

THE AGING BRAIN

PROVEN STEPS TO PREVENT DEMENTIA
AND SHARPEN YOUR MIND

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Some names and details have been changed to protect the privacy of the individuals involved.

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AUTHOR'S NOTE

This book proposes specific lifestyle interventions to improve health, slow aging, and reduce the risk of late-onset Alzheimer's disease (AD). This book is not intended to provide steps to address other types of dementia, such as frontotemporal dementia, Lewy body dementia, spongiform disorders, and so on. You should consult a qualified medical professional before initiating these interventions or any other fitness regimen. The interventions in this book are intended to be implemented in consultation with your doctor, and this is especially so if you suffer from any medical condition.

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INTRODUCTION

It's Personal

This book is personal—not simply because my heart has been touched by the numerous patients I have treated over the last twenty-six years, many of whom suffered from dementia, nor because my wife and I are in our middle fifties and acutely aware of the difficulties of aging but because over the last several years I have watched my wife’s mother slowly being ravaged by Alzheimer’s disease. I have felt the heartache, the frustration, and the sadness as she has become more feeble, less aware, and less capable. I know the utter frustration of being helpless as a loved one, who had been so reliable, so strong, and such a bastion of courage and support to everyone else, slowly loses the ability to care for her most basic needs.

I have seen the hurt on my wife’s face as she recognized each newly lost ability and found her mother becoming ever less present, and my heart is torn every time I see the fear in my wife’s eyes as she realizes her risk of dementia is increased because her mother has it.

Yes, this book is personal. In writing it I have sought not only good scientific evidence but also usable information to be put into

practical action that will promote better health and slow aging and help us in the pursuit of our goal to prevent the development of late-onset Alzheimer's disease—even in those who are at higher risk for developing it and in those who are already showing early signs of impairment!

It's been said that beautiful young people are accidents of nature, but beautiful old people are works of art. I dedicate this book to my wife, Christie, who is both a beautiful "accident of nature" and the most beautiful work of art I have ever known. Christie, I hope this book will remove your fear and give you confidence to know that rather than slowly fading away you can grow more beautiful every day!

And to the reader, I invite you to share in this vision, to use the information in this book to not only live long but also live well and grow more beautiful every day!

PART 1

HISTORY AND AGING



1

The Problem of Aging

We All Do It

And yet the wiser mind
Mourns less for what age takes away
Than what it leaves behind.

William Wordsworth, "The Fountain, a
Conversation," in *Lyrical Ballads*, 1800

It was painful to watch, agonizing really. Anger, frustration, helplessness, mixed with sadness, heartache, loss—and of course denial, this can't be happening. But sadly it was.

The features were the same—blue eyes, teeth yellowed from years of use—but her historically warm and friendly smile wasn't warm, wasn't friendly, not anymore. Like so much of her, it was empty, just a shell—she was a wasting, shriveling, slowly decaying shell.

"Hello, Mom," was met with a confused look. Her formerly thick brunette hair, always kept, was now thinning, snow white, and

disheveled. How could this be happening? Alzheimer's disease—the name given to this destroyer of worlds, the thief that neuron by neuron slowly steals life away. Like a picture slowly fading, like the last beams of sunlight growing ever dimmer, this insidious disease robs a person not only of ability but also of their very selves.

In the twenty-first century Alzheimer's disease is perhaps the most frightening diagnosis a person can receive. But it has not always been this way. In fact, dementias like Alzheimer's are a relatively new problem for humanity. Just fifty years ago cancer was the most dreaded diagnosis for many. While cancer remains a terrible problem, for those over fifty the threat of losing oneself as the brain slowly deteriorates is even more terrifying. The rise of dementias as a problem in human history is a result of ever improving health care and the fact that people are living longer. Prior to the last one hundred years few lived long enough to develop dementia.

Throughout history there have always been health scares, but dementia wasn't one of them. During the fourteenth century the Black Death (bubonic plague) swept across Europe, killing one-third of the population. People lived in terror of contracting this mysterious disease. No one understood the cause, let alone how to treat it. Religious leaders proclaimed the ghastly destruction was the wrath of an offended god. Yet it was merely a bacterial infection (*Yersinia pestis*) carried by fleas. Today the disease occurs infrequently, and if antibiotics are given, it rarely results in death.

The greatest killers throughout most of human history have been infections—from either disease or wounds. Prior to modern antibiotics and sanitation, life expectancy was short. Before the twentieth century, essentially every family lost children in death. Before 1900 only 39 percent of men and 43 percent of women lived to be sixty-five years of age, but by 1997, 77 percent of men and 86 percent of women lived to the age of sixty-five.¹

At the turn of the twentieth century (1900), the top three causes of death, accounting for 30 percent of all deaths, were from

infections: pneumonia and influenza, tuberculosis, and gastrointestinal infections (diarrhea and enteritis). But by 1990, with the advent of water treatment, food inspections, antibiotics, modern dentistry, and childhood vaccinations, this had markedly changed. No longer were large segments of the populace dying from infections. By 1990 the top three killers, accounting for 60 percent of all deaths, were heart disease, cancer, and stroke.²

Today's top killers are as follows:

- Cardiovascular disease—28.2 percent
- Cancer—22.2 percent
- Stroke—6.6 percent
- Chronic lung disease—6.2 percent
- Alzheimer's disease—4.2 percent
- Diabetes—2.9 percent
- Flu and pneumonia—2.6 percent
- Accidental injury—2.2 percent

Strikingly, the top five causes of death are all a result of people living longer—they are no longer dying at a young age from infections. America as a populous is aging, and with an aging population comes increased numbers of age-related diseases. In 1950 there were twelve million people over the age of sixty-five accounting for 8 percent of the population. By 2002 this increased to 12 percent or thirty-six million people. And according to the Centers for Disease Control and Prevention (CDC), by 2030 there will be seventy-one million people in the United States over the age of sixty-five.

The number of very old, those over eighty-five, is also increasing. From 1950 to 2002 there has been an eightfold increase in the number of people ages eighty-five and older. It is projected that by 2020 there will be seven million people over the age of eighty-five, and by 2040 that number will double to fourteen million.³

For the young the idea of living longer is all about length of years, but as we grow older the quality of life begins to overshadow mere age. This is evidenced by the growing right-to-die trend—the principle that individuals have the right to end their lives, usually because their quality of life has become so poor it is tantamount to sustained torture. In the United States, three state legislatures (Oregon, Washington, and Vermont) have passed laws permitting physician-assisted suicide, and in 2009 Montana’s Supreme Court ruled physician-assisted suicide legal. In California in 2015 the governor signed a physician-assisted suicide law into effect during a special session of the legislature after the law failed to pass in regular session. Its full implementation is pending at the time of the writing of this book.

Pain, suffering, and disability undermine quality of life and must be considered in any discussion of aging. In 2011 there were more than 40 million people ages sixty-five and older in the United States, and more than 14.5 million (36.6 percent) of them suffered with some type of disability. More than 9 million (23.6 percent) had impairments in their ability to walk, nearly 6.5 million (16.2 percent) could not live independently, more than 6 million (15 percent) had impaired hearing, nearly 3.8 million (9.4 percent) were disabled due to cognitive impairment, more than 3.5 million (8.9 percent) could no longer provide basic self-care, and more than 2.6 million (6.8 percent) were visually disabled.⁴

People don’t simply want to live longer; they want to live better—healthier, happier, and fuller lives. The greater question today is not how do we live longer but how do we live better—how do we retain our vitality, health, independence, and autonomy? How do we slow the ravages of time?

The good news is not only can we live longer but we can also live better, healthier, and more vibrant lives. By making the right choices we can maintain our independence, vitality, and most importantly our mental acuity. Dementias such as Alzheimer’s disease are not inevitable. Disability is not predestined. Yes, we can live longer, and we can live better!

In this book we will explore aging. I'll differentiate normal aging from pathological aging. I will identify activities that accelerate aging and increase the risk of both physical disability and dementia, but I'll also provide specific actions a person can take to slow the aging process and protect our brains and bodies from deterioration in order to maintain our independence, autonomy, and abilities as we age. At the end of each chapter will be lists of learning points or action steps or both for you to implement that are designed to reduce your risk of dementia. Because of individual differences from person to person, not every intervention is applicable to every person. For instance, a person with nut allergies would not benefit from adding nuts to their diet whereas those without the allergy would. Select those elements from the action steps that are applicable to your life and build an action plan that will improve your vitality and brain health and keep your mind sharp.

Science and medicine have reduced the risk of dying young; now it is up to us to decide how we will age. Will we make purposeful choices to maximize health and maintain our abilities?

My wish for you is that you will use the information in this book not only to live longer but also to live more vibrantly with each passing year!

▪ **LEARNING POINTS** ▪

1. Modern science has reduced the risk of dying young.
2. Dementia is a problem of living longer.
3. We can make choices to reduce the risk of dementia even while living longer.