# THE MIRACLE OF

# REGENERATIVE

# MEDICINE

HOW TO NATURALLY
REVERSE THE AGING PROCESS

Elisa Lottor, Ph.D., H.M.D.

FOREWORD BY **Judi Goldstone**, M.D.

AMERICAN ACADEMY OF ANTI-AGING

AND REGENERATIVE MEDICINE

#### **CONTENTS**

**Cover Image** 

Title Page

**Epigraph** 

**Dedication** 

Foreword by Judy Goldstone, M.D.

**Introduction: The Next Frontier** 

Part 1: What's the Matter?

#### Chapter 1. Inflammation: The Root of Disease

WHAT IS INFLAMMATION?

THE CAUSES OF INFLAMMATION

KNOWING IF YOU HAVE CHRONIC INFLAMMATION

HOW TO TREAT INFLAMMATION

BENEFITS OF EATING AN ANTI-INFLAMMATORY DIET

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 1** 

#### Chapter 2. Food Is the Best Medicine

SECRETS TO LONGEVITY

**ELEMENTS OF A TRADITIONAL DIET** 

**ELEMENTS OF A MODERN DIET** 

THE BLUE ZONE DIET

**FOOD AND DISEASE** 

**POINTS TO REMEMBER** 

**REFERENCES FOR CHAPTER 2** 

#### Part 2: Your Body, Your Life

Chapter 3. A Gut Feeling

**FAQS ABOUT THE GUT** 

THE UGLY WORLD OF CONSTIPATION

WAYS TO HEAL AND SEAL THE GUT

THE BENEFITS OF A HEALTHY GUT

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 3** 

#### **Chapter 4. Detoxing the Organs**

HOW CAN I TELL WHETHER I'M HEALTHY OR NOT?

THE LIVER

THE INTESTINES

**HEAVY METAL DETOX** 

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 4** 

#### Chapter 5. Stretching in Our Skins

**HOW SKIN DEGENERATES** 

**BONUS: HOW TO TREAT SHINGLES** 

SIX FOODS FOR HEALTHY SKIN

**OTHER SUPPLEMENTS** 

**CUTTING-EDGE SKIN REGENERATION TECHNIQUES** 

POINTS TO REMEMBER

REFERENCES FOR CHAPTER 5

#### Chapter 6. Sleep: The Core of Recovery

BENEFITS OF SLEEP

HARMFUL EFFECTS OF SLEEP DEPRIVATION

THE ROLE OF NAPS IN REGENERATION

HOW TO SLEEP BETTER

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 6** 

#### Chapter 7. Remembering the Brain

AGE-RELATED COGNITIVE DYSFUNCTION

**DEMENTIA** 

WHAT IS ALZHEIMER'S

FACTORS THAT LEAD TO ALZHEIMER'S

FOODS, HERBS, AND OTHER METHODS TO REDUCE THE RISK OF ALZHEIMER'S

**BONUS: THE MIND DIET** 

**SUPPLEMENTS** 

OTHER TIPS FOR PREVENTION

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 7** 

#### **Chapter 8. The Mind-Body Connection**

THE HEALING POWER OF WATER

LONELINESS, AGING, AND DEPRESSION

YOUR GUT AS A "SECOND BRAIN"

LONELINESS CAN BE DANGEROUS TO YOUR OVERALL WELL-BEING

HOW SPIRITUALITY CAN INCREASE YOUR HAPPINESS

**SUPPLEMENTS** 

**POINTS TO REMEMBER** 

**REFERENCES FOR CHAPTER 8** 

#### Part 3: The Search for a Solution

#### **Chapter 9. Supplementing Your Everyday Needs**

**TELOMERES** 

**SUPPLEMENTS** 

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 9** 

#### Chapter 10. Adaptogens: The What, the Why, the How

WHAT IS AN ADAPTOGEN?

HOW CAN THEY AFFECT YOU?

RHODIOLA ROSEA

**ASTRAGALUS ROOT (TA-65)** 

ASHWAGANDHA (INDIAN GINSENG)

**BENEFITS OF TAKING AN ADAPTOGEN** 

FINDING AN ADAPTOGEN THAT WORKS FOR YOU

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 10** 

#### Chapter 11. Hormones: Maintaining Your Inner Balance

**HORMONES AND YOU** 

WHAT ARE THE MAIN HORMONES RESPONSIBLE FOR AGING?

#### KNOWING IF YOU ARE EXPERIENCING A HORMONE IMBALANCE

TREATING HORMONE IMBALANCES: NATURE VERSUS MODERN MEDICINE

POINTS TO REMEMBER

REFERENCES FOR CHAPTER 11

#### Chapter 12. Energy Medicine: A Gentle Remedy

HOW ENERGY MEDICINE CAN HEAL

**HOMEOPATHY** 

**ACUPUNCTURE** 

**BACH FLOWER REMEDIES** 

**QIGONG** 

**ENERGY MEDICINE AND SCIENCE** 

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 12** 

#### **Chapter 13. Stem Cells: A New Revolution**

STEM-CELL THERAPY

THE SOLUTION WE NEED

STEM-CELL PROCEDURES: HARVESTING, DEPLOYING, HEALING

PROGRESS IN STEM-CELL RESEARCH

POINTS TO REMEMBER

REFERENCES FOR CHAPTER 13

#### Chapter 14. Epigenetics: Unraveling Your DNA

WHAT IS EPIGENETICS?

HOW DOES IT AFFECT ME?

BENEFITS OF EPIGENETICS

IMPROVING YOUR LONGEVITY THROUGH EPIGENETICS

**GUIDING YOUR GENE EXPRESSION** 

**EPIGENETICS AND DISEASE** 

CASE STUDY OF EPIGENETICS: THE HOLOCAUST

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 14** 

#### **Chapter 15. Cutting-Edge Regenerative Treatments**

PRP THERAPY

**3-D BIOPRINTING** 

HYPERBARIC OXYGEN THERAPY

**HYALURONIC ACID** 

**MEDICAL CANNABIS** 

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 15** 

#### Part 4: Take Charge of Your Life

#### Chapter 16. The Road to Recovery

WHY BE GRATEFUL?

FINDING GRATITUDE

HOW KINDNESS AND GRATITUDE WORK TOGETHER

BEING CONTENT WITH YOUR LIFE AND HAVING PURPOSE

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 16** 

#### **Chapter 17. Regenerative Recipes**

**BREAKFAST RECIPES** 

**LUNCH RECIPES** 

**DINNER RECIPES** 

**DESSERT RECIPES** 

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 17** 

#### **Chapter 18. Exercise and Mobility**

THE BENEFITS OF REGULAR EXERCISE FOR THOSE OVER THE AGE OF SIXTY

HOW EXERCISE CAN HELP YOUR BRAIN

PHYSICAL ACTIVITY AND PAIN RELIEF

THE BENEFITS OF T'AI CHI, YOGA, AND QIGONG

MOVEMENT AND ITS BENEFITS

POINTS TO REMEMBER

**REFERENCES FOR CHAPTER 18** 

#### Chapter 19. All the Resources You Need Are at Your Fingertips

KNOWLEDGE IS POWER

THE NEW PARADIGM OF HEALTH

POINTS TO REMEMBER

#### **Resources for Wellness**

ALTERNATIVE/COMPLEMENTARY HEALTH CARE
WHERE TO GET . . .
WHERE TO BUY VITAMINS, SUPPLEMENTS, AND HOMEOPATHIC MEDICINE
BOOKS WORTH READING

**About the Author** 

About Inner Traditions • Bear & Company

**Books of Related Interest** 

**Copyright & Permissions** 

Index

## **FOREWORD**

#### JUDI GOLDSTONE, M.D.

Living a long and healthy life is much different today than it was in previous generations. It is actually possible, and a choice you can make. What does it take to get into top physical and mental shape and maintain it for a lifetime? What decisions can you make now to enjoy a long life of health, energy, enthusiasm, and feeling terrific? The Miracle of Regenerative Medicine by Dr. Elisa Lottor has all the answers and a game plan to put them into action as well. The fascinating, novel concepts in The Miracle of Regenerative Medicine are presented in such a compelling and practical manner that it is a must read for anyone wishing to be in control of his or her own destiny. Start now and take advantage of this remarkable book, which is on the forefront in the science, technology, and medicine of life extension, regeneration, and disease prevention.

Given the right circumstances, the body has the ability to heal and regenerate itself. It is possible to regain or improve health and vitality with aging. However, knowledge of what is currently available and/or is on the horizon in medicine, science, and technology is necessary in order to make proper choices for optimal health and well-being. Scientific advances to improve life-span and quality of life are being discovered continually but they can be difficult to find and integrate into a workable personal plan.

Dr. Lottor has been involved with the fastest growing and cutting-edge medical field of advanced preventive/regenerative/anti-aging medicine since its inception. All you have to do is read her book and utilize the strategies presented. She has done all the work by combining revelations from current scientific research and her forty years of clinical experience and patient feedback into this one powerful resource. The Miracle of Regenerative Medicine is the most comprehensive evaluation and explanation of existing advances and cutting-edge trends in disease detection, treatment, prevention, and reversal that I have read to date. I believe this is the only book necessary to read in order to gain the necessary knowledge and empower yourself to make wise choices for your future health and longevity.

Beside all the information presented, Dr. Lottor presents numerous

scientifically validated tips and practical advice you can incorporate right now to prevent, reverse, and treat bodily degeneration. It is only with this incredible innovative information that you will be able to make informed, wise choices to regain, improve, and/or maintain your health and remain at your physical and mental peak for life.

My personal story, which is the story of a majority of my patients, illustrates why it is crucial to take charge of your health, learn as much as you can, and make the proper choices now. When I was in my midfifties, it seemed as though my body was rapidly deteriorating. I had no energy, was depressed, lost my enthusiasm for life, couldn't concentrate, and was barely able to work. I couldn't imagine that this was how life was supposed to be; was it all over at fifty? I didn't know where to go for help or even find information on what was happening. Several medical professionals told me it was just the natural aging process and there was nothing to do about it. Refusing to believe or accept this, I started a long, solo, and difficult learning process that lasted several years. What I discovered turned out to be life changing. Gradually, I was able to reverse these signs and symptoms of "aging" and return to optimal mental and physical functioning by incorporating a multimodality, holistic lifestyle approach, all of which is delineated in this book. If I, as a board certified, top internal medicine physician, had minimal knowledge of advanced, preventive, regenerative medicine, I imagine many people lack this information and could benefit greatly by learning about and incorporating the suggestions found in this book. Because of The Miracle of Regenerative Medicine you can be saved from the struggle many people experience with illness and aging. So, take advantage of this precious gift that will allow you to take control of your health and live a long, happy, and healthy life.

JUDI GOLDSTONE, M.D., is a board certified internal medicine physician. She is a long-standing member of the American Academy of Anti-Aging and Regenerative Medicine and the Obesity Medicine Association. Dr. Goldstone graduated at the top of her class from Mount Sinai School of Medicine in New York and has practiced weight loss and wellness medicine for the past fifteen years. She is a well-known expert in bioidentical hormone replacement therapy, nutraceautical usage, and nutrition. She practices at Southern California Center for Anti-Aging in Torrance, California.

#### INTRODUCTION

### THE NEXT FRONTIER

the thicket of vines, a man and his party whip their machetes. The slimmer with the slashing motions, and the sunlight filters through the dense forest canopy. Sweat and the heavy air attract lazy swarms of mosquitos, which the men occasionally slap away before continuing forward. They are weary. They have traveled far, crossing oceans and trudging past the shores of the warm Atlantic coast.

They are searching restlessly, endlessly in these isles of Florida for a miraculous spring of water. Legend has it that this mysterious spring has the power to restore life, youth, and vitality to anyone who drinks of it. The captain has heard countless stories of its waters in his childhood; he has studied dusty tomes that claimed of its existence; and yet...

The man wipes his forehead and leans back on a tree, feeling the rough bark against his drenched shirt. He watches the men continue their work. In this very moment, he can only imagine how refreshing it would feel to drink deeply from the clear waters. To splash and laugh in the waves, like a child. To float weightlessly on his back, freed of every burden. To wash away the weariness settled deep inside his bones. No, he mustn't only imagine. Juan Ponce de León must obtain, once and for all, the wondrous powers of the Fountain of Youth.



Juan Ponce de León may be considered the patron saint of the Fountain of Youth, but the sixteenth-century explorer wasn't the only one to seek the powers of rejuvenation. Tales of the fountain resonate throughout history and geography over the span of thousands of years. The Greek historian Herodotus—widely regarded as the Father of History—describes his encounter with the miraculous water near the lands of Egypt, in the fifth century BCE. The water reputedly granted longevity, as well as stature and good looks to the inhabitants of

Macrobia. And according to the legends of the East, Alexander the Great journeyed through the Lands of Darkness—the impenetrable forest that doomed its inhabitants to eternal wandering—to seek the coveted Water of Life. Even the Bible features its own fountain of healing in the Pool of Bethesda. According to the fifth chapter of the Gospel of John, an angel would descend to stir the miraculous pools, bestowing complete restoration to the first who entered its waters.

These texts characterize the Fountain of Youth as an element of myth, legend, and even miracle. Indeed, the fountain seems to inhabit a space beyond our everyday lives, in an atmosphere of fantasy and faith. If we were to trace the fountain back to its roots, we would not be surprised to see it emerge from the depths of human imagination, a desperate fantasy to cope with the ever-present decay of the body. But although eternal youth and everlasting life may be entirely fictional, the coming chapters will demonstrate that biological rejuvenation lies perfectly within our reach. Whether we desire to maintain our health, or long for the energy and focus of our youth, regenerative medicine promotes healthy, holistic, and natural solutions that will work to reverse the passage of time.

#### Biological rejuvenation lies perfectly within our reach.

Before we look for a solution, we must first evaluate the problem: growing old. From a scientific standpoint, aging begins at birth. It is the continuing process of development and degeneration, in body and in mind. Time, gravity, environment, stress—each of these works to damage the body and propel us steadily toward death. However, the body doesn't passively sit and allow its own demise: from cuts and bruises to colds and infections, the body heals and protects itself through cell regeneration and the immune system.

Now, let's extend this natural healing process to a broader medical theory: if the body naturally heals and regenerates by itself, it may even be able to counteract the minute but persistent daily wear that our cells face over time. By renewing and replacing old cells, our bodies could effectively turn back the biological clock—under the right circumstances. That's where we come in: when we pay close attention to our bodies' language and provide ourselves with the best-known resources, our bodies will undoubtedly reach their full regenerative potential.

# Our bodies could turn back the biological clock—under the right circumstances.

Contrary to popular belief, regenerative medicine is not an anti-aging effort. It does not aim to slow or stop the aging process. Instead, regenerative medicine aims to *reverse* the process by improving the efficiency of our biochemistry and cell functions, thereby promoting self-healing and recovery. Consider it parallel to the human mental capacity: though we each have our own peak levels of brain activity and function, we don't always achieve it. But if we were to fully understand the brain and the way memory, logic, and analysis work, we could utilize *more* of our brain power, more effectively. Similarly, when we begin to understand our bodies intimately and personally, we increase our bodily capacity for healing and recovery, as well as rejuvenation.

# Regenerative medicine improves the quality of our lives through years of freedom and happiness.

Regenerative medicine does not focus on the superficial: it doesn't target appearances, like plastic surgery, or external symptoms, like pharmaceutical drugs. It doesn't aim only to increase the *number* of years we gain, because what is the use of a longer life without personal empowerment and independence? Instead, regenerative medicine improves the *quality* of the life we live, and gives us more years of freedom and happiness.

We as a society are entering a paradigm shift: as patients grow more familiar with alternative and complementary medicine, doctors are beginning to realize that traditional modes of medicine often neglect individual care. Whereas traditional medicine aims to *combat the disease*, regenerative medicine aims to *treat the patient* through the implementation of comprehensive lifestyle changes.

Regenerative medicine uses scientific research as a tool to better understand the origin of our strengths and our struggles—the body. Contrary to traditional medicine, regenerative medicine does not wait for the disease to occur. Rather, it takes preventive measures by confronting disease at its very roots. It always pursues a permanent solution through the use of natural compounds such as vitamins, minerals, nutraceuticals, herbs, bioidentical hormones, and the unobtrusive practice of energy medicine.

Regenerative medicine lies on the cutting-edge frontier of scientific

research. As a relatively new scientific and medical discipline, it pays particular attention to harnessing the power of stem cells as well as the body's natural regenerative capacity to restore function to damaged cells, tissues, and organs. You may have heard of this already—scientists are developing stem cells into specific cell types so as to be able to repair, replace, or even *grow* new functioning organs.

In 2011, for example, nineteen-year-old marine Isaias Hernandez lost his right leg to a mortar in Afghanistan. He took such severe muscle damage up his thigh that ordinarily he would have had to have it amputated. However, the U.S. military invested \$70 million in an experimental regenerative procedure that extracted a growth hormone from pig bladders to inject into his leg. These hormones stimulated his remaining muscle matter to regenerate, and eventually, after sufficient care and recovery, Hernandez found his leg—and his life—fully restored.

#### Regenerative medicine aims to heal the body from within.

More recently, in April 2013, a newborn baby, born without a trachea (windpipe) was implanted with a bioengineered organ in a hospital in Illinois. Dr. Paolo Macchinari led the procedure, taking stem cells from the baby's own bone marrow and artificially incubating the organ until it was ready to be implanted. This gave her a new chance at life. She survives to this very day, and though she may need replacement surgeries as her body continues to grow, the fact that she has the capacity to grow in the first place is nothing short of miraculous. Developments like these represent huge steps of progress in regenerative medicine. Because, in the end, regenerative medicine does not incorporate artificial products that may cause unforeseen bodily rejections or consequences. It aims to heal the body from within.

Imagine a future without painful backs and knees—a future in which our own bodies will repair the worn-out joints that cause arthritis and inflammation. Imagine a future without the endless delay for an organ donor, because we will be able to grow our own skin, our own bones, our own livers and kidneys and hearts. Imagine a wellspring of healing for blindness, deafness, and even paralysis. Open your eyes: the future is here.

Growing older is a natural process, but *feeling* old is entirely optional. Our medical tool kit has never been so vast, versatile, and readily available. Our generation can not only experience *longer* life-spans, but also enjoy vitality,

health, and wellness far into our autumn years. We work hard throughout our lives: pursuing careers, raising kids, maintaining an entire household. Don't we deserve something better as we age, when we have the leisure to enjoy life with those we love?

What's stopping us?

The secret to change is to focus all your energy not into fighting the old, but on building the new.

**SOCRATES** 

# PART 1 What's the Matter?

## 1

## INFLAMMATION

A good doctor endeavors to help the body repair itself, to awaken the healer within.

J. E. BLOCK, M.D.

Barbara sat in her doctor's office while she rattled off a litany of complaints. She had arthritis in her hands and knees, and they ached all the time, her dentist just told her she had gingivitis, and now, she had just been diagnosed with gastritis. She was only forty-five. She wanted to know what was going on. You might be thinking, she's so young to have so many health problems, but people a lot younger have even more serious and chronic problems. "My body seems to be falling apart," she said. If truth be told, she looked a lot older than forty-five. Her diet and lifestyle were finally catching up, even before she reached menopause.

# Your body's ability to heal is greater than anyone has permitted you to believe.

Of course, her doctor prescribed pain pills for her and told her to take Aleve, but he failed to inform her what the underlying factor contributing to all her health problems was: it was inflammation. Words that end in *itis* mean inflammation, like laryngitis, the inflammation of the larynx, or conjunctivitis, the inflammation of the membrane that covers the eye (known as conjunctiva). She had arthritis, the inflammation of the joints; gingivitis, the inflammation of the gums; and gastritis, the inflammation of the stomach. Her body was telling her that something was very wrong.

If you can put out the fire of inflammation, many, if not most, health

#### problems would dissipate.

Chronic inflammation is a newly identified cause of many health problems from diabetes to heart disease, which is the number one killer in Western countries. In fact, if you can put out the fire of inflammation that is going on in the body, many, if not most, health problems would dissipate. If this is the case, then why are we living with so many diseases in our lives?

When Barbara called to make an appointment, I asked her to bring in a food journal of everything she had consumed for the past week and write down the type and duration of exercise and how many hours she slept, and the quality of her sleep. When she came for her first visit, I could tell by the extra weight she carried and where she carried it (around her waist), that she not only did not exercise, but also ate a diet of refined foods, sodas, and a little too much alcohol. She said, "I have a couple of glasses of wine when I come home to unwind, and sometimes I drink more than I know is good for me." This was evident from her blotchy complexion, dull hair with split ends, and bloodshot eyes. I could also tell that she was suffering from adrenal exhaustion because of the dark circles under her eyes. I later found out that she was a single mother and was working full time while having to cook, clean, and take care of her children. It was obviously taking its toll. Additionally, she was getting about six hours of sleep per night.

#### Inflammation is the mother of all diseases.

After reading her food and exercise journal, I was not surprised to find out that my suspicion was right. She did not exercise and consumed a diet of sugar and refined foods. I explained to her that both her diet and sedentary lifestyle, along with a lack of sufficient sleep and increased stress were causing all her health issues. She was not a happy camper. I presented several suggestions that could help quell her inflammation and improve her overall health. These included changing her diet, finding stress-management techniques other than alcohol, and getting a half hour of exercise on a daily basis. Also, I encouraged her to get enough sleep and take anti-inflammatory supplements. The prevalence of drinking in women has increased incrementally with their responsibilities of having to "do it all." Had she continued with her current lifestyle, she would not only be shortening her life-span, but she would also be creating the perfect storm for chronic disease.

Scientists have searched for and recently found out why some people live to be over one hundred, while being physically active, happy, and healthy. A team of experts in Tokyo researched which processes in the body may be responsible for not only successful aging but also for longevity. They have identified the common denominator, and that is inflammation. In this chapter, we will learn to not only identify the signs of chronic inflammation, but also what to do to keep it at bay.

Professor Thomas von Zglinicki from Newcastle University Institute for Ageing in the United Kingdom found that, "Centenarians and supercentenarians seem to age slower and they can ward off disease much longer than the general population."

#### The level of inflammation predicts successful aging.

Inflammation increases with age, but those people who were successful in keeping inflammation under control invariably maintained good cognition, independence, and had extended years.

This study showed for the first time that the level of inflammation predicts successful aging. It is hoped that this understanding of extreme longevity can translate to the general population, helping them achieve an extended healthy life-span. Dr. Yasumichi Arai, Head of Tokyo Oldest Old Survey on Total Health said, "Our results suggest that mitigating chronic inflammation might help people to age more slowly."

Severe inflammation is an aspect of many aging-related diseases and the lifelong accumulation of molecular damage resulting from chronic inflammation has been suggested as a major contributor to the process of aging.

#### WHAT IS INFLAMMATION?

The concept of inflammation is probably one of the most exciting revelations to come to light in recent years because it points to the common denominator behind practically every disease.

What most health care practitioners neglect to inform you is that you can reduce inflammation in your body, thereby eliminating one of the major causes of disease and premature aging. According to the Centers for Disease Control, seven out of every ten deaths are attributed to cancer, heart disease, or diabetes. What do these all have in common? They are all linked to inflammation!

But what exactly is inflammation? We all have heard the term *inflammation* before, but we don't know exactly what it is and how big an effect it can have on our lives. At some point, we have all encountered inflammation. If you've sprained an ankle or bumped your head, you may have noticed swelling at the point where the injury happened. This is inflammation. It is the body's way of telling us that there is something wrong and that it is protecting itself from further damage by essentially padding the affected area. Acute inflammation also helps in the healing process by removing dead cells and helping in the regeneration of new cells.

However, there is a huge difference between acute and chronic inflammation. When inflammation becomes chronic, it is no longer a healthy immune response for healing the body; instead it becomes the root cause of a disease. Practically every chronic disease has inflammation as the underlying cause. Many common everyday health issues experienced by people are the result of chronic inflammation. A well-known form of inflammation is arthritis. "My arthritis is acting up" and "Arthritis just comes with age," can commonly be heard from the general population. You may think of this as an old people's ailment, but even younger people are showing symptoms of this inflammation much earlier in life than normal.

You might be wondering what you can do to treat or prevent such incidents from occurring. What if you could change the course of inflammation by simply making a few changes to your lifestyle? Well, you can! We are going to take a look at some small ways that can yield big results. But first let's talk about what causes inflammation.

#### THE CAUSES OF INFLAMMATION

How can we alleviate inflammation now that we know what it is? Knowing where inflammation comes from can help you to understand some simple and achievable ways to rid your body of this painful and possibly crippling condition.

#### When it comes to your health, ignorance is not bliss.

Most of our health problems are in one way or another attributed to inflammation. For example, due to the fact that they end with -itis, we know that arthritis, bursitis, diverticulitis, and other -itis problems connect directly to inflammation. But did you also know that other diseases, such as heart disease

and cancers, can directly result from inflammation? Knowing this, we need to find the causes of inflammation so that we can stop chronic health problems before they begin. So, what causes inflammation and why do we need to know about it?

Here are some factors that can contribute to chronic inflammation:

- Being obese or overweight: having a waist size of over 35 inches if you're a woman, and over 40 inches if you're a man
- Eating a poor diet, high in sugar (even fructose) and refined carbohydrates and unhealthy oils
- A genetic predisposition or history of heart disease
- Prediabetes or diabetes
- A sedentary lifestyle, sitting too much
- Smoking tobacco, drinking too much alcohol (more than 4 oz. per day)
- Having a chronic infection or autoimmune disease
- Chronic stress

Inflammation has direct links to our diet and lifestyle. As we look at Barbara's situation mentioned in the introduction, we notice that much of the inflammation relates to how she lives her life. She eats processed foods that contain large amounts of sugars, does not pursue regular physical activity, and has chronic, unremitting stress as well as lack of sufficient sleep. Breaking down her situation, we can see many causes of inflammation before we dig even deeper.

Let's take a look at some of the common factors that lead to inflammation that we can take control of right now.

#### Diet

When it comes down to it, the standard Western diet is largely responsible for inflammation. One hundred years ago, you wouldn't hear half the health complaints that we hear of today. In fact, even thirty years ago, when I began my practice, I never encountered patients with so many chronic diseases. What is one of the key differences between how they lived then and how we live now? People ate healthier and they got regular physical activity.

The standard Western diet is largely responsible for inflammation.

The story of Dr. Terry Wahls has some fascinating ties to how a diet can help, if not cure, illness. She was diagnosed with multiple sclerosis and was essentially crippled. While she followed the advice and treatments that were common to MS, she was still feeling its crippling effects. One day, she decided that she was going to put her research to the test. If she could change her diet to support her mitochondria and myelin sheaths, she felt she could change the course of her disease.

By taking on a paleo, whole-foods diet, she was able to reverse the effects of the disease and actually cure it. How can this be? She basically eliminated all of the foods that are linked to inflammation! The processed and refined foods that are common in the Western diet were purged from her diet, and she was able to reverse the effects of a crippling disease!

This goes to show that diet can play a huge role in how our bodies react to disease. If we can support our health by eliminating foods that can cause disease, we might actually be able to cure and prevent some of the most disabling diseases.

In the next chapter, I am going to go more into depth about the elements of our modern diet, but for now, I want to emphasize that what we eat is a common factor linked to inflammation. By eating refined and processed foods and foods that are high in sugar, we are not giving our bodies the nutrients that they need for growth, repair, and regeneration.

By making a few changes to our diet, we can make a huge change to our overall health. Later on in this chapter, I will present a few suggestions on how you can change your diet in small ways in order to avoid chronic inflammation.

#### Lifestyle

Another key factor in chronic inflammation is our modern lifestyle. Instead of walking, we drive places. In Southern California where I live, people often joke that they drive to their mailboxes. The effort it takes to do tasks today is much less than it was before technology came around. People were used to moving before gadgets that promoted ease came along.

Just because we have made our lives easier doesn't give us an excuse to stop moving. By finding opportunities to move and be active, we are using the calories our diet provides and allowing our joints to move more efficiently, controlling cortisol and other inflammatory processes in the body.

Inactivity, combined with a diet high in processed foods can lead to weight

gain and inflammation. In fact, obesity is a problem we are now seeing even in children. A new term has been coined called *diabesity* to refer to a metabolic dysfunction that involves obesity and diabetes. At the beginning of this chapter, one of my main recommendations for Barbara was to get thirty minutes of activity in a day. This doesn't mean going to the gym and sweating it out on a treadmill. You can simply take a walk and enjoy nature!

#### Mind-Set

Along with diet and lifestyle, many people have adopted the mind-set that certain diseases are just a part of aging. This is simply not true. However, by thinking this, they live their lives expecting to have arthritis and other health problems. I am seeing more people now than ever before with several autoimmune diseases like fibromyalgia, Hashimoto's thyroiditis, and cancer.

Getting older does not mean you have to succumb to illness and disease. It is not necessarily a natural part of aging, even though the prevailing mentality is that it is. Also, not all old people are confined to walkers, canes, and wheelchairs. Most importantly, they don't take handfuls of prescription medication on a daily basis.

Recently, I watched a video on the internet about the world's oldest gymnast. She was ninety years old, and she had the flexibility of a teenager! She didn't let the standards of old age determine how she aged. When asked what her secret was, she stated that she ate right and exercised frequently. She didn't take supplements or other things to boost her health. She simply led a healthy lifestyle.

When you change the way you look at things, the things you look at change.

WAYNE DYER

#### Stress

Stress has a huge effect on our bodies in various ways. I have noted that many women use alcohol as a stress-reducing elixir. I have given lectures at women's groups and noted that women were drinking wine at 10:30 in the morning. When I questioned this, the answer I got is, "Wine is good for you."

One of my patients said, "When I used to stress out, I would make my way to the kitchen. Food was a comfort to me, and when I felt like my nerves were shot, I ate ice cream straight from the carton standing up by the sink, sometimes consuming the whole container."

One patient told me that her husband had brought home a cake for the company they were expecting that night. Well, she was so stressed out that she ended up eating the whole cake and had to make a quick run to the bakery to replace it, so her husband wouldn't know. Although the food tasted great and temporarily eased her nerves, it was highly processed and full of sugar. These are two of the main factors that can lead to inflammation.

#### Cortisol is the driver of inflammation.

Additionally, when we are stressed out or don't get enough sleep, the body secretes more cortisol, which is the driver of inflammation. Knowing this, it becomes paramount that we learn how to handle stress. Diet and exercise are two ways, but in the subsequent chapters, we will go into detail about supplements, specific exercises, amounts of sleep, and ways to change our mindset that will change how we handle stress.

If I have to point to the worst dietary culprit, I would have to cite sugar. People are consuming 128 pounds of sugar a year. When sugar enters the body it releases inflammatory toxins that result in different types of inflammation. The sugar causes something known as glycation, which turns proteins into toxins. These hybrid proteins are called AGEs (Advanced Glycation End Products).

By eliminating or limiting our sugar intake, we can prevent these AGEs from forming in our bodies. Learning to substitute refined sugar with natural alternatives can make a huge difference in the ways in which we enjoy our foods.

Understanding the processes in our bodies that can result in inflammation will make us think twice the next time we want to dive into a sugary dessert!

# KNOWING IF YOU HAVE CHRONIC INFLAMMATION

While inflammation can be a normal and healthy reaction to injury or infection, chronic inflammation can often be symptomless until you lose function in a particular part of your body. Knowing if you have chronic inflammation can help save your body from further damage.

The C-reactive protein blood test is one of a few medical tests that can be used to determine if there is a risk of chronic inflammation in the body. It is a

blood test that can detect the proteins that can lead to inflammation. Another medical test that can help detect inflammation in the body is the ESR (erythrocyte sedimentation rate), which uses a fasting blood sugar test to determine the amount of insulin in your blood and risks for inflammation. The presence of excess insulin can indicate the presence of inflammation.

Even if you show few or no symptoms of inflammation, I would still like to encourage you to take steps to prevent it from occurring in the future. Preventing and detecting chronic inflammation early on can help prevent severe damage to your body.

Ron made an appointment with me at his doctor's suggestion after his C-reactive protein results were high. He wanted to know not only what that means, but also how he could lower his score. He wasn't totally convinced that there was a problem since he had no symptoms. I made the suggestions that are described in this chapter about cleaning up his diet and taking antiinflammatory supplements, but he wasn't quite convinced and decided since he had no symptoms, why make changes. He tried to take aspirin that his doctor had recommended but it bothered his stomach.

A year later Ron ended up in the emergency room with a mild stroke (TIA). This time when he came for his appointment again, at his doctor's suggestion, he not only took notes, but brought in a tape recorder. He said, "I guess I should have taken your suggestions more seriously. I had no idea that inflammation was such a big deal."

#### **HOW TO TREAT INFLAMMATION**

Having chronic as opposed to acute inflammation is a sign that you need to make changes to your lifestyle. We can begin by eliminating sugar and moderating alcohol. Also, we can start eating a whole-foods, preferably home-cooked, diet with seasonal and locally grown foods and remove all processed foods from the diet.

We can begin a practice of meditation, yoga, t'ai chi, or qigong to control stress. Supplements can provide your body the necessary nutrients if you cannot get them in your diet. Some supplements that can help relieve inflammation include:

• A vitamin D supplement may be necessary if you do not get a lot of natural sunlight.

- Ginger offers anti-inflammatory benefits while also acting as a pain reliever and stomach soother, added as tea or a condiment on a daily basis.
- Bromelain is an enzyme that is found in pineapples that eases inflammation. You can take it as a supplement or eat fresh pineapple.
- Boswellia is an herb that contains active anti-inflammatory ingredients, referred to as boswellic acids, that have been proven to significantly reduce inflammation.
- Resveratrol is an antioxidant found in certain grapes, vegetables, and cocoa and is known to promote the look of youth. It keeps your body from forming sphingosine kinase and phospholipase D, which are known to trigger inflammation.
- Fish or krill oil is also a powerful anti-inflammatory containing omega-3 fatty acids and DHA.
- Turmeric, or curcumin, can often produce dramatic results.

#### Inflammation can be a silent killer.

Alongside taking supplements, some changes to your lifestyle like getting more exercise, quitting smoking, and finding healthier ways to handle high stress levels, other than alcohol, will help to keep inflammation in check.

Here are some ways chronic inflammation can be a silent killer:

- It can harm your gut.
- It can harm your joints.
- It's linked to heart disease.
- It's linked to a higher risk of cancer.
- It has recently been implicated in Alzheimer's disease.
- It can damage your gums.
- It can make weight loss more difficult.
- It can damage your bones.
- It can affect your skin.

In the next chapter, we will find out how people are living longer and healthier lives all over the world, unencumbered by pain and many of the

afflictions we have come to associate with aging. We are going to read about these people in depth to find out their secret. It may also be fascinating to realize that these people don't have to take pain medications, cholesterol medication, high blood pressure medication, or use walkers or canes, hearing aids, or even glasses, but they can still move around as easily as someone half their age. Also, they are basically unencumbered with the ailments we have come to associate with aging; you may wonder what makes them so healthy.

But first let's take a look at some of the common foods that will help you to treat and prevent inflammation.

Anti-inflammatory foods include:

- **Fermented foods and beverages** like yogurt, kimchi, sauerkraut, lebne, and kefir
- Saturated fat-finding foods that are rich in omega-3 fatty acids rather than omega-6 fatty acids can drastically reduce inflammation and inflammatory symptoms in the body—try eating more fish, nuts, and seeds
- **Turkey:** the chemical tryptophan, known for making us sleepy after a turkey dinner, also helps boost serotonin in your system, combating depression; selenium is another antidepressant found in turkey and it also has anti-inflammatory qualities
- **Dark chocolate:** the chemicals in dark chocolate can help reduce proinflammatory C-reactive protein—enjoy a small cube of 70 percent dark chocolate daily to help reduce inflammation
- **Green tea:** this beverage can help ease your stress while doubling as an anti-inflammatory
- **Legumes** like beans and chickpeas: chickpeas contain tryptophan, folate, and vitamin B6, all of which have great anti-inflammatory properties

A diet that includes many anti-inflammatory foods will help the existing inflammation to diminish and prevent new occurrences of inflammation. Along with foods that prevent inflammation, there is a list of foods that you should avoid in order to keep inflammation at bay.

Foods that are known to cause inflammation include:

Sugars: excessive use of sugars can result not only in inflammation, but also

diseases such as diabetes, obesity, Alzheimer's disease, heart disease, and tooth decay. There are natural sugar alternatives such as stevia that will still give you the benefit of having the sweet taste without the inflammation!

- **Cooking oils:** common cooking oils used in kitchens today are high in omega-6 fatty acids rather than omega-3 fatty acids. Omega-6 acids result in instances of inflammation and discomfort, while omega-3 acids are recommended to ease inflammation. Instead of using unhealthy vegetable oils for cooking, try using butter or olive oil or coconut oil. They are high in omega-3s!
- Red and processed meats: these meats include a molecule that initiates an immune response in our bodies that may cause inflammation. Since our bodies cannot process this molecule, it is best to avoid it. Instead, try eating more fish and poultry. Also, if choosing to eat red meat, make sure that it is from grass-fed animals and is the leanest cut available.
- **Alcohol:** high levels of alcohol consumption contribute to inflammation and possibly cancer. Try limiting your alcohol consumption to one drink, or four ounces a day, and fill the void with green tea or water.
- **Refined grains:** these grains are processed until they lack all the nutrients and fiber that we look for in grains. By eating too many refined grains, we are filling ourselves with empty calories. Instead of consuming these, try eating foods made from whole grains. Take a closer look at labels when buying bread and cereals to make sure that your grains are truly whole grains!
- **Food with artificial additives and preservatives:** these are common alternatives to sweeteners that we use today. Artificial additives and preservatives are only found in boxed foods. In order to avoid these, try making sure that you eat fresh food or that the food you do eat is sweetened naturally.

All of these foods contain agents that result in inflammation. While it may be impossible to avoid eating some of these completely, at least try to drastically reduce your consumption of these particular foods. Try to substitute these foods with better choices that will decrease inflammation.

#### BENEFITS OF EATING AN ANTI-INFLAMMATORY

#### DIET

If you quell the fire of inflammation, not only will you prevent chronic disease that brings on more stress and medication, but you also allow your body to focus its energy on repairing itself. Using methods to alleviate and prevent inflammation can help you begin to live a healthier and more fulfilling life. By eating an anti-inflammatory diet, you will see many benefits to your health including:

- **Increased energy, improved mood:** having a better mindset will help you to cope with stresses more productively and view your lifestyle and diet in a more positive light
- **Better health:** better elimination, improved sleep, and so forth will result in a dissipation of some chronic health problems
- **Improved skin (begins to glow):** when your body rids itself of the toxins that cause inflammation, your skin will improve and glow
- **Healthier hair:** eating a healthier diet will give your hair the nutrients it needs in order to promote a lustrous and full head of healthy hair
- **Improved blood pressure and cholesterol levels:** giving your body what it needs will improve the function of your circulatory system and the cholesterol in your blood

#### Health is the new wealth.

A whole-foods diet has some wonderful benefits to your health and well-being. Not only will you look and feel better but you will create the appropriate terrain from which your body can begin the process of repair and regeneration.

#### POINTS TO REMEMBER

Chronic inflammation is often undetectable until it causes larger problems. Knowing that inflammation has a direct link to disease makes it worth focusing on changing our lives to prevent it. Not only can inflammation affect your inner health, it can also affect your physical appearance. To start making changes to your life you can:

- Eliminate or cut back on foods known to cause inflammation
- Get at least thirty minutes of exercise on a daily basis
- Substitute foods that will promote your body's healing processes
- Try substituting alcoholic beverages with water or green tea
- Find alternatives to stress relief rather than eating, or alcohol
- Improve your mind-set and change your common misconceptions of diet and disease
- Get enough good quality sleep
- Take anti-inflammatory supplements

Since inflammation is a huge factor in disease, finding ways to treat and prevent it can help boost your quality of life. I encourage you to try to find alternatives to the foods that you currently eat and make changes to your activity levels. Pay attention to what food you are buying and how you prepare it. All of these factors can make a huge difference in your feelings of health and well-being.

One might naturally wonder why I didn't write a book on inflammation alone, as it seems to be at the root of every disease. Well it's because inflammation is just the tip of the iceberg, just as pain is a symptom of something more. When the body engages in an inflammatory response it cannot mobilize its ability to heal and regenerate.

In subsequent chapters, we will learn about the elements that promote healing and regeneration. We will begin to understand where true health really comes from—and what you need to do to encourage it. You will learn how to plant the seeds of regeneration in the fertile soil of infinite possibilities.

#### **REFERENCES FOR CHAPTER 1**

Axe, Josh. "10 Anti-Inflammatory & Disease-Fighting Foods." *MindBodyGreen,* September 19, 2015. www.mindbodygreen.com/0-21664/10-anti-inflammatory-disease-fighting-foods.html (accessed April 29, 2017).

Benson, Jonathan. "Reduce Widespread Inflammation in Your Body with These Foods." Natural News, February 1, 2013. www.naturalnews.com/038915\_inflammation\_foods\_healing.html (accessed April 29, 2017).

Black, Jessica. "Prevent Illness with the Anti-Inflammatory Diet." Mother Earth

- Living, May/June 2015. www.motherearthliving.com/food-and-recipes/food-for-health/anti-inflammatory-diet-zmoz15mjzhou.aspx (accessed April 29, 2017).
- Francis, Raymond. "Inflammation: A Common Denominator of Disease." *Arizona Center for Advanced Medicine*, June 26, 2013. www.arizonaadvancedmedicine.com/Articles/2013/June/Inflammation-A-Common-Denominator-of-Disease.aspx (accessed April 29, 2017).
- Get Holistic Health. "Top 10 Inflammatory Foods to Avoid Like the Plague." July 12, 2013. www.getholistichealth.com/40185/top-10-inflammatory-foods-to-avoid-like-the-plague/ (accessed April 29, 2017).
- Goldstein, Michelle. "Carbon Dioxide 'Pollutant' Myth Debunked: Eating for Happiness." *Natural News*, December 13, 2013. www.naturalnews.com/043226\_happiness\_organic\_diet\_processed\_foods.html (accessed April 29, 2017).
- Kahn, Joel. "Don't Overthink Your Diet, Just Eat More Plants: A Cardiologist Explains." *MindBodyGreen*, October 2, 2013. www.mindbodygreen.com/0-11149/dont-overthink-your-diet-just-eat-more-plants-a-cardiologist-explains.html (accessed April 29, 2017).
- Marquis, David. "How Inflammation Affects Every Aspect of Your Health."

  Mercola, March 7, 2013.

  http://articles.mercola.com/sites/articles/archive/2013/03/07/inflammation-triggers-disease-symptoms.aspx (accessed April 29, 2017).
- Nelson, Jennifer. "Is Inflammation the Root of All Health Evil?" *Mother Nature Network*, February 25, 2013. www.mnn.com/health/fitness-well-being/stories/is-inflammation-the-root-of-all-health-evil (accessed April 29, 2017).
- Newcastle University. "Inflammation, Not Telomere Length, Predicts Healthy Longevity of Centenarians." *Medical Press*, April 5, 2015. http://medicalxpress.com/news/2015-08-inflammation-telomere-length-healthy-longevity.html (accessed April 29, 2017).
- Shemek, Lori. "9 Foods to Fight Inflammation and Boost Your Mood." *MindBodyGreen*, July 16, 2015. www.mindbodygreen.com/0-20729/9-foods-to-fight-inflammation-boost-your-mood.html (accessed April 29, 2017).
- WorldHealth.net. "Anti-Inflammation for Anti-Aging," September 25, 2015. Updated June 30, 2016. www.worldhealth.net/news/anti-inflammation-antiaging/ (accessed April 29, 2017).

#### **ELEMENTS OF A TRADITIONAL DIET**

In a traditional diet, food comes from the source. This means that the fruits and vegetables come from the ground, meat comes from the animal, and bread and other goods come from baking from scratch. Nothing comes from a factory, nothing is processed. By taking the time to ensure that we know that our food is free from chemicals and hormones, we ensure that we are putting natural elements into our bodies rather than trusting a box to tell us that the contents are healthy. Based on how "morally" other big corporations have behaved in the past, can we really trust our health to food corporations?

A hundred years ago, people ate a traditional diet because that was all there was. Everything was organic. Even though they didn't have the modern advances in medical care that we enjoy today, people lived longer and had healthier lives. Nowadays, we are seeing people die younger due to heart disease and other factors that can be directly linked to our diet. Obviously, the people who enjoyed longevity a century ago had the right idea as to what and when they ate.

According to a Weston A. Price Foundation article "Modernizing Your Diet with Traditional Foods," by Joette Calabrese, all traditional cultures:

- Consume some sort of animal protein, including organ meats and fat, every day
- Consume foods that contain very high levels of minerals and fat-soluble vitamins (vitamin A, vitamin D, and vitamin K2 found in seafood, organ meats, and animal fats)
- Consume some foods with high enzyme and probiotic content
- Consume seeds, grains, and nuts that are soaked, sprouted, fermented, or naturally leavened in order to neutralize a portion of the naturally occurring anti-nutrients in these foods
- Consume plenty of natural fats, but no industrial liquid or hardened (partially hydrogenated) oils
- Consume natural, unrefined salt
- Consume animal bones, usually in the form of gelatin-rich bone broths
- Provide extra nutrition for parents-to-be, pregnant women, breast-feeding women, and growing children, to ensure the health of the next generation
- Do not consume refined or processed foods, including white flour, refined sweeteners, pasteurized and low-fat milk products, protein powders, industrial fats and oils, and chemical additives

These are suggestions to work toward because simple, time-proven foods can make a huge difference in your health and longevity.

The trouble is, we're not eating food any more, but food-like products.

ALEJANDRO JUNGER, M.D.

#### **ELEMENTS OF A MODERN DIET**

Many people are confused, misled, or miseducated as to what constitutes a healthy diet, and assume that eliminating entire food groups like carbohydrates or protein will make them healthier, but often with dire consequences.

Let me tell you about a patient of mine who thought she was eating "healthy" because she read that eliminating animal products from your diet was much better for you.

When Greta came into my office, she complained that her once full head of hair was now falling out, and she experienced intestinal issues on occasion that were so painful that she would double over in pain.

Although she thought she was eating healthy by being a vegetarian, eschewing most animal protein and dairy, her body told another story. Upon questioning her further, I found out that she was substituting animal protein with textured vegetable proteins and various "meat alternatives" (all made from soy) deemed to be healthy (because they were sold in health-food stores), but they were nothing more than highly processed foods. Her intestinal problems came from an imbalance in intestinal flora as she ate a predominately high carbohydrate diet that did not include any fermented foods or dairy. On my suggestion, she agreed to include some animal protein and some fermented vegetables in her diet.

After she did this, her health began to improve, and her hair not only stopped falling out, but actually grew back much healthier. Now that is not to say that everyone needs to eat animal protein or everyone shouldn't be a vegetarian, because I have found that everyone needs to eat for their "condition" and constitution. These are merely guidelines.

As mentioned before, a modern diet tends to consist of more processed foods. Even if we avoid foods that we know to be processed, we are still at risk of eating foods that are harmful to our health without really realizing it. So, what are the foods that we enjoy as part of a modern diet that can be causing us

Healing Arts Press One Park Street Rochester, Vermont 05767 www.HealingArtsPress.com

Healing Arts Press is a division of Inner Traditions International

Copyright © 2017 by Elisa Lottor

All rights reserved. No part of this book may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without permission in writing from the publisher.

**Note to the reader:** This book is intended as an informational guide. The remedies, approaches, and techniques described herein are meant to supplement, and not to be a substitute for, professional medical care or treatment. They should not be used to treat a serious ailment without prior consultation with a qualified health care professional. Any resemblance to actual persons living or dead or actual events is purely coincidental.

#### Library of Congress Cataloging-in-Publication Data

Names: Lottor, Elisa, 1942-

Title: The miracle of regenerative medicine: how to naturally reverse the aging process / Elisa Lottor, Ph.D., HMD.

Description: Rochester, Vermont: Healing Arts Press, [2017] | Includes bibliographical references and index.

Identifiers: LCCN 2017026367 (print) | LCCN 2017018088 (e-book) | print ISBN 9781620556030 | ebook ISBN 9781620556047

Subjects: LCSH: Aging—Prevention. | Regenerative medicine. | Nutrition. | Selfcare, Health. | BISAC: HEALTH & FITNESS / Alternative Therapies. | SELFHELP / Aging.

Classification: LCC RA776.75 (print) | LCC RA776.75 .L678 2017 (e-book) | DDC 613.2—dc23

LC record available at https://lccn.loc.gov/2017018088

To send correspondence to the author of this book, mail a first-class letter to the author c/o Inner Traditions • Bear & Company, One Park Street, Rochester, VT

#### **INDEX**

All page numbers are refer to the print edition of this title.

```
Aborigines, 127
acceptance, 250
acid bath treatment, 209-10
acne, 68
acupuncture, 117, 188-91, 297
acute inflammation, 11
Adamson, Wendy, 183
  adaptogens
  ashwagandha, 163
  astragalus root, 162
  explanation of, 159-61
  points to remember, 164
  Rhodiola rosea, 161-62
adrenalin, 69
age-related cognitive dysfunction,
    97-98
AGEs (Advanced Glycation End
    Products), 16
aging, 2-3, 128-29
  benefits of exercise, 274-75
  skin and, 66-70
alarm clocks, 92
alcohol, 9-10, 15, 20
Alexander the Great, 2
almonds, 109
alpha-lipoic acid, 59
aluminum, 57, 60-61, 103-4
Alzheimer, Alois, 99
Alzheimer's disease, 83, 99-109
American Association of
  Naturopathic Physicians
  (AANP), 295
```

American Naturopathic Medical Association (ANMA), 295 amyloid beta protein, 98, 101 antibiotics, 45 anticholinergic drugs, 117 anti-inflammatory diet, benefits of, 21 anxiety, 85-86 apple crisp, 270 apples, 58, 109 Arai, Yasumichi, 10 arthritis, 8-9, 11 artificial preservatives, 20 ashwagandha, 163 asparagus, 58 astaxanthin, 73, 74, 111, 146-49 astragalus, 145 astragalus root, 162 Atala, Anthony, 206-7 attention deficit hyperactivity disorder (ADHD), 86 autologous cellular rejuvenation (ACR), 77 avocados, 58, 72

Bach, Edward, 191–92
Bach flower remedies, 191–92
bacopa, 98
bacteria, 43
baked potato soup, 266
bananas, 91
beans, 18, 48
bedtime routines, 92
Belotero, 78
Blackburn, Elizabeth, 140–41, 144
blood pressure, 21
blueberries, 108
Bluerock, Grace, 240–41
Blue Zones, 31–36
boswellia, 18

```
brain
  age-related cognitive dysfunction,
    95-98
  dementia, 98-99
  MIND diet, 109-11
  points to remember, 118
  prevention of memory issues,
    116-17
  supplements for, 111-16
bran, 47, 50, 60
breakfast recipes, 256-58
broccoli, 58
bromelain, 18
brussel sprouts, 58
butter, 49
caffeine, 105
Calabrese, Joette, 28
California, 33
cancer, 15, 61, 147, 221-23
cannabis, 106, 231-35
cardiovascular system, 148
carnosine, 143
cauliflower, 58
cell phones, 93
centenarians, 10
Centers for Disease Control, 11
chelation therapy, 103
cherries, 91
chia seeds, 47, 50, 60, 73
chickpeas, 18
China, 34
chlorella, 59, 60-61, 107-8
chocolate, dark, 18, 109
chocolate peanut butter spread,
    268
cholesterol, 21
Chopra, Deepak, 127
chronic inflammation, 11
```