

Who Am I? Establishing a Healthy Concept of Self

Establish a Healthy Concept of Self

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Establish a Healthy Concept of Self **Who Am I?**

We know so much more now about living a healthy lifestyle than we ever have before. Much of this knowledge has come to us in just the past few years. For example, scientists and researchers have determined that certain kinds of lifestyle choices—such as smoking, not exercising, eating poorly, and not getting enough sleep—are responsible for about 80 percent of all illnesses. For the most part, your good health is in your hands.

Of course, accidents happen and people get sick, but the vast majority of healthy living is the result of the choices we make every day. No matter your age, you can make a difference to your health and the health of those around you. A major recent advance in knowledge is grounded in the evidence that

everything we do affects the body, the mind, and our emotions—or spirit—as they all function as one whole unit. Our approach to wellness will enhance your ability to live your life with a balance and harmony of all aspects of you. This is truly the key to good health and wellness.



After reading this chapter, you will be able to:

- **EXPLAIN** how the dynamic interaction between mind and body impacts wellness.
- **DESCRIBE** the concepts of immaterialism, materialism, and holism; explain how self-perception affects your wellness.
- **PROVIDE** a clear, working definition of wellness, and explain how the definition of wellness has evolved over time.
- **IDENTIFY** the factors that affect your health and wellness.





Figure 1. Wellness is living in harmony and balance with all dimensions of you.

WHO AM I?

establish a healthy concept of self

SCIENCE OF THE MINDBODY CONNECTION

Have you ever had trouble sleeping because your body won't relax and your mind is racing? Has anyone told you how cranky and mean you can be when you're hungry or tired?

By doing a lot of scientific research, neuroscientists, cardiologists, immunologists, and other scientists found that the human body and the mind are inextricably linked and function as an integrated unit. The brain does not act separately from the rest of the body; the body does not function separately from the mind. Scientists now speak of the integrity of the organism, the connection between the mind and body, and all dimensions of an individual are interrelated to affect overall wellness (*Figure 1*).

Memories Stored in the Body's Cells

Here's an example of how closely the body and mind are entwined. Research shows that memories are stored in cells throughout the body, as well as in the brain.

Traumatic experiences, such as the death of a loved one, is an example to which most people can relate. During the grieving process, many people experience physical pain as well as emotional pain, such as profound sorrow.

Many people in mourning report pain in the lower back or some other part of the body. There is mounting evidence that we place the memory of emotional events in physical storage-not just mental storage-throughout the nervous system and throughout the body. The interconnectedness of mind and body, or bodymind, helps us comprehend how experiences of the mind affect the body and experiences of the body affect the mind.

Knowing this totality of the functioning of our being, we are in position to make

Knowing this totality of the functioning of our being, we are in position to make choices to effectively generate wellness. This communication is the bodymind's intelligence, an intelligence that enables us to take care of our own health and not be overly dependent on others.

THE SCIENCE OF THE WHOLE INDIVIDUAL

Molecules of Emotion

These exciting understandings of who we are and how we function are due, in part, to the excellent pioneering laboratory science of research pharmacologist Dr. Candace Pert (1946-2013). Pert published over 250 scientific articles on peptides and their receptors and the role of these neuropeptides in the immune system.

Her popular book, *Molecules of Emotion*, provides scientific details in lay terms regarding the role of emotions in the psychobiology of health and wellness. She described her research as a journey into how the mind, body, and spirit are inseparable. This is not the old "mind-over-body" paradigm. Rather, her research led her to conclude that "mind does not dominate body, it becomes body. The body and mind are one." She was often heard to say that the body does not exist just to carry the head around!

Pert preferred the term *bodymind* to describe who we are. Her research into opiate receptors, endorphins, and peptides showed that the brain, glands, and immune system are constantly functioning together. The neuropeptides and their receptors function as a lock-and-key mechanism. The key entering a specific lock is affected by feelings. If you suppress your feelings and don't express them, the cellular lock and key are going to be blocked and inhibit the work of the immune system, which is our main defense against disease.

Neuropeptides and their receptors are at every level of our being and are the biochemical molecules of emotion or messengers that communicate information throughout a network that links all of our systems and organs. And the communication goes both ways. "Immune cells not only control tissue integrity of the body, but they also manufacture information chemicals that can regulate mood or emotion."

Psychoneuroimmunology

These ideas have contributed significantly to the establishment of **psychoneuroimmunology (PNI)**, which studies how thoughts and feelings affect the functioning of cells. It has motivated scientists to pursue cutting-edge research concerning the intricacies of how the mind and body function as one whole. This work continues to influence the development of treatments for myriad disorders, including Alzheimer's, Parkinson's, and Huntington's diseases, spinal cord injury, epilepsy, hypoxia, and autism.

There are many specific examples of the mind and body functioning as bodymind, or as one entity. Other chapters in this textbook explore many of these specific topics, but by way of introduction we will briefly look at three examples here:

- The presence of neurotransmitter receptors in the gut.
- The harmful effect of negative psychological stress on cellular health.
- The interactions between the brain and the immune system.

" This body-wide information network is constantly changing, and dynamic, infinitely flexible. It is one gigantic loop, directing and admitting information simultaneously; intelligently guiding what we call life. "

-Dr. Deepak Chopra

There's a Brain in Your Belly

When you are happy or in love, you probably have experienced a funny sensation in your stomach, a feeling of well-being (**Figure 2**). When you have separated from a loved one, you felt your chest hurt, as though your heart itself were aching. Have you wondered why these intense feelings or thoughts are not restricted to your brain, but instead are felt in your body, particularly your belly?





Figure 2. Those happy thoughts that you feel are not just in your head; they are transmitted throughout your body.

Dr. Michael Gershon, a professor at Columbia University and leader in the field of neurogastroenterology, determined that the gut uses some of the same **neurotransmitters** as the brain. The **enteric nervous system (ENS)** is the "brain in the belly" and neurotransmitters, such as serotonin, play a role in digestion. Over 80 percent of the body's serotonin (a neurotransmitter often associated with feelings of well-being and known as the "happiness hormone") is actually found in the bowels. Gershon named his findings the "second brain."

Both doctors and psychologists need to help patients understand the big brain, in the head, and the little brain, in the gut. Serotonin reuptake inhibitors (SSRIs) are natural neurotransmitters that communicate between brain cells and are used in antidepressant medications to block the re-uptake of serotonin. Blocking serotonin in this way can help improve mood. Did you know these serotonin-based anti-depressants are also being used to alleviate gastrointestinal disorders? This is just one example of how our "two brains" are constantly communicating and are useful to each other.

Psychoneuroimmunology (PNI): The research arm that supports behavioral medicine and investigates the manner in which thoughts and feelings affect the immune system and cause increased or decreased susceptibility to disease.

Neurotransmitters: Chemicals that facilitate communication from one nerve cell (neuron) to another across a synapse. Neuropeptides are one form of neurotransmitter that neurons use to communicate via cell receptors.

Enteric nervous system (ENS): The system of nerves and neurotransmitters in the gastrointestinal system. Also referred to as the "brain in the belly," it controls digestion and plays a role in our emotional or mental state.

Telomeres: DNA protein complexes that help stabilize a cell's

Telomeres: DNA protein complexes that help stabilize a cell's chromosomes

Telomerase: An enzyme that repairs damage to the chromosome.

Too Much Stress Can Make You Age Faster

THE SCIENCE OF THE WHOLE INDIVIDUAL Brain, Behavior, and Immunity

A good way for scientists to stay up-to-date with current research findings is through the Psychoneuroimmunology Research Society, which is on Facebook, and through their official journal, *Brain, Behavior and Immunity*. The main purpose of the Society is "to promote the study of interrelationships among behavioral, neural, endocrine and immune processes and encourage collaborations among immunologists, neuroscientists, clinicians, health psychologists, and behavioral neuroscientists." Their website is www.pnirs.org. With a focus on the relationship between behavior and health, the Society encourages basic science research that can assist people to enjoy a greater level of wellness of mind and body.

Have you ever had a parent show you the gray hairs you gave them or tell you that you have taken several years off their lives? Well, the science is finding that stress and anxiety may cause aging.

For example, consider Juanita's case. Juanita was at the midpoint of her career when she assumed the responsibility of caring for her aging mother. Becoming a caregiver, in addition to her already busy life, was quite a sacrifice. Juanita started experiencing pain from arthritis and early signs of aging. She had no idea why this was happening until she read an article by Janice Kiecolt-Glaser and Ronald Glaser, who have been doing research on the mind and body for over 30 years at Ohio State University.

Their research found that the psychological stress placed on caregivers advances the aging of their cells and may shorten their lives by years.

The Role of Telomeres in Aging

Telomeres are DNA protein complexes that help stabilize a cell's chromosomes (**Figure 3**). **Telomerase** is an enzyme that repairs damage to the chromosome. As part of the aging process, cells' telomeres become shorter and telomerase functions less effectively. In one study of caregivers that compared them to non-caregivers (who were matched for age, gender, and other factors), the caregivers' telomeres were shorter and the telomerase function poorer. The caregivers' lifespan was 4 to 8 years less than the non-caregivers. Higher levels of depression and indicators of poor immune functioning in the caregivers led the Glasers to discover significant ways that psychological stress can harm the body.



Figure 3. Telomeres appear as red tips on the chromosome.

The Mind and Body's Systems Work Together

Years ago, it was thought that the immune system only functioned within itself; in other words, it was believed to be a closed system. Recent discoveries have proven that the central nervous system, the immune system, and other systems work together in a dynamic way. The autonomic nervous system innervates the thymus, bone marrow, spleen, and lymph nodes, and causes the endocrine glands to secrete hormones into the blood and organs. This means that the mind and body are constantly interfacing.

The purpose of the basic science of psychoneuroimmunology is to uncover the specific actions occurring in the brain and the systems and organs of the body (**Figure 4**). These are highly complex interactions that are very challenging to study. The research also demands scientists to expand their knowledge and extend beyond their highly specialized focus because it requires a multidisciplinary approach. It is a fascinating blending of the sciences of the mind and the sciences of the body.

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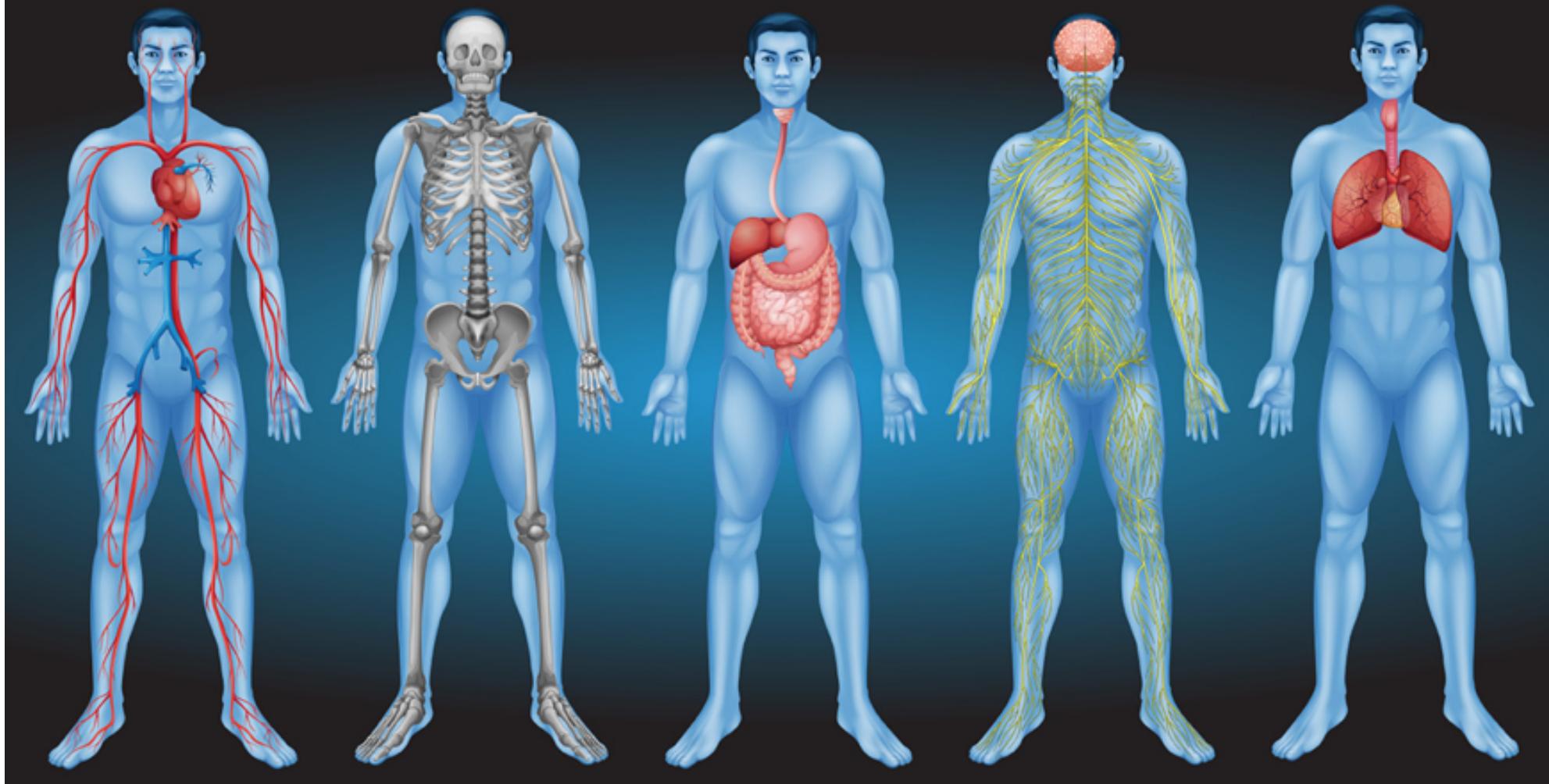


Figure 4. Psychoneuroimmunology is a multidisciplinary science that studies the functioning of the whole individual.

Physical Activity Can Make You Smarter

Because of the integrated functioning of mind and body, when you take care of your body, you are taking care of your brain. Exercise has been found to play a key beneficial role in neurogenesis, the process by which new brain cells or neurons are generated. Scientists have identified two areas of the brain in which stem cells can develop into new brain cells. It wasn't until 1998 that neurogenesis was proven to be a reality in adult humans. Prior to that time, it was thought that loss of brain cells accompanied aging and there was nothing that could be done about it.

Building the Brain's Capacity to Change and Adapt

Much of brain research has focused on important neurotransmitters, but in the past several decades, another class of protein molecules that build cells has been more fully researched. One prominent protein, ***brain-derived neurotrophic factor (BDNF)*** has been found to nourish neurons. BDNF plays a key role in synaptic plasticity. ***Neuroplasticity***, or brain plasticity, is the capacity of the brain to be flexible, change, or adapt. BDNF stimulates positive synaptic adaptation by:

- Increasing the number of synapses
- Binding with receptors and activating genes within the cell to produce more BDNF and other molecules that strengthen the synapses and also the immune system

system

There is a tie between BDNF functions and learning. BDNF improves the cellular structure that in turn creates the mechanism for improved learning. And you guessed it; exercise enhances the production and effectiveness of BDNF. John Ratey, MD, associate clinical professor of psychiatry at Harvard Medical School, acknowledged that one physical educator said to the other teachers, I'll build the brain cells-you fill them.

Scientists in the University of Muenster Department of Neurology demonstrated that high-intensity interval exercise produced greater amounts of BDNF than low-impact running. When the researchers combined the physical activity with a learning activity, they discovered that the subjects learned 20 percent faster after the interval exercise. The researchers concluded that BDNF, dopamine, and epinephrine produced during exercise improve learning (**Figure 5**).



Figure 5. Research has found that exercise will help nourish your brain, which will enable you to function better in all parts of your life.

Link Between Physical Activity and Brain Cell Development

Fibroblast growth factor (FGF-2) and vascular endothelial growth factor (VEGF) are additional proteins that, among many other functions, stimulate mitosis or the development of new cells. Muscles that are contracted during exercise release FGF-2 and VEGF.

In addition to neurogenesis, FGF-2 and VEGF contribute to building new blood vessels, specifically new capillaries. Several studies conducted at the University of Illinois concluded that aerobic fitness activity increases brain volume and helps attenuate the expected loss of brain tissue due to aging. When heart and lungs are taxed, individuals not only experience greater cardiovascular health but also experience a reduction in brain matter loss.

Exercise also increases levels of insulin-like growth factor (IGF-1), which regulates insulin in the body and improves synaptic plasticity in the brain. IGF-1 is a hormone released by the muscles, which works with insulin to supply cells with glucose, a main energy source for muscles and the brain. IGF-1 helps to fuel muscles but when it acts in the brain it helps learning.

Long-term potentiation (LTP) is the name for the dynamic action of neurons that results in learning. With more neurons in place, the greater the neuronal activity and connections result in more capacity for learning. The brain's abilities to learn and remember, execute higher thought processes, and manage emotions are all improved at a cellular level as a result of physical activity. These dynamics and more will be discussed in greater depth throughout this book.

Brain-derived neurotrophic factor (BDNF): A human protein that promotes growth of neurons and synapses in the brain.

Neuroplasticity: The ability of the brain to change neural connections and reorganize neural pathways. This can occur at any age.

OUR VIEW OF OURSELVES MATTERS

Healthy people tend to have a healthy understanding of self-one that integrates the body and the mind and views the body positively. With the scientific evidence we have that makes it so clear that the mind and body function as one, does it just make you want to go play intramurals or lift some weights before you study? Hopefully that is the case but oh, if it were just that easy. So many of these scientific breakthroughs regarding how our minds and bodies are interrelated have occurred within the past few decades. How do they affect attitudes toward the body? What impact do our attitudes toward our bodies have on the integration of body and mind? What impact do they have on wellness?

Brain-imaging techniques and various new forms of technology has been instrumental in giving us the scientific evidence of the interactive nature of mind and body we have just discussed. Conceptualizing the body and mind as functioning in a unified manner seems to make perfect sense and yet this concept is based on new discoveries. In many cases, as was true of Gershon's work on the second brain, researchers have been surprised by the results. Why haven't we made these discoveries before? Granted, a large part of the reason is new technology, particularly for the brain studies, but historical, cultural, and religious worldviews regarding the mind and the body have also influenced this lack of knowledge about the brain and its functions.

body have greatly influenced our thinking and continue to do so today.

Discussions on the nature of the human being—that is, the question of who we are—go back as far as the beginning of written records. In contemporary introductory philosophy texts, the essays about the nature of our being are usually posited as the mind vs. body dilemma. Considering the scientific understandings we have just discussed and will be discussing throughout this book, it may very well be that these essays will be rewritten in the not too distant future. Why mind vs. body, as if our nature is composed of two opposing entities, rather than two aspects of being working together as one?

Evolution of Thinking About Ourselves

The way in which we view ourselves is foundational to our wellness. Understanding the nature of human life is a highly complex matter with enormous variations in accepted sources of knowing and types of beliefs. Beliefs about the origin of life and concepts about if and what life continues beyond mortality impact beliefs about the mind and body. The look we are taking at these ideas will seem very simplistic to the sophisticated philosopher, but we want to make it workable in the confines of this book and relevant to our focus on wellness including your body and your mind

(Figure 6).

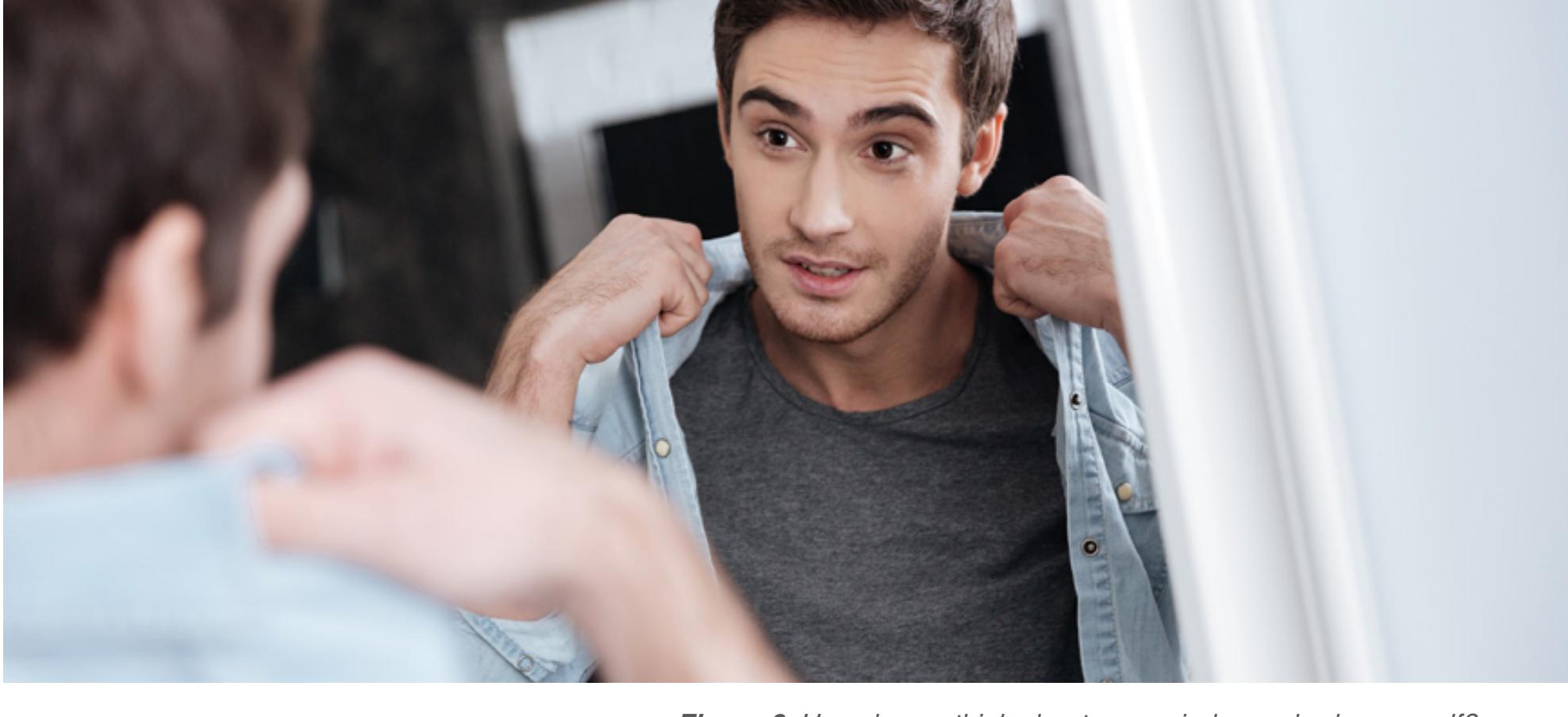


Figure 6. How do you think about your mind, your body, yourself?

There are three major concepts regarding the nature of being that impact wellness. These views of who we are address the questions of whether the mind and body exist independently of one another or whether they are interdependent aspects of one

whole. These worldviews are stated in the first person:

1. I am only my mind (immaterialism).
2. I am only my body (materialism).
3. I am my mind and my body (holism).

I Am Only My Mind (Immaterialism)

If one thinks "The reality of my being is the mind only; the body is some entity that is not really who I am," then this person has been influenced by the philosophy called **immaterialism**. This worldview is centuries old, yet continues to influence attitudes about the nature of human life. Immortalism holds that the mind is not composed of matter. Therefore, the body, obviously material, is not really the person. The body may be thought of as just a casing or housing that will eventually be discarded-leaving the real, inner immaterial self as the true being (**Figure 7**).



Figure 7. Immortalism says that the body is just a casing for one's true being.

Plato (428-348 BC), in some of his writings, contended that the body was a prison house of the spirit, a detriment to perfection, a hindrance to wisdom and knowledge. Plato explained because the mind is immaterial, it is superior to the material body and, in fact, is inhibited by the body. In Plato's other writings, he took a more positive view of the body. However, those who came after Plato, referred to as Neo-Platonists, took the body-as-prison concept to the extreme. We will discuss asceticism, the extreme view, after considering several other forms of immaterialism.

Cartesian dualism is the outlook of philosopher René Descartes (1596-1650). Descartes ascribed reality to both the mind and the body, establishing his dualistic concept of human nature. In his famous statement, "I think, therefore I am," Descartes put forth the immaterial mind as the ultimate reality of human life. However, he maintained that the body is also real but it is a lesser, antagonistic reality. His concept of the nature of human life that pits the body against the mind has been incorporated into modern thinking. This thinking that the body is separate from the mind finds

into many worldviews. This thinking that the body is an enemy to the mind firmly established the separation of mind and body. The body became a thing to be overcome by the mind, a foe to be vanquished.

Asceticism, the extreme view taken by the Neo-Platonists, is a belief that a person must deny the body to free the mind. The life of an ascetic was characterized by self-inflicted physical torture such as extreme fasting, lying on a bed of nails, and general denial of the physical for the purpose of freeing or refining the mental or spiritual aspect of being. In asceticism, the bodily foe is not only to be overcome, it is to be eliminated.

If even emotions have molecules or material substance, how could something that is real be immaterial? It is odd how it works, but thinking that there is such a thing as an immaterial reality serves to make that which is composed of matter a questionable reality. The immaterial takes on the position of being superior, somehow more pure than that which is simply matter. In the case of the nature of human life, the mind or spirit gets elevated over the body in the immaterialist's view. The mind and body are seen as opposites and eventually even antagonists, the one fighting the other. In this perception of human life, the mind and body are not alike, one being immaterial and the other material.

I Am Only My Body (Materialism)

Materialism is the opposite worldview of immaterialism. Materialism designates reality just to the body whereas immaterialism ascribes reality only to the mind. If a person thinks "The reality of my being is my body only," then that person has been influenced by materialism.

In this philosophy, the body is not independent of the person whose body it is; rather, a person is his or her body. German philosopher Friedrich Nietzsche (1844-1900) advanced this theory: "Body am I entirely and nothing else; and soul only a word for something about the body." Nietzsche's view of the self as only the body left no room for any kind of conscience. Materialism claims that thinking and feeling are not attributed to a mind but are bodily in nature.

Scientists, of course, study atoms, but there is also a philosophy called atomism that maintains only atoms exist. This is a specific form of materialism that can be found in Eastern as well as Western traditions. In his book *The Story of Civilization: Our Oriental Heritage*, Will Durant explains that the Buddhist form of atomism focuses on atoms as they appear in the four standard elements, earth, water, air, and fire. Two Indian philosophies are based in atomism. The Jains believed that all atoms produce different effects, even though they have similar composition. The Vaisheshika

different effects, even though they have similar composition. The Vaisheshika philosophy held that the composition of the atoms varied with the composition of the elements.

B. F. Skinner (1904-1990) described behavior in terms of stimulus and response action, in the pattern of Pavlov's famous studies with dogs, bells, and salivation. Skinner believed that the human being is simply a form of animal life. He taught that human behavior is a response to stimuli in the environment and that there is no means for an individual to have thoughts other than those that respond to a stimulus, such as money (**Figure 8**). The anatomical brain constitutes the mind.

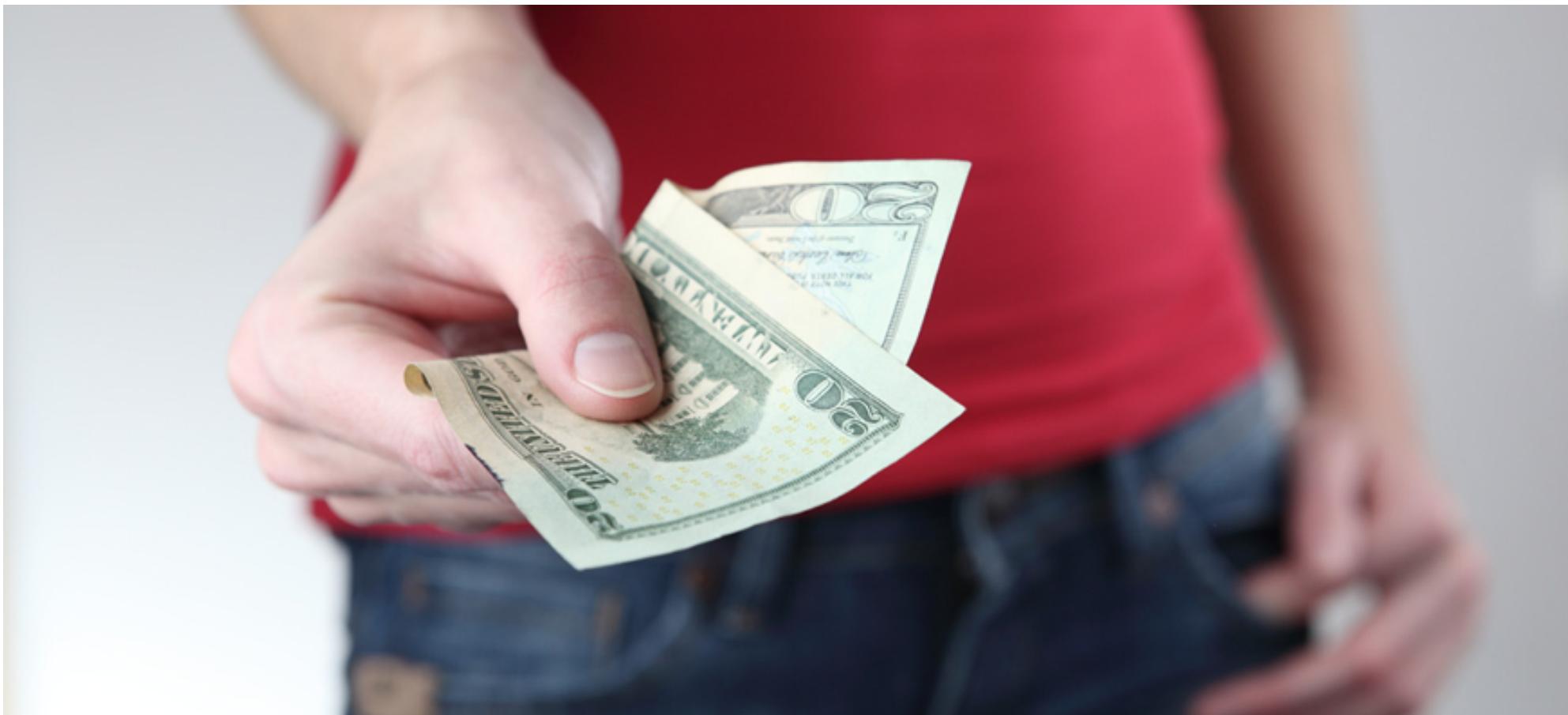


Figure 8. Materialism says that we are just a body, and our behaviors are reactions to environmental stimuli.

Materialism's claim that a person is just a body eliminates the supposed contention between mind and body by eliminating mind altogether. Eliminating mind from the equation reduces the human to a physical existence.

Immaterialism: The belief that ultimate reality is something that has no material properties. This reduces matter to that which is not real.

Cartesian dualism: The mind and body are two incompatible entities causing one to be antagonistic to the other.

Materialism: The belief that ultimate reality is something that has material properties and that which is immaterial does not exist.

Wellness: A state of being that maximizes your quality of life and contributes as much possible to the well-being of the community around you.

I Am My Body and I Am My Mind (Holism)

If a person thinks, "I am my body and I am my mind," then that person has been influenced by holism. Holism in philosophy maintains that the whole is greater than the sum of its parts. The term *holistic*, as it applies to medicine and healing, has become popular in the genre of psychoneuroimmunology and behavioral medicine. The focus of this way of thinking is on the whole person and the way human systems interrelate and interface with one another. The mind and body in holism are more alike than different and work together to constitute our human reality. The reality of human life is mind and body together, not just one aspect or the other.

Holism is conducive to wellness because it acknowledges the reality of the mind and the body. It sees the mind and body as compatible because of their likeness and also that they are comparable in importance. This way of looking at life encourages a positive acceptance of the body as well as the mind.

Holism and Healing

Traditional Chinese medicine (TCM) is a systems approach focusing on bodily functions, such as breathing, circulation, temperature, and digestion. Chi is a vital life force that streams through the meridians or energy channels in the body. When the systems are in balance, the chi flows freely, which results in good health and wellness. Ill health comes about when chi is blocked or restricted and the systems are not in balance.

The Taoist philosophy of Yin and Yang, the major belief system underlying TCM, gives depth to the understanding of balance. Everything in the universe is regulated by the interaction of Yin and Yang. In theory, all things are parts of a whole in which Yin and Yang are polar complements (**Figure 9**). Yin is the shady side of the slope and Yang the sunny side of the slope.

Kaptchuk explains that Yin qualities are "cold, rest, responsiveness, passivity, darkness, tranquility, completion and realized fruition. Yang is associated with heat, stimulation, movement, activity, excitement, vigor, light, beginning and dynamic potential. Yin and Yang create each other, control each other and transform into each other."

These ideas are being successfully implemented in healing practices. At least 6 percent of Americans have turned to complementary and alternative medicine (CAM) for treatment of back pain. A major reason cited by patients for using CAM was that conventional medical treatments were not effective. Sixty percent of those reported

having used CAM for back pain said that it benefited them a great deal.

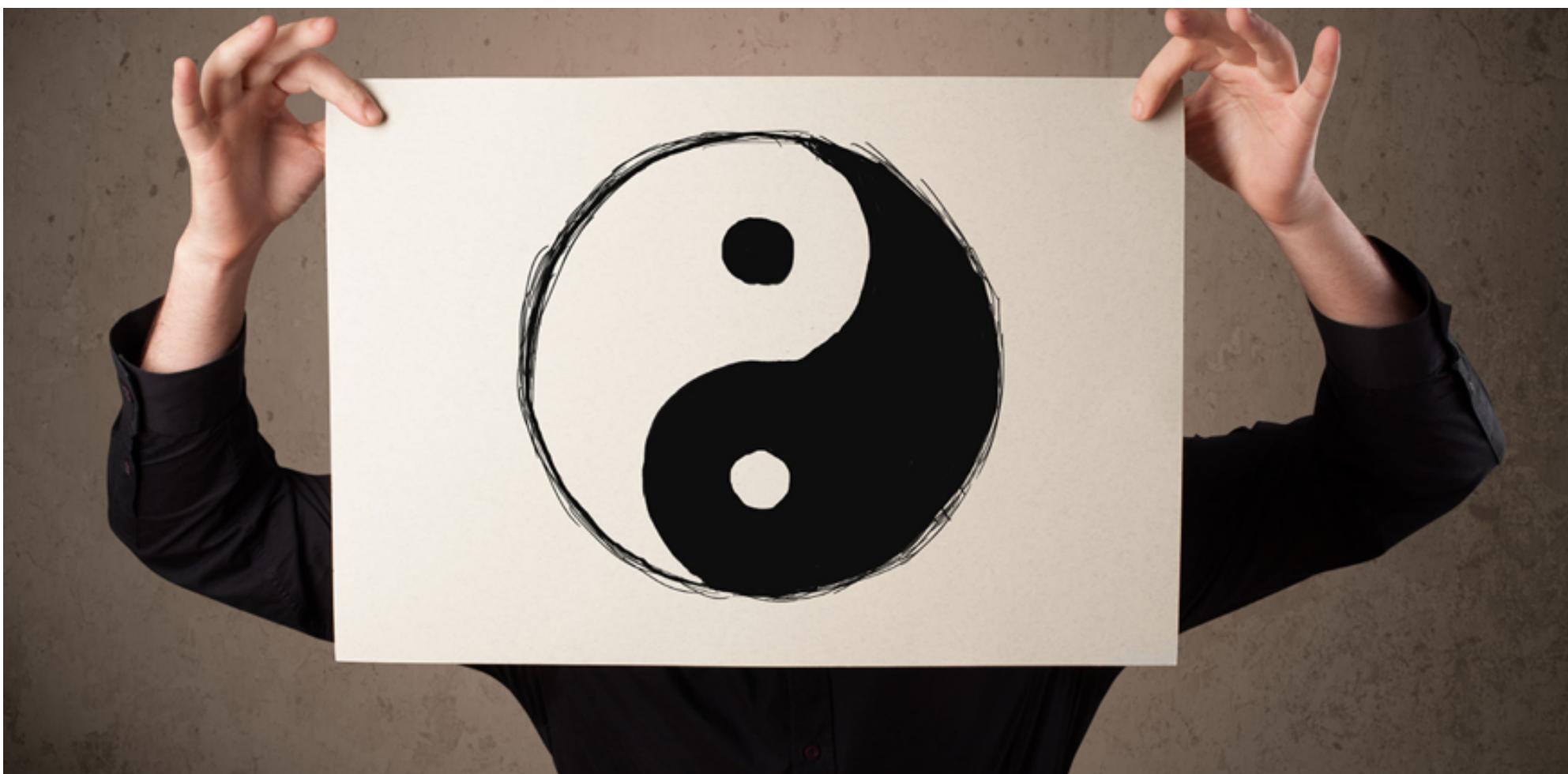


Figure 9. The symbol for yin and yang.

Complementary Alternative Medicine

Use of herbs for healing is a common practice in TCM. One population study reported that nearly one in five Americans used herbs for head or chest colds, stomach or intestinal illness, or musculoskeletal conditions. Most often mentioned herbs were Echinacea, ginseng, gingko, and garlic. The research noted the factors associated with those who chose to use herbs were the high cost of conventional medicine, poor health, and being 25-44 years old.

The National Center for Complementary and Integrative Health (NCCIH) is 1 of 27 institutes of the National Institutes of Health (NIH). In recent years NCCIH dispersed approximately \$130 million annually for the funding of research, training, and career development. Selected areas of funding include treatment for depression for patients with Parkinson's disease, tai chi for chronic heart failure, effects of massage on the immune system of preterm infants, and funding for the research center on the neurobiology of acupuncture and the developmental center on chiropractic manipulation.

Integration of Body, Mind, and Environment

Wellness is about your body and your mind. Science has taken us to the point of understanding how integral the working of the mind and body really are. We have explored numbers of examples of the way the mind and body function as one. Further

scientific research will provide even more evidence of the interrelatedness of mind and body.

History and philosophy across world cultures give us insight into major perceptions regarding the nature of human life. Learning from the experience of others can help avoid or erase stumbling blocks that may create perplexity about the reality of mind and body. These worldviews provide a framework for sound introspection. It will be even more evident throughout our journey in *21st Century Wellness* how basic understanding about who we are is to wellness. Together, history, philosophy, and science are leading us forward in the mindbody wellness paradigm.

WELLNESS IN THE 21ST CENTURY

Today, **wellness** is defined as a state of being that maximizes your quality of life and contributes as much as possible to the well-being of the community around you. Well-being is internal harmony, optimal energy, and aliveness.

Wellness is more than just avoiding disease; well-being living captures the desire and the capacity to thrive. The World Health Organization (WHO) defines health as the "optimal state of health of individuals and groups." The National Wellness Association (NWA) defines wellness "as an active process of becoming aware of and making a more successful existence."

The **wellness paradigm**, which is really a way of viewing life, begins with the recognition that each of us is a complex being composed of mind and body functioning as a unified whole (*Figure 10*). The essence of wellness is a healthy integration of mind and body that results in health, fitness, and overall well-being.

Old fitness and wellness paradigms focused on the abilities of physical body. Physical strength and speed were measured. A person's fitness was measured by how many push-ups they could do or how far they could run. Many other parameters were measured along with motor skills and athletic prowess. With all this attention on the physical, it was not unusual to treat the body as if it was an entity apart from the mind, thoughts, and feelings. Even with all the good this physical fitness approach has achieved, we now realize that it is quite limited.





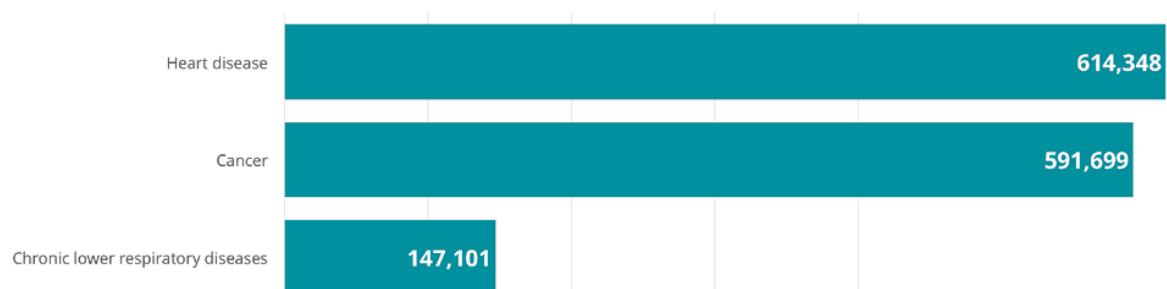
Figure 10. Wellness is a state of complete physical, mental, and social wellness.

The Evolution of Wellness

For many generations, the average life expectancy for Americans was less than 50 years. Today it is not unusual for men and women to live into their 80s or 90s with few debilitating problems. This change is primarily due to lifestyle. Because of major advancements in the treatment of disease and environmental improvements in sanitation and water purification, people today do not die as frequently from tuberculosis, pneumonia, or other infectious diseases.

Chronic diseases (also referred to as "lifestyle diseases"), such as heart disease, stroke, cancer, and diabetes, are the leading causes of death today (*Figure 11*). It is estimated that about 80 percent of older American adults have at least one chronic condition, 50 percent have at least two, and approximately 95 percent of older adults' health care expenditures are used to treat chronic diseases. Basically, most of what impairs people's health today is disease that results from lack of exercise, lack of sleep, poor eating habits, smoking, drinking, and the negative effects of stress. Choosing to live a healthy lifestyle is not only wise but a powerful way to enjoy quality of life and longevity.

LEADING CAUSE OF DEATH IN U.S. 2014



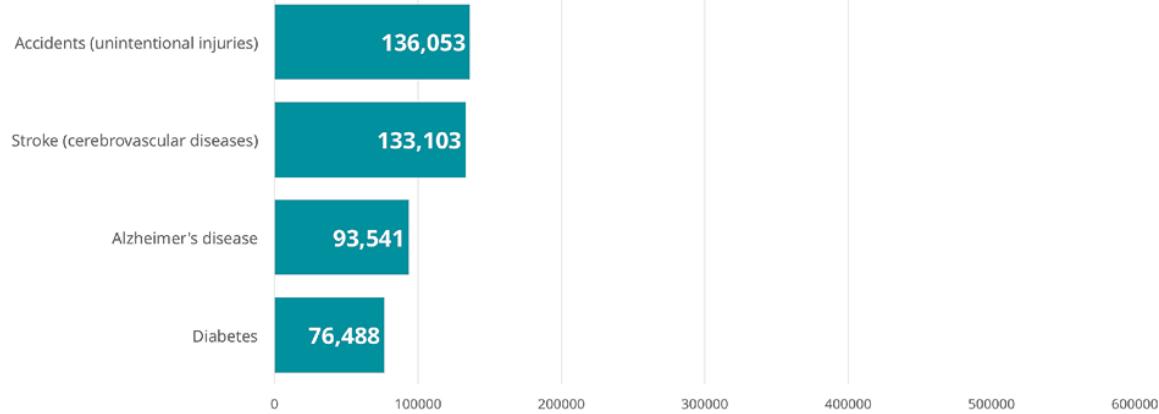


Figure 11. Chronic diseases are the leading causes of death in our society today. Source: Center for Disease Control.

It is estimated that by 2030 the proportion of people over 65 will increase to 19.6 percent of the population and the number of people over 80 will double from the current number, reaching about 20 million, including nearly equal numbers of men and women. In this aging population, racial and ethnic minorities have poorer health than non-minorities. These trends in aging present one of the major public health challenges facing the country in this century. The economic factor is significant as health costs of treating older adults can be 3 to 5 times higher than for people under 65. One of the highest priorities for the Centers for Disease Control (CDC) is to increase the number of older adults who live "longer, high-quality, productive, and independent lives." The CDC claims that this goal will be accomplished by helping people adopt healthier behaviors and by obtaining regular health screenings.

Traditional Chinese medicine (TCM): A number of medical methods that work to rid a person of disharmony and restore harmony and thus health and healing.

Paradigm: A model or pattern that affects how a person views reality. A paradigm shift is a conscious effort to see things in a new way.

Chronic disease: Human health condition or disease that has long-lasting effects and for which there may not be a cure.

Active aging: A process that enables people to maximize opportunities for health, participation and security so that they can maintain quality of life as they age.

Why Starting Young Matters

The same transition from infectious disease and acute illness to chronic disease and degenerative conditions continues to progress in many countries around the world. The World Health Organization is working to promote active aging so people can experience wellness throughout life and continue to contribute to society.

Active aging is a process that enables people to maximize opportunities for health, participation, and security so that they can maintain quality of life as they age (**Figure 12**). It applies to both individuals and population groups. Active aging includes being physically active and capable of working. It also includes the capacity to be involved in social, economic, cultural, spiritual, and civic affairs.

In a comprehensive analysis of the National Longitudinal Survey of Youth (NLSY) covering the years 1988 to 2006, it was observed that this shift from acute illness to chronic disease has been occurring in children. A major concern is the growing number of children who are overweight or obese, which leads to chronic conditions including diabetes, hypertension, and high cholesterol, formerly only observed in adults. Another major concern is that most alcohol, tobacco, and drug use begins early in life.



Figure 12. Healthy diet and exercise will help you age well and live longer.

Importance of Active Lifestyles

Population studies have reflected the importance of active lifestyles. Researchers are discovering more details about how lifestyle actually affects us on a cellular level. Earlier in this chapter, we discussed telomere shortening occurring in caregivers. Telomere shortening may also be associated with many types of cancer and cardiovascular disease. Researchers have discovered that lifestyle factors improve cell health by increasing telomerase, the enzyme that counters telomere shortening and premature aging and death by repairing and lengthening telomeres. Subjects who ate a diet low in refined sugars and rich in whole foods, fruits, and vegetables with only 10 percent of calories derived from fat, did moderate aerobic exercise, and relaxation techniques and breathing exercises experienced a 29 percent increase in telomerase in 3 months. They also reported lower stress and decreased levels of LDL

cholesterol.

What Does Wellness Encompass?

Wellness is a dynamic state of our being characterized by the balance and integration of our whole physical, mental, emotional, spiritual, and social self. The path to wellness is the incorporation of healthy choices in our day-to-day living. Wellness is a lifelong process that is unique to the individual but also can be shared by several people or a whole community.

The wellness focus on harmony of being is a major difference in the mindbody integrated wellness paradigm from the former fitness paradigms. Rather than focusing on the individual person, the former focus tended to be on the performance. The former paradigm favored those who are naturally good athletes. Those who were not as skilled in sports or dance or who did not already have a good level of physical fitness tended to be overlooked. Integrated wellness is inclusive of every individual because our focus is on you, learning what you need, to choose and enjoy wellness. Ideally this paradigm has the potential to be motivating to each and everyone-mind and body!



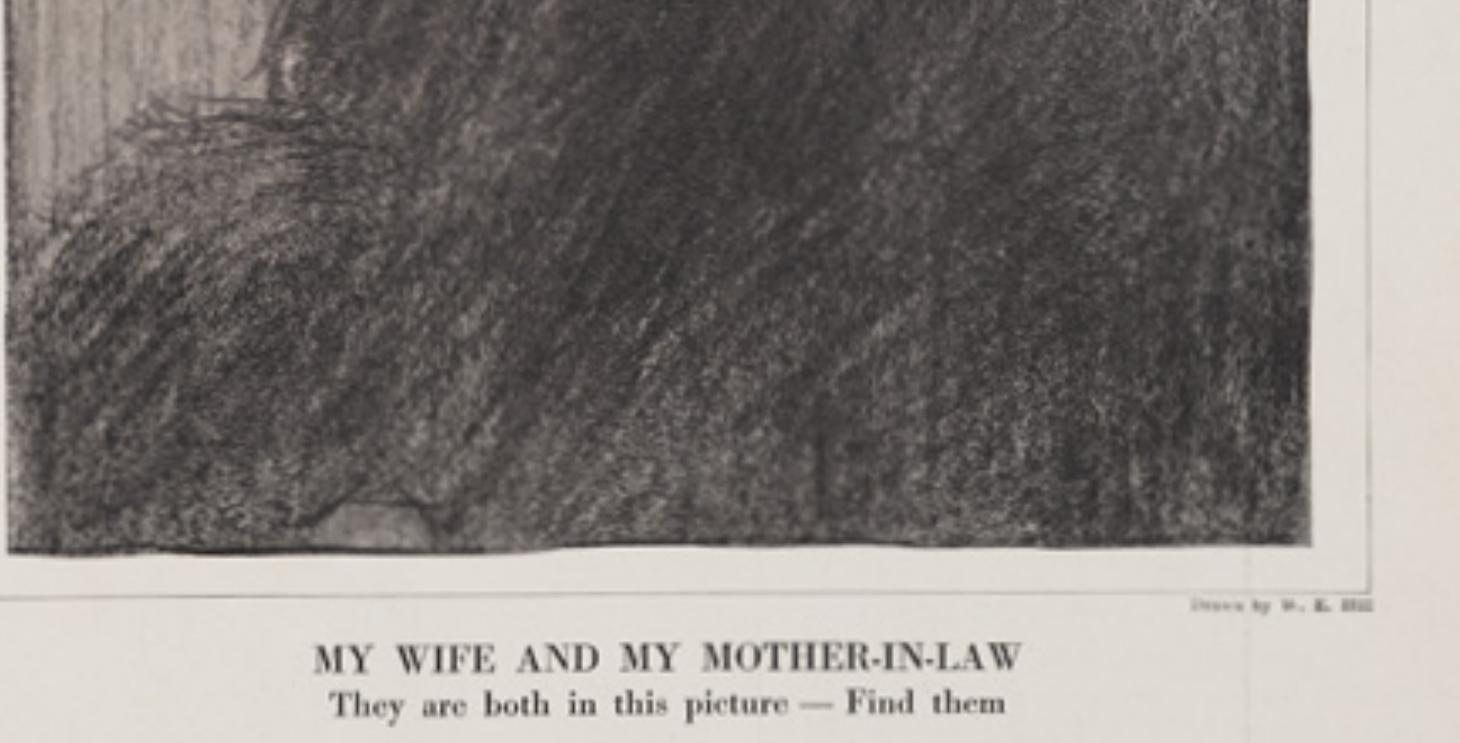


Figure 13. Who do you see in this illustration? A young woman or an old woman?

Wellness Paradigm Shift

A paradigm is a model or pattern that describes how we perceive things in the world around us. A paradigm shift means we see things in a new way. Stephen Covey uses the figure of the old woman to get this point across. Look at **Figure 13**. Do you see an old woman or do you see a young woman? Take another look. You should be able to see two images of a woman. The illustration is meant to challenge your perceptions. How often do you challenge your view of the world around you or your view of yourself?

As the concept of wellness is in the process of being developed, we are moving from the former physical fitness paradigm to the mindbody integrated wellness paradigm. The scientific advancements we have discussed ready us to embrace the new paradigm. Prior to these discoveries, as people contemplated that wellness is more than physical fitness, they postulated that the physical, social or interpersonal, emotional, intellectual, spiritual, environmental, and occupational were dimensions of wellness. These make sense in that they are an expansion beyond just the physical. However, when one dimension is separated from the others it loses the power that comes with the integration with the whole being. When each dimension is treated as a distinct entity rather than an integrated whole, it's difficult to see how wellness behaviors impact the whole person.

Behaviors Affect All Dimensions of You

For instance, **Table 1** displays a chart associating specific behaviors to a dimension of wellness. For example, it lists eating well in the physical dimension of wellness and self-esteem in the emotional dimension. In traditional wellness textbooks, the nutrition chapter was devoted to the chemical composition of food (physical dimension) and

discussions of self-esteem about feelings (emotional dimension). The unintended result separates mind, body, and emotions rather than integrating the whole being.

Table 1: Old categories of dimensions of wellness.

Physical	Emotional	Intellectual	Interpersonal	Spiritual	Environmental
Get physical activity and exercise	Believe in yourself	Be open to new ideas	Communicate well	Be loving	Reduce pollution and waste
Enjoy a good diet	Be confident	Ask questions	Be intimate	Be compassionate	Recycle
Know symptoms of disease	Understand and accept your feelings	Think critically	Establish and maintain satisfying relationships	Be empathetic and altruistic	Maintain sustainable development
Get annual medical evaluations	Be accepting of yourself	Be curious	Build a support system of friends and family	Be joyful	Promote clean natural resources
Practice safe sex	Trust yourself and others	Be creative		Find fulfillment	
Avoid injury	Share feelings with others	Enjoy a sense of humor		Be caring	
Avoid destructive habits	Be optimistic	Drive to learn new skills		Look for meaning and purpose	
		Learn throughout life		Belong to something greater than oneself	

In the integrated wellness paradigm, the whole you engages all dimensions with everything you do. Every healthy behavior impacts the whole you, not just part of you.

In this textbook, we discuss how all dimensions of you are integrated in a way to affect your overall well-being. In addition to nutrition, for example, we will explore emotional eating, how negative stress affects digestion, the effect of the environment on nutrition, and the benefits of eating together as a family.

The material on self-esteem will include attitudes toward your body, motivation and validation, and relationships with others, in addition to feelings. The dimensions of wellness blend together. Every wellness activity involves all your dimensions and all dimensions of you are involved in each wellness activity. It wouldn't make much sense if when you went for a walk or a run only your body went and your mind stayed home!

Power of the Integrated Wellness Approach

The integrative paradigm is a very powerful approach to wellness. The science we have presented is a fraction of the evidence available that we function as a whole, integrated individual. The parts or dimensions of our being do not function individually or separately from one another. They blend together as one whole. Knowing this makes a huge difference in how you approach wellness or living a healthy lifestyle.

This wellness paradigm says that your healthy daily activity not only strengthens your muscles and heart, but physical activity also strengthens your mind, slows aging, and helps you have more upbeat feelings, among many other things.

This awareness helps you realize how much of your health and well-being is in your hands. Psychologists call this an internal locus of control.

Your Personal Wellness Wheel

The wellness wheel, shown in *Figure 14*, depicts what wellness encompasses. The

individual, you, is placed at the center of the wheel with all your dimensions-physical, emotional, mental, social, and spiritual. Wellness is reflective of the quality of your life. The quality and meaning of your life is not superficial but comes from deep within you, honoring the dignity and value of each human life. Just as you are the center of your life, you are the center of the wellness of your life.

Putting yourself at the center of wellness is not self-centered. Just the opposite is the case. As you thrive, there is a natural tendency to reach out to others. You are an amazing composite of body, mind, and feelings. As you strive for a harmony of your whole being, the process is analogous to playing in an orchestra or playing on an athletic team.



Figure 14. These are the dimensions of you plus others that impact your wellness.

Make Your Own Music with Others

To contribute to the orchestra, you must first desire to develop your own capacities. You must work diligently to master your instrument. You must develop intellectual understanding of the music. You and the other members of the orchestra bring together individual talent and passion that enhance the performance. When all are contributing the best of his or her physical, mental, and emotional self, the music produced is inspiring and brings joy to everyone who hears it.

Using this analogy, think of your life in a similar way. In what ways would you benefit from achieving the best in yourself and collaborating with the people and community around you?

around you?

A harmony of being is not dependent on your capacity to perform. It is dependent on your choices and your attitudes. As you formulate healthy attitudes and choices, your behavior and your lifestyle reflect these and the performance, if you will, becomes the life you lead (**Figure 15**).

The spokes of the wheel depict the behaviors that enable us to capitalize on healthy living for a more joyful and optimal life. In today's world, the quality of your life is, to a large extent, in your hands. For the most part, your lifestyle choices will determine the quality of your life and your longevity.

Wellness encompasses the life choices indicated in the spokes. These are generally applicable to most of our lives and have a bearing on living a healthy lifestyle. Included are: living a physically active lifestyle, specifically cardiovascular fitness, flexibility, functional fitness, and muscular endurance and strength; nutrition and maintaining a healthy weight; enjoying leisure activities, fun, and happiness; learning and intellectual curiosity; fulfilling work; serving others; meaningful life purpose; establishing healthy relationships and a healthy environment. The specifics of why and how each of these areas contributes to wellness will be dealt with in depth throughout the book. Because wellness is a state of being, your wellness is personal to you. The healthy behaviors we have identified here are basic to wellness. You may have others that are important to your life or you may want to personalize the general ones we have identified.



Figure 15. For the most part, the quality of your life is in your hands.

Build Wellness Into Your Life

Wellness is a rather simple and straightforward concept, but it is a challenging one to conceptualize and keep in perspective. With a good understanding of wellness, actually living a healthy lifestyle should not be too difficult. Those of you reading this book probably run the whole gamut from some who make very healthy choices to others who are struggling with addictive behaviors. Building wellness into your life is a highly individual process.

However, a common denominator is that the foundation for this process of living a healthy lifestyle is to deepen your understanding of who you are, the intent of this chapter. One study of nearly 10,000 adults showed that happiness and life satisfaction correlated to good, very good, and excellent health and the absence of long-term limiting health concerns. A better understanding of wellness and an appreciation of who you are basically translate into a greater commitment to wellness.

FACTORS THAT AFFECT WELLNESS

Factors that affect wellness are a combination of personal lifestyle behaviors and beliefs, genetic factors, and social, economic, and political forces. Wellness is a matter of great concern to individuals but it is also a great concern to policymakers because the health or disease of the population has far-reaching economic costs and social implications.

Numbers of longitudinal studies have shown that these five factors are common to well-being:

1. Not using tobacco
2. No excessive alcohol consumption
3. Avoidance of overweight
4. High educational level
5. Having stable relationships

Of course, there are additional factors, but these five emerge through various population studies. Wholeness implies a balance of mind and body and the concept that the whole is greater than the sum of the parts. This is the main goal of integrated wellness. A healthy mind with healthy attitudes fosters a healthy body. A healthy body enhances the acquisition of a healthy mind and healthy attitudes.

Healthy people tend to have a healthy understanding of self, one that integrates the body and the mind and views the body positively. Positive attitudes toward the body are related to healthier behaviors.

Environment

Creating health-supporting environments is a challenge on personal, community, national, and global levels. Globally, there are still hundreds of millions of people without access to clean water and basic sanitation. Childbirth often occurs in inadequate conditions, resulting in high rates of child mortality, the death of children under 5 years of age. The World Health Organization is making effective strides in reducing these numbers, yet millions of people continue to cope with inadequate food supplies and poor housing conditions, and lack access to parks, playgrounds, and other recreation facilities.

Pollution causes harm or discomfort to the ecosystem. Blacksmith Institute, a non-profit organization formed in 1999 to combat life-threatening pollution, publishes an annual list of the world's worst polluted places and the top toxic threats. Lead, mercury, chromium, arsenic, pesticides, and radionuclides cause risk for more than 100 million people, making these toxins a public health issue on par with malaria and HIV/AIDS.

Air quality is a major health concern both outdoors and indoors. Air Quality Index (AQI) or Air Pollution Index (API) reports are given in local areas to warn people when not to exercise outdoors or when to carpool. Secondhand smoke (environmental tobacco smoke) is associated with diseases in adults who do not smoke and the premature death of children.

While many aspects of our environment are beyond our personal control, many are within our span of personal choice. Access to parks, playgrounds, or other recreational facilities may dictate your choice of location in addition to access to quality education. A commitment to keeping your living space clean and safe will contribute to your own quality of life and that of the others around you. It is good to prepare for emergencies.

Enjoying your job and your work environment may greatly add to the quality of your life as you will probably spend a good portion of your time at work. Taking stock of your natural talents and your personal preferences may help you identify a career you will truly enjoy that will not place inordinate stress on you or influence you to live a sedentary lifestyle. Living within your means so that you are financially stable will go a long way to contribute to your wellness.

Genetics

In 2003, the Human Genome Project (HGP) completed a map of the human genome,

which identifies all the genes in the human body. When it was finished, scientists were surprised to find that the human genome contains only approximately 25,000 genes, approximately 10,000 genes more than a chicken but 5,000 less genes than a grape. The HGP basically put an end to genetic determinism, the belief that genes determine human traits and behaviors. Scientists realized from finding this simple blueprint that there is much more to understanding the complexity of human life than identifying genes.

Epigenome

The science of epigenetics, control over genes or genetics, is an emerging field that studies the features of the cell that stimulate the DNA to be suppressed or expressed. These cellular activities compose the ***epigenome***. DNA is not self-emergent. In other words, it cannot act for itself; it must be acted upon.

Gene modification is affected by lifestyle factors such as what we eat or drink, how we feel, if we are physically active or not. In a study using pregnant mice with the agouti gene (which makes mice extremely obese and gives them a yellow coat), the mice given methyl-group-rich supplements, like those available in health food stores, produced lean offspring with a brown coat. The pregnant mice with the agouti gene that were not given the dietary supplement produced obese offspring with yellow coats. The offspring are genetically identical but look entirely different. The obese mice were also diabetic while the lean brown mice were healthy. The dietary supplement modified the genes without altering the DNA.

Similar findings have been reported in human subjects. A study of monozygotic human twins, who had identical DNA and similar epigenomes at birth, found that the twins' epigenomes were remarkably different from each other in later years. Through the years, the twins chose many different lifestyle behaviors, such as smoking and non-smoking.



Figure 16. Knowing your family's health history is important to managing your health.

Family Health History

A family history of a disease does not mean that an individual is going to contract that disease, but knowing your family's health history is important (**Figure 16**). Being aware of a high incidence of chronic disease in your family can alert you to genetic risks. It can also raise your awareness of how lifestyle, especially diet and physical activity, can raise or lower risk in your family. You get your attitudes, perceptions, and behaviors from the people around you, starting with your family.

Of the chronic diseases that are today's biggest health challenges, approximately 70-90 percent are most likely due to lifestyle and only a small percentage due to heredity. Genome-wide association studies (GWAS) have linked particular genes with particular diseases. A well-known example is the BRCA1 and BRCA2 breast cancer genes. What may not be as well known is that only 5-10 percent of breast cancers are hereditary.

Exposome

The "nature vs. nurture" or "gene vs. environment" debate carries on with two disparate sides. Many experts are calling for an exposome to be developed. An **exposome** measures all the exposures to a person during a lifetime and how those exposures relate to personal health, such as risk to disease. The exposome maps the impact of exposures from environment, diet, lifestyle, occupations, and other sources that impact health.

Genome information comes from sophisticated and well-funded science but environmental and lifestyle information often comes from questionnaires. Some experts are calling for scientists to adopt the concept of the exposome to make available the environmental equivalent of GWAS.

The sophistication level of the science used in the formulation of the exposome would need to match that of the science behind the genome. Without the information from the exposome, too much reliance is placed on the information from GWAS when it comes to disease prevalence. A more comprehensive view of environmental exposure is needed if epidemiologists are to discover the major causes of chronic diseases. Having both the genome and the exposome could also be very instrumental in helping individuals make wise choices regarding their own health.

Epigenome: Cellular changes that result due to influences other than genes that occur while the DNA of the cell remains unchanged.

Exposome: A measure of all the exposures to a person during a lifetime and how those exposures relate to personal health, such as risk to disease.

Preventive medicine: Medical treatments that seek to prevent disease and illness rather than finding cures for people who are already sick.

Access to Health Care

Access to health care is a major concern in most countries today, especially in the United States. **Figure 17** shows health care spending in 14 countries as a percentage of gross domestic product (GDP) 1980-2013. As you can see, spending on health care is not only significantly higher in the United States, but the costs have increased at a much faster rate than other countries.

A Right or a Privilege?

A major issue is the question as to whether health care is a right or a privilege. When health care is a right, the usual solution is a government-funded universal health care system, one giving access to health care to every citizen in the country. Sweden has long been known for its government universal care system. Because of the rise in health care costs in the 1990s, more of Sweden's health care has been privatized so that by 2008 about 18 percent was back in the private sector. The same trend is occurring in Germany, England, and Canada. In addition to cost, other issues with the universal system are lack of specialized care and inability to receive timely treatment.

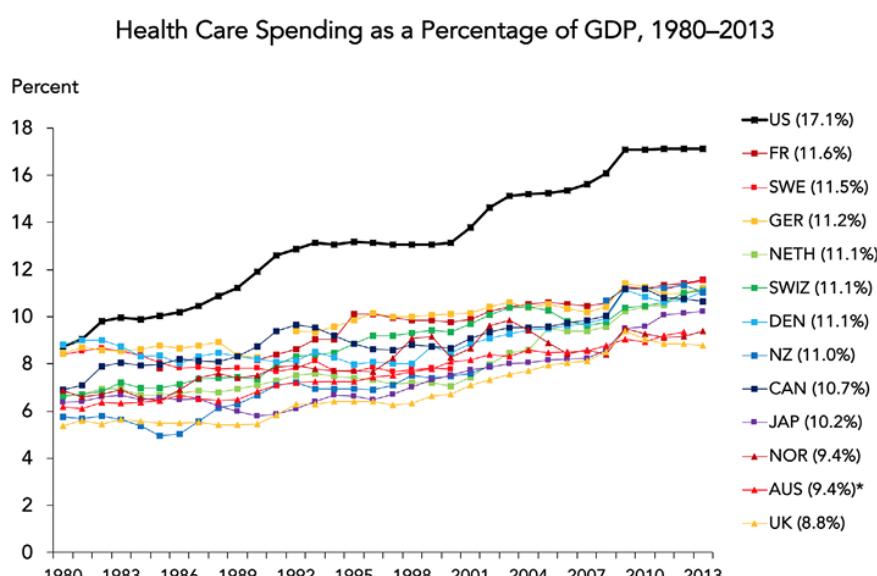


Figure 17. U.S. health care costs are significantly higher than in other countries. The high cost of health care in the United States is caused by a system that is designed to treat disease, rather than prevent it. **Notes:** Dutch and Swiss data are for current spending only, and exclude spending on capital formation of health care providers.

Disease Care Versus Preventive Care

Another major concern is the disease care model that prevails in the United States. The current health care system in America is basically a disease care system, which means that the system is set up to heal people who are already sick or injured. Ninety-five cents of every dollar is spent to treat disease after it has occurred rather than trying to prevent the disease from occurring.

Leading doctors in mindbody medicine say that we are providing surgery that "is dangerous, invasive, expensive and largely ineffective but pay very little to help people make lifestyle changes." For instance, life is not prolonged nor heart attacks prevented in 95 percent of people who receive angioplasties and stents. The INTERHEART study conducted in six continents (52 countries) with 30,000 subjects indicated that approximately 90 percent of heart disease could be prevented if a person lives a healthy lifestyle.

Preventive Medicine

Healthy lifestyle changes are a central component of **preventive medicine**, which endeavors to apply treatments that prevent disease and illness. It is important to have access to medical, dental, and mental health care, if needed.

Health care benefits have considerable monetary value and may be as important as the actual salary you earn. When seeking full-time employment, these are important considerations. When on campus, if necessary, take advantage of the Student Health Services provided by the college or university. If you are still under your parents' health plan, determine if you can receive additional medical help in the area in which you are living. It is important for you to have a record of your own medical history and not rely on someone else for this knowledge.

Social Determinants of Health

The World Health Organization describes the social determinants of health as the "circumstances in which people are born, grow up, live, work and age, and the systems put in place to deal with illness. These circumstances are in turn shaped by a wider set of forces: economics, social policies, and politics." These factors, along with individual lifestyle, work together to affect wellness. Some factors identified as playing a role in health care include income and social status, social support networks, education and health literacy, gender, and culture. The WHO established a commission on social determinants of health in 2005 to spearhead a global movement to overcome some of the more difficult health challenges. An awareness of global issues and a desire to share resources and talents will be the only way to achieve

health equity.

Lifestyle

Living a healthy lifestyle is what wellness is all about. Your lifestyle-your attitudes, perceptions, and behaviors-are the greatest determinants of whether you will achieve a healthy, fulfilling life. When you think of well-being as your own health status, a state of being, it will be your choices that will decide if you enjoy well-being and at what level. A person may be challenged with a physical disability or financial challenges, but he or she can still achieve a high level of well-being. Someone else may be financially wealthy or athletically gifted, but also emotionally miserable and addicted to drugs or alcohol.

Wellness is not the innate capacity or talent you have. It is what you believe and what you do. Everyone can enjoy this state of being if they desire it, and if there is a willingness to work for it. It will not just happen; it does take effort.

You Have a Choice

An interesting thing about choice is that everyone has it. How you choose to live your life is up to you. Sometimes it may be tempting to blame others when things don't go right. If you step back and analyze what you are doing when you blame, you are saying that you don't have a choice: The other person or circumstance created your problem. The truth is that the choice is still yours. You have forfeited your right to choose.





Figure 18. Choose a healthy, enjoyable life. There are so many ways to do it, such as skateboarding on a boardwalk.

Take Action

There are many wonderful, healthy, lifestyle choices you can enjoy and we will devote the entire book to helping you build those into your life. One of the real keys is to enjoy your life your own way (**Figure 18**). This process of living well should not be drudgery. Well-being, by its very nature, is positive and optimistic. As you consider your current well-being status, what choices contribute to your happiness and well-being?

For some, it might be walking to class or work, drinking more water and less soda, getting adequate sleep, not using tobacco, moderate drinking, if any, and for others it might be getting a good workout with weights several times a week. This is a good time to add to your sports skills repertoire to include individual sports such as golf or tennis (**Figure 19**), or try yoga or tai chi.



Figure 19. Tennis is a great way to play with friends and get in shape.

Keep It Simple, 100% Real

Simplifying life, trying not to cram so much in a day, may help you to enjoy a deeper feeling of well-being. Maintaining a healthy weight, establishing healthy relationships, and finding ways to enjoy wholesome recreation or satisfying leisure activities can add

and finding ways to enjoy wholesome recreation or satisfying leisure activities can add much needed balance to life and help reduce the negative effects of stress. Thinking positively about yourself and others and reducing negativity in your life will work like a magnet helping to attract more positive people and things into your life.

Emotional States and Attitudes Toward the Body

Taking a mindbody or integrated approach to fitness and wellness, it is imperative that we consider the relationship between thoughts, emotions, and physical illness. "There is no health without mental health," says the World Health Organization. "Mental health can be conceptualized as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community. In this positive sense, mental health is the foundation for well-being and effective functioning for an individual and for a community."

Links Between Emotional States and Physical Illness

A strong link between depression and coronary heart disease has been verified through research. Chronic stress, which is experienced on a daily basis, is associated with coronary heart disease. Social stressors-such as divorce, the death of a loved one, or a life-threatening illness-tend to trigger depression. These life stressors also can worsen depression or bring about a relapse in those who have recovered from depression. Stress, possibly from dealing with the disease and its treatments, may cause a replication of the HIV virus in those people with HIV/AIDS and therefore play a role in the progression of this disease. Elevated levels of C-reactive protein, a known factor in cardiovascular disease, have been measured in adults who came from low socioeconomic status and a harsh family environment as children, indicating their susceptibility to heart problems.

Positive Emotion and Wellness

The relationship between positive emotions and wellness has also been the subject of research. Many researchers have found a significant correlation between people who are cheerful, energetic, and display positive moods and physical health, more specifically lower morbidity, decreased symptoms, and decreased pain. These positive traits are also associated with longevity in the elderly who live in communities. A study of 2,564 Mexican American adults, for example, found that people who expressed positive emotions also had lower blood pressure (**Figure 20**).

BLOOD PRESSURE AND POSITIVE EMOTION

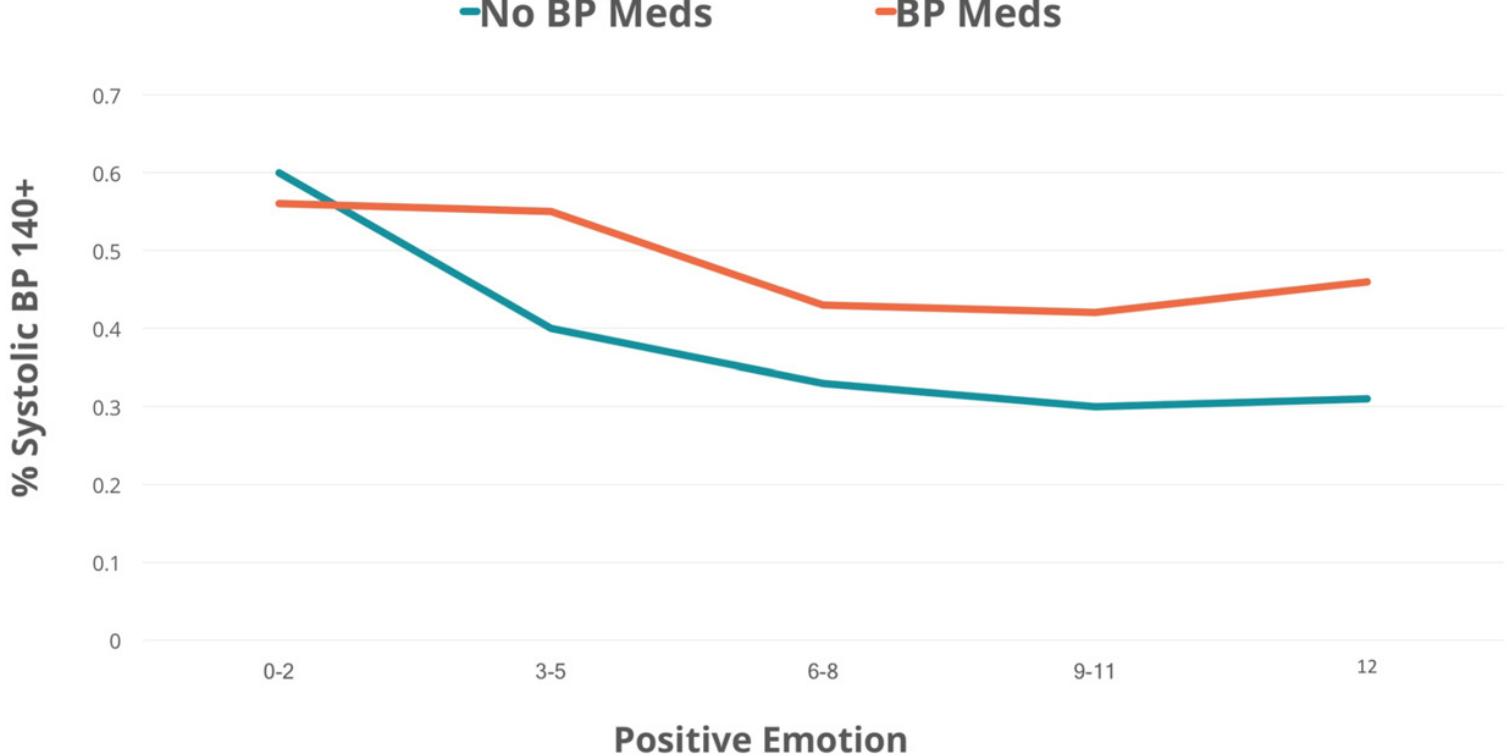


Figure 20. Percentage of older Mexican Americans with high systolic blood pressure by positive emotion score stratified by use of anti-hypertensive medication ($p=.0001$ no meds; $p= .09$ meds). Source: Ostir et. al. 2006.

As we learned earlier about psychoneuroimmunology, our thoughts and feelings really do affect the biochemical actions of our bodies. Science is making it so clear that the body and mind do not function in isolation of each other. A sound understanding of the interrelatedness of mind and body, and an appreciation of both, are the best motivators for choosing to live a healthy lifestyle and therefore enjoy wellness. Negative attitudes about ourselves and our bodies, which we internalize from history and popular culture, can make it difficult to choose healthy behaviors.

Body Objectification and Wellness

Body objectification and body shame are linked with disordered eating. Objectifying the body means that you perceive the body as an object, as a thing. Perceiving the body in a subjective way means that you identify the body as part of yourself. Objectification of the body is usually associated with perceiving yourself as you think others see you (**Figure 21**).

If a person buys into the belief that women's bodies should be thin to be beautiful, that individual may see her own body as not fitting the cultural standard. Her body becomes more an object that she wants to fit a cultural norm rather than being part of her. Objectification can lead to feelings of shame about the body and other negative emotions. Shame is a terribly negative emotion that is debilitating. Body shame can lead to revulsion or complete abhorrence of one's body. Self-criticism of one's whole body or specific body parts can become so extreme that it leads to body dysmorphic disorder (BDD). This disorder is significantly linked to depression and unhealthy behaviors.

Living a healthy life is about much more than learning some positive health habits. Unless we are strongly motivated to adopt positive health habits, chances are we will not do them regularly even when we know they are good for us. The real motive for living a healthy life must come from deep within you. In large part, that desire stems from a recognition and acceptance of who you are. Your healthy living will be enhanced as you establish a healthy understanding of self. A healthy life then becomes an expression of how you feel about your body and your mind and the joy you experience feeling their dynamic unity.



Figure 21. Objectification of the body is often associated with perceiving yourself as you think others see you.

Healthy People 2020

Your individual health and wellness is your responsibility. Your health contributes to the health of society. Governments are concerned with individuals but particularly with the welfare of the society. Countries throughout the world have health standards that are usually found in some kind of program. In the United States, those health standards can be found in the Healthy People program.

Every decade since the 1980s, the U.S. Department of Health and Human Services (HHS) has published science-based 10-year goals perceived as realistic for attaining a healthy society. These goals are a comprehensive health promotion and disease prevention program for the entire nation. The intent is to provide guidelines for improving the health of all Americans and challenge communities to support health-promoting policies. The desire for a healthier culture must include all citizens regardless of race, sex, or income.

Healthy People 2020 goals are to:

1. Eliminate preventable disease, disability, injury, and premature death.
2. Achieve health equity, eliminate disparities, and improve the health of all groups.
3. Create social and physical environments that promote good health for all people (**Figure 22**).
4. Promote healthy development and healthy behaviors across every stage of life.



Figure 22. With the help of friends and family, the happiness of your mind and body is in your hands.

MOVING FORWARD

Having completed this chapter, expected outcomes for you include:

Having completed this chapter, expected outcomes for you include:

1. Awareness of specific ways in which your mind and body interact and impact one another. Can you articulate several examples?
2. Recognize that all the dimensions of humans contribute to wellness and that wellness activities involve all the dimensions of humans. For instance, when exercising, you are involving all your dimensions and not just the physical or the body as was previously supposed. Think of an example of this reality.
3. Formulate your understanding of the nature of human life and particularly your life. Would your reality be "I am my mind" or "I am my body" or "I am my bodymind"? ("bodymindspirit")
4. Have familiarity with healing methods that involve the interaction of mind and body. Can you articulate several examples? Any with which you have had personal experience?
5. Explain to someone what constitutes wellness. In addition, what does it mean for you personally to live a healthy lifestyle and enjoy a high measure of integrated wellness?

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