH

Meeting people of different backgrounds and expertise shows us new possibilities for what our lives can be.

“A broader set of more distant relationships may lack an affective quality but exposes the individual to new, even unanticipated possibilities.”

Administrative Science Quarterly, 1999

Activities that boost our social capital can open doors to new opportunities.

“Our results suggest (...) volunteering may indeed develop or strengthen an individual's social capital, thereby providing volunteers access to opportunities for employment. This may be particularly important for individuals who have a greater social capital deficit, such as those lacking education.”

Office of Research and Evaluation, Corporation for National and Community Service, 2013

It's not just close ties that help you find a new job. Having a broad network helps, too.

“Weak ties are important collectively because of their quantity, but strong ties are important individually because of their quality.”

Journal of Labor Economics via Facebook Research, 2016



As we age...
Stress wreaks havoc on our mind and body.

THE IMPACT



Health

Stress is damaging physically as well as mentally.

For both men and woman, stress is a risk factor for cardiovascular disease—a leading cause of death in the US.

The Lancet, 2004; PLOS One, 2012



Wealth

Stress is tied to money and work.

For decades, money and work have been the top two leading causes of stress in American adults, according to national surveys.

American Psychological Association, 2017



Self

Reducing stress helps us make better decisions.

On a neurological level, chronic stress impairs decision-making: It weakens our ability to consider consequences and can lead to more high-risk decisions.

Cell, 2015

THE TAKEAWAY

Make time to de-stress every day.

ADVICE FROM REAL PEOPLE

“Seeing the ocean is so calming for me. So I make a point of either parking by the beach or walking my dog down there a couple times a week.”

“I work in a service-based industry where people often get upset. It used to stress me out. It helps to ask questions instead of making assumptions. That way I see the reason behind the anger, so I can solve it stress-free.”

“For me, different kinds of stress require different solutions. Running gets me out of my head. Meditation or Tai Chi helps me focus. So instead of forcing myself to do one thing, I try lots of stuff and see what sticks.”

THE RESEARCH

Even small, daily stressors accumulate to harm long-term mental health.

“Results suggest that daily stressors cause wear and tear on emotional well-being and are consistent with cognitive theories of depression: How people respond to the negative events in their lives is important to future well-being.”

Psychological Science, 2013

As we get older, we become more vulnerable to the damaging effects of stress.

“Acute stress responses in young, healthy individuals typically do not impose a health burden. However, if the threat is unremitting, particularly in older or unhealthy individuals, the long-term effects of stressors can damage health.”

Annual Review of Clinical Psychology, 2005

Non-medicinal interventions, like meditation, can be as effective as medication in reducing stress.

“Experienced meditators have lower stress hormones and perceived stress, as well as a smaller neurogenic inflammatory response, compared to the control group.”

Psychoneuroendocrinology, 2016



As we age...

Making daily routines more active keeps us fit.

THE IMPACT



Health

When it comes to exercise, it's important to start small.

The CDC recommends starting with low-intensity, low-impact activity and scaling up—not overdoing it.

CDC, 2015



Wealth

Staying active keeps our wallet in good shape.

Americans spent a staggering \$273B in 2013 fighting chronic diseases that could have been prevented with things like exercise.

JAMA, 2016



Self

Exercise is tied to stress reduction and brain health.

Running, in particular, has been shown to protect learning and memory mechanisms in the brain from chronic stress.

Neurobiology of Learning and Memory, 2018

THE TAKEAWAY

Do what gets you moving.

ADVICE FROM REAL PEOPLE

“Whenever I might use an elevator, I take the stairs instead. I do it at work (eight floors up, eight floors down), in malls, and whenever I travel. It’s challenging, but my stamina is way improved.”

“Every day I do a 15-minute cleaning sprint that gets me up and moving. It gives me the satisfaction of accomplishing something, clears my head, and makes me want to be more active afterward.”

“I’ve turned grocery shopping into a stopwatch-fueled race against myself. I see how fast I can get all of my foods under a certain time. It’s surprising how active it can get! Plus, I don’t waste money impulse buying.”

THE RESEARCH

Successful centenarian cultures tend to favor exercise that comes naturally.

“The world’s longest-lived people don’t pump iron, run marathons or join gyms. Instead, they live in environments that constantly nudge them into moving without thinking about it. They grow gardens and don’t have mechanical conveniences for house and yard work.”

The Blue Zones: Lessons for Living Longer From the People Who’ve Lived the Longest, 2008

Sufficient exercise in old age can be attained by making daily chores more rigorous.

“Muscle-strengthening activities make muscles do more work than they are accustomed to during activities of daily life. This includes lifting weights, working with resistance bands, ... climbing stairs, carrying heavy loads, and heavy gardening.”

Office of Disease Prevention and Health Promotion, U.S. Department of Health and Human Services, 2008

Daily low-intensity activity may improve health more than occasional high-intensity workouts.

“Prolonged sitting over several days amplified fat molecules and abolished the beneficial effect of acute exercise on lowering fat molecules and raising fat breakdown, regardless of energy balance.”

American Journal of Physiology-Endocrinology and Metabolism, 2016



As we age...

Talking openly about money helps us save and spend wisely.

THE IMPACT



Health

Health care can be a huge expense.

A 2015 survey found nearly 25% of Americans experienced a major, unexpected out-of-pocket medical expense in the prior year and 46% say they currently have debt from that expense.

Federal Reserve Board Survey, 2015



Wealth

It's not a matter of if a financial crisis will hit, but when.

About 60% of American households have faced an expense or loss of income in the past 12 months for which they did not budget.

Pew Charitable Trusts, 2015



Self

Life-defining decisions happen when a financial crisis hits.

One in three pre-retirees has less than \$2,000 in liquid savings—the cost of a typical worst-case financial shock. Draining that money can alter plans around work, debt, and family.

AARP, 2016

THE TAKEAWAY

Make saving a conversation topic.

ADVICE FROM REAL PEOPLE

“When I told my friend I was trying to pay off my student loans, she said she was, too! Now we do fun home-cooked meals over expensive dinners. I’m not embarrassed anymore, and I’m saving a lot.”

“Every year, my partner and I do a ‘Financial Summit.’ We lay out all of our finances—earnings, goals, debts, and fears—then make a solid plan. It brings us closer because we don’t have to do this alone.”

“I asked a coworker how he saves for a big trip. He said he has part of his salary deposited into a separate account, for travel money. Now I’m doing the same. This has helped me realize people have good tips to share.”

THE RESEARCH

Everyone struggles with saving at some point. Talking about it makes it less overwhelming.

“Americans have been made to feel like failures when it comes to retirement savings. But it is typical for a person to experience setbacks in their retirement savings throughout their lifetime—96% of Americans experience four or more income shocks by the time they reach age 70.”

National Endowment for Financial Education, 2017

Having a “buddy” as a support system helps us stick to long-term financial goals.

“85% of respondents believe having someone who understands their financial goals and can assist in holding them accountable would be helpful.”

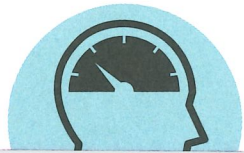
National Endowment for Financial Education, 2013

Most of us don’t know what deals we’re missing. Talking to people helps us discover tips, tricks, and helpful financial “life hacks.”

“A whopping 79% of travel credit cardholders said they have never transferred credit card rewards points to an airline or hotel loyalty program. 72% of respondents said they never check to see if credit card companies are offering new or better sign-up bonuses.”

Princeton Survey Research via The Points Guy, 2015

Taking Living 100 Forward



What Does the Future of Aging Look Like: A Kinder, Gentler Clock for Human Development

A longer life span means we need to cultivate the ability to reinvent ourselves, change careers, and build new life skills. It's time we reframe development to extend far beyond early life and span across our entire life course.

REFLECT

**What skills will be most valuable in the future?
How will you anticipate and adapt to new opportunities?**

Spirit for Living 100

What we do with a longer life extends beyond ourselves. If we so choose, we can use our time to have a profound, positive impact on others.

REFLECT

What contribution do you want to make over the course of your lifetime?

100

90

80

70

60

50

40

30

20

10

0



Inventing new ways to live and age.

Disrupt Aging celebrates people of all ages who are challenging cultural norms, uncovering biases, and reshaping expectations about aging.

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