

**Catherine Rush Thompson**

# **Prevention Practice and Health Promotion**

**A Health Care Professional's Guide to  
Health, Fitness, and Wellness**

**Second Edition**

**ROUTLEDGE**  


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# **Prevention Practice and Health Promotion**

**A Health Care Professional's Guide to  
Health, Fitness, and Wellness**

**Second Edition**

***Catherine Rush Thompson, PT, PhD, MS***

*Associate Professor of Physical Therapy  
Department of Physical Therapy Education  
Rockhurst University  
Kansas City, Missouri*

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# DEDICATION

*“Man is a knot into which relationships are tied.”*—Antoine de Saint-Exupéry, *Flight to Arras* (1942), translated from French by Lewis Galantière

This book is dedicated those who are my “knot”: my family, both nuclear and extended. May my two sons, Richard and Eric, live long and healthy lives, and may Jerry Thompson (1951-2003) be remembered for his humor, grace, and dignity.



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*“We are what we repeatedly do. Excellence, then, is not an act, but a habit.”—Aristotle*

I would like to personally thank my professional colleagues who have supported this effort and provided valuable insight regarding the growing role of preventive care in health care. More specifically, I would like to thank those who contributed their time and effort to this book through sharing their expertise and reviewing the book’s content for accuracy and relevance. I am also indebted to my family members, friends, colleagues, students, and patients, who provided both the incentive and the inspiration for expanding my book promoting health, fitness, and wellness. I am very grateful for lessons learned in life through friendship, love, loss, and hope.



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## ABOUT THE AUTHOR

*Catherine Rush Thompson, PT, PhD, MS*, was born in Kansas City and attended the University of Colorado Medical Center, graduating with distinction with a BS in physical therapy. With support from the Hillman Medical Student Fellowship, she attended and graduated with distinction from the University of Kansas Medical Center with an MS in special education with an emphasis on children with illness and other health impairments. With support from the Arthur Mag Fellowship and the UMKC Community Scholars Fellowship at the University of Missouri at Kansas City, she completed her interdisciplinary PhD, incorporating studies in physiology, psychology, biochemistry, neuroscience, exercise science, and education. Although her primary clinical practice focuses on individuals with developmental disabilities across the lifespan, she has worked in practice settings in acute care, outpatient care, long-term care, school-based therapy, home health, and private practice. Currently she is an associate professor in the Department of Physical Therapy Education at Rockhurst University.

Dr. Thompson's travel to more than 50 countries gives her insight into global health care disparities and the need for multicultural education and advocacy for populations at risk for health problems. Her research interests focus on growth and development across the lifespan, motor learning, and prevention practice. She hopes this book will encourage health care professionals to advocate for healthy lifestyles and collaboratively work toward a healthier world.



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# CONTRIBUTING AUTHORS

*Shawn T. Blakeley, PT, CWI, CEES, MBA*  
(Chapter 20)

Area Vice President  
Aegis Therapies  
Chicago, Illinois

*Ann Marie Decker, PT, MSA, GCS, CEEAA*  
(Chapter 9)

Clinical Assistant Professor of Physical Therapy  
and Academic Coordinator of Clinical  
Education

Department of Physical Therapy Education  
Rockhurst University  
Kansas City, Missouri

*Shannon DeSalvo, PT* (Chapter 8)

Physical Therapist Specialist in Pelvic  
Rehabilitation  
Foundational Concepts, PA  
Kansas City, Missouri

*Amy Foley, DPT, PT* (Chapters 13, 14, 16)

Associate Professor of Physical Therapy  
Department of Physical Therapy Education  
Rockhurst University  
Kansas City, Missouri

*Martha Highfield, PhD, RN* (Chapter 10)

Professor of Nursing  
California State University  
Northridge, California

*Steven G. Lesh, PhD, PT, SCS, ATC* (Chapter 19)

Chair, Physical Therapy Department  
Professor of Physical Therapy  
Southwest Baptist University  
Bolivar, Missouri

*Gail Regan, PhD, MS, PT* (Chapters 9, 13, 14)

Associate Professor  
Physical Education Department  
Castleton State College  
Castleton, Vermont

*Mike Studer, PT, MHS, NCS, CEEAA, CWT*  
(Chapter 15)

President  
Northwest Rehabilitation Associates  
Salem, Oregon



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# PREFACE

*“Prevention is better than cure.”—Desiderius Erasmus*

This is the second edition of *Prevention Practice: A Guide for Health, Fitness, and Wellness*, expanded to offer evidence-based resources to all health care professionals incorporating health promotion and preventive care in their practice settings. Whereas health promotion encourages others to improve their health, my definition of *prevention practice* is the conscious habit of caring for one’s health, fitness, and wellness mentally, physically, spiritually, psychosocially, and environmentally. As with any type of practice, prevention practice relies on mindfulness and consistency to become a lifestyle habit. As health care professionals, we need to support and advocate for prevention practice for ourselves, our patients, our communities, and society at large.

The intent of this book is to provide health information contributing to “a society in which all people live long, healthy lives” (Healthy People 2020) and supporting health care professionals in their efforts to “improve equity in health, reduce health risks, promote healthy lifestyles and settings, and respond to the underlying determinants of health” (World Health Organization). The authors of *Prevention Practice and Health Promotion: A Health Care Professional’s Guide to Health, Fitness, and Wellness* compiled information relevant to health, wellness, and fitness as a ready resource for those promoting holistic health care in diverse practice settings. Written for students and clinicians, this book introduces key concepts of health, fitness, and wellness and offers detailed information for screening individuals across the lifespan, identifying key risk factors for specific populations, educating clients and their families about healthy lifestyle behaviors, and developing effective interventions to promote health, fitness, and wellness. Additionally, this book provides a theoretical framework for program development, including marketing and management strategies to address both individual and community needs. Recognizing the cost-effectiveness of preventive care, health care professionals must work collaboratively in their expanded roles in health promotion and wellness, complementing evidence-based management of medical conditions. Finally, the publisher offers accompanying PowerPoint presentations to facilitate educating others about prevention practice and health promotion.

Through the process of writing and editing this book, I discovered a wealth of resources that can be readily accessed through technology and current literature. My hope is that fellow health care providers and those seeking healthy lifestyles will further explore needed resources to holistically counsel others in preventing illness and injury and in mindfully managing health conditions, ultimately improving their quality of life.

*“The cure of the part should not be attempted without the cure of the whole.”—Plato*

*Catherine Rush Thompson, PT, PhD, MS*



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# FOREWORD

*“An ounce of prevention is worth a pound of cure.”—Benjamin Franklin*

The importance of quality of life and a healthy lifestyle has been recognized for decades, with the World Health Organization (WHO) promoting the importance of a healthy state of being since the late 1940s. Although slow to evolve, virtually every health care organization and professional association today speaks clearly to the need for promotion of health and well-being, through policy and position statements on the importance of prevention, health, fitness, and wellness. Although still present, the dichotomy between prevention and wellness on one hand and disease management and treatment on the other is beginning to be addressed. Since the inception of the Healthy People initiative in 2000, when the first set of national strategies for improving the health of Americans by the end of the 21st century was released by the Department of Health and Human Services, there has been a very gradual paradigm shift from an emphasis on illness to an emphasis on health and well-being. In keeping with this vision toward a commitment to health, *Prevention Practice and Health Promotion: A Health Care Professional's Guide to Health, Fitness, and Wellness*, offers the health care professional an evidence-based approach to preventive care and health promotion across a variety of practice settings and age groups. Addressing the broad compendium of a holistic approach to health, wellness, and fitness, this comprehensive book emphasizes the action of primary care vs the treatment of tertiary care and serves as an important resource for health care professionals. This notable book is a testament to Dr. Thompson's long-standing and dedicated career and her commitment to the health and well-being of others.

*Ellen F. Spake, PhD*  
Assistant to the President  
Office of Mission and Ministry  
Rockhurst University  
Kansas City, Missouri



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# 1

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## Prevention Practice A Holistic Perspective for Health Care

*Catherine Rush Thompson, PT, PhD, MS*

*“The Doctor of the future will give no medicine, but will interest his patient in the care of the human frame, in diet, and in the cause and prevention of disease.”—Thomas Edison, *The Newark Advocate*, January 2, 1903*

### HEALTH

The word *health* is derived from the Old English term *hal*, meaning sound or whole. Health is essentially the purpose of medicine, the promotion and restoration of wholeness. Although *health* is broadly defined as “the condition of being sound in mind, body, and spirit,”<sup>1</sup> the World Health Organization defines *health* as “a state of complete physical, mental, and social well-being, and not merely the absence of disease or infirmity.”<sup>2</sup> Health is a more dynamic process, “a quality of life involving dynamic interaction and independence among an individual’s physical well-being, his [her] mental and emotional reactions, and the social complex in which he [she] exists.”<sup>3</sup> Finally, “spiritual health” or “the passion one has to fulfill a need” or personal goal is yet another aspect of health that should be recognized by health professionals. In all of these definitions of health, there are physical, mental, social, and spiritual components: key factors for the comprehensive health examination.

Health care professionals are shifting their paradigm perspective from one emphasizing illness to one stressing health, function, quality of life, and well-being. This shift in health care has resulted in a surge in preventive strategies designed to reduce disease by helping individuals modify their lifestyle behaviors to optimize health. *Optimal health* is defined as the conscious pursuit of the highest qualities of the physical, environmental, mental, emotional, spiritual, and social aspects of the human experience.<sup>4</sup> Lifestyle changes promoting optimal health can be facilitated through a combination of efforts that (1) enhance self-awareness and knowledge of healthy habits, (2) change behaviors that interfere with good health, and (3) create environments that support good health practices. The importance of supportive environments for producing lasting change cannot be overemphasized.

Poor health may include physical ailments causing acute or chronic disabilities, as well as mental health issues that limit independent functioning. Poor health has a significant effect on the individual, the family, the community, and society at large. Depending on the severity of illness, the individual may lose functional independence and the opportunity to fulfill a role in the home and community. Family members also lose the support of those who are ill and often must adjust their roles and goals to meet the needs of someone who is disabled. Society also suffers from injury and disease that may be preventable. One example of a preventable health condition leading to acute or chronic disabilities is obesity. According to the Centers for Disease Control and Prevention, “obesity-related conditions include heart disease, stroke, type 2 diabetes and certain types of cancer, some of the leading causes of preventable death.”<sup>5</sup> Obesity is also a contributing factor to physically disabling conditions, such as osteoarthritis, infertility, and sleep apnea. The cost of this health condition has had a major effect on American society; it is estimated that the medical care costs of obesity total more than \$147 billion.<sup>5</sup>

A rising trend in poor health reported in the United States indicates an immediate need for preventive care to reduce medical conditions that lead to disability. According to the Behavioral Risk Factor Surveillance System,<sup>6</sup> 3.9% of Americans reported poor health in 2010 (up from 3.5% reporting poor health in 1993), whereas only 20.2% reported excellent health in 2010 (down from 25.3% in 1993). Only 28.4% of adults exercise at the level of moderate intensity for more than 300 minutes/week or vigorous intensity for more than 150 minutes/week, as recommended by the Surgeon General. Nationwide, more than half of the adult population is overweight (36.2%) or obese (27.2%), and only 23.5% consume the recommended 5 fruits or vegetables daily. These data indicate the growing need for preventive care (Table 1-1).<sup>6</sup>

Poor health affects personal satisfaction and the ability to meet family needs, personal responsibilities, and the demands of the workplace. Poor health is not only financially costly, but it also takes a toll on the emotional, psychological, and social well-being of all affected. According to the National Center for Chronic Disease Prevention and Health Promotion,<sup>7</sup> “certain behaviors—often begun while young—put people at high risk for premature death, disability, or chronic diseases. The following are the most common of such behaviors:

- Smoking and other forms of tobacco use
- Eating high-fat and low-fiber foods
- Not engaging in enough physical activity
- Abusing alcohol or other drugs
- Not availing oneself of proven medical methods for preventing disease or diagnosing disease early (eg, flu shots and evidenced-based screening procedures)
- Engaging in violent behavior or behavior that may cause unintentional injuries (eg, driving while intoxicated)”

A study conducted by the Centers for Disease Control and Prevention<sup>8</sup> determined that depression, anxiety, and other emotional problems were a leading cause of limited activity, as measured in a quality-of-life profile. Mental health issues were followed by cancer, diabetes mellitus, stroke, high blood pressure, back and neck problems, heart problems, walking problems, and joint problems. All of these conditions can be positively affected by health promotion activities and a healthy lifestyle.

## WELLNESS

*Wellness* is often used synonymously with health; however, wellness is a more comprehensive construct. According to the National Wellness Institute, “wellness is an active process of becoming aware of and making choices toward a more successful existence.”<sup>9</sup> In other words, wellness is an

**TABLE 1-1. 2009 BEHAVIORAL RISK SURVEY RESULTS  
OF ADULTS AGED 18 TO 75+ YEARS (N = 422,199)**

| VARIABLE                      | CATEGORY                           | NO. OF RESPONDENTS | PERCENT | 95% CONFIDENCE INTERVAL* |
|-------------------------------|------------------------------------|--------------------|---------|--------------------------|
| Race/ethnicity                | White non-Hispanic                 | 336,768            | 13.4    | 13.2 to 13.7             |
|                               | Black non-Hispanic                 | 32,687             | 20.8    | 19.9 to 21.7             |
|                               | Asian                              | 6974               | 9.2     | 7.9 to 10.4              |
|                               | Pacific Islander                   | 689                | 18.7    | 12.2 to 25.1             |
|                               | American Indian/<br>Alaskan Native | 5900               | 24.3    | 21.9 to 26.6             |
|                               | Other non-Hispanic                 | 9170               | 20.7    | 18.9 to 22.5             |
|                               | Hispanic                           | 25,420             | 24.7    | 23.6 to 25.8             |
| Educational level             | < High school                      | 38,788             | 37.0    | 35.8 to 38.1             |
|                               | High school graduate               | 126,094            | 20.0    | 19.5 to 20.5             |
|                               | Some college                       | 113,360            | 14.4    | 13.9 to 14.8             |
|                               | College graduate                   | 142,517            | 7.1     | 6.8 to 7.4               |
| Annual household income level | < \$15,000                         | 40,578             | 39.6    | 38.5 to 40.8             |
|                               | \$15,000 to \$24,999               | 64,396             | 27.3    | 26.5 to 28.1             |
|                               | \$25,000 to \$34,999               | 44,409             | 20.2    | 19.3 to 21.0             |
|                               | \$35,000 to \$49,999               | 56,660             | 13.4    | 12.8 to 14.0             |
|                               | \$50,000 or more                   | 159,624            | 6.2     | 5.9 to 6.5               |
|                               | Unknown/refused                    | 56,532             | 18.6    | 17.8 to 19.4             |
| Employment status             | Employed                           | 175,980            | 8.6     | 8.3 to 8.9               |
|                               | Self-employed                      | 35,747             | 9.5     | 8.7 to 10.2              |
|                               | Out of work 1 year or more         | 9862               | 26.1    | 24.3 to 27.9             |
|                               | Homemaker                          | 31,482             | 16.8    | 15.9 to 17.7             |
|                               | Student                            | 6520               | 6.5     | 5.5 to 7.6               |

(continued)

**TABLE 1-1 (CONTINUED). 2009 BEHAVIORAL RISK SURVEY RESULTS OF ADULTS AGED 18 TO 75+ YEARS (N = 422,199)**

| VARIABLE   | CATEGORY                  | NO. OF RESPONDENTS | PERCENT | 95% CONFIDENCE INTERVAL* |
|--|---------------------------|--------------------|---------|--------------------------|
|  | Retired                   | 118,064            | 24.6    | 24.1 to 25.0             |
|  | Unable to work            | 28,272             | 66.7    | 65.4 to 68.0             |
| Body mass index category   | Underweight               | 6411               | 21.2    | 19.1 to 23.3             |
|  | Normal weight             | 135,384            | 10.9    | 10.5 to 11.3             |
|  | Overweight                | 147,537            | 13.5    | 13.1 to 13.9             |
|  | Obese                     | 113,658            | 24.0    | 23.5 to 24.6             |
| Cigarette smoking status   | Current smoker, every day | 50,476             | 23.6    | 22.8 to 24.4             |
|  | Current smoker, some days | 18,101             | 20.6    | 19.2 to 22.0             |
|  | Former smoker             | 127,400            | 18.8    | 18.4 to 19.3             |
|  | Never smoked              | 223,536            | 12.4    | 12.0 to 12.7             |
| Binge drinking   | Yes                       | 43,893             | 10.4    | 9.7 to 11.1              |
|  | No                        | 365,836            | 16.8    | 16.5 to 17.1             |
| Leisure time physical activity   | Yes                       | 307,156            | 11.3    | 11.0 to 11.5             |
|  | No                        | 114,516            | 30.2    | 29.6 to 30.8             |
| Self-rated health  | Good-excellent            | 341,245            | 0.0     | 0.0 to 0.0               |
|  | Fair-poor                 | 80,954             | 100.0   | 100.0 to 100.0           |
| Diabetes mellitus  | Yes                       | 50,749             | 45.0    | 44.1 to 46.0             |
|  | No                        | 371,058            | 13.0    | 12.7 to 13.3             |
| High blood pressure  | Yes                       | 163,836            | 29.0    | 28.5 to 29.5             |
|  | No                        | 257,484            | 10.5    | 10.2 to 10.8             |
| *A confidence interval describes the level of variability in a sample estimate and specifies the range in which the true value of the population that the sample represents is likely to fall. |                           |                    |         |                          |
| Source: Health, United States, 2012: with special feature on emergency care. Hyattsville, MD: National Center for Health Statistics (US); May 2013.  |                           |                    |         |                          |

active, lifelong process of becoming aware of choices and making decisions toward a more balanced and fulfilling life. Wellness involves choices about one's life and the priorities that determine one's lifestyle. Wellness integrates mental, social, occupational, emotional, spiritual, and physical dimensions of one's life and reflects how one feels about life, as well as one's ability to function effectively.

### *Dimensions of Wellness*

According to the systems theory of wellness, the multiple dimensions of wellness are essential subelements of a larger system, yet these dimensions function independently as their own

subelements.<sup>10</sup> When one dimension of wellness is disrupted, such as when an individual gets injured in an accident, other dimensions of wellness reciprocally interrelated to that dimension are also disrupted, requiring adaptation of the whole individual. When an individual has emotional problems, these problems affect the mental, social, occupational, spiritual, and physical dimensions of that person.

Corbin et al,<sup>11</sup> prominent educators in the field of exercise and health promotion, outline the 6 dimensions of wellness described by the National Wellness Institute. These descriptions include examples of physical wellness, spiritual wellness, social wellness, psychological wellness, emotional wellness, and intellectual wellness.

1. *Physical wellness* is the positive perception and expectation of health. Physical wellness includes the ability to effectively meet daily demands at work and to use free time. A person with a positive perception and expectation of health may be more likely to embrace healthy lifestyle behaviors that prevent injury and illness.
2. *Spiritual wellness* is the belief in a unifying force between the mind and body. Spiritual wellness includes a person's ability to establish values and act on a system of beliefs as well as to establish and carry out meaningful and constructive lifetime goals. Those individuals with a strong belief system may be more likely to carry out goals that keep both the mind and body healthy.
3. *Social wellness* is the perception of having support available from family or friends in times of need and the perception of being a valued support provider. Social wellness includes a person's ability to successfully interact with others and to establish meaningful relationships that enhance the quality of life for all people involved in the interaction, including oneself. Social support is a valuable asset for health and wellness, as well as recovery from illness and injury.
4. *Psychological wellness* is a general perception that one will experience positive outcomes to the events and circumstances in life. This perception suggests a positive attitude or outlook about life. The intangible qualities of optimism, determination, and hope are vital in preventive practice and positively dealing with life problems.
5. *Emotional wellness* is the progression of a secure self-identity and a positive sense of self-regard, both of which are facets of self-esteem. Emotional wellness includes the ability to cope with daily circumstances and to deal with personal feelings in a positive, optimistic, and constructive manner. A person who dwells on negative emotions and who has negative self-esteem does not reap the benefits of a positive self-attitude. It is important for health care professionals to consider that ill or injured individuals are at risk for lower self-esteem as they lose functional abilities and, potentially, their significant roles in life.
6. *Intellectual wellness* is the perception of being internally energized by an optimal amount of intellectually stimulating activity. This type of intellectual stimulation must be sufficient to challenge intellectual abilities but not so overwhelming that there is no time for mental repose. Both intellectual overload and intellectual underload can adversely affect health. Intellectual wellness includes a person's ability to learn and to use information to enhance the quality of daily living and optimal functioning.

Theologian Howard Clinebell<sup>12</sup> offers an even more comprehensive perspective of wellness with his 7 dimensions of wellness. His dimensions are more encompassing of the environment and a world perspective. The definitions of his 7 dimensions of wellness include spiritual well-being, mental well-being, physical well-being, relationship well-being, work well-being, play well-being, and the well-being of our world.

1. The *Spiritual Well-Being Dimension* incorporates healthy religious beliefs, practices, values, and institutions that energize and enrich all aspects of our lives. This dimension of well-being addresses an individual's need for purpose, guidance, meaning, and values. The ill person who

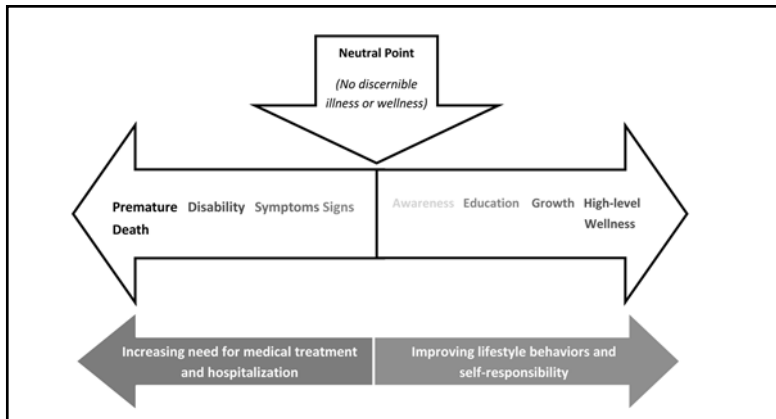
has healthy religious or spiritual beliefs and values has a sense of personal value and spiritual security.

2. The *Mental Well-Being Dimension* represents the profound interdependence of the mind and body that manifests itself in our mental and physical health. Mental well-being incorporates problem solving, creativity, clarity in thinking, service, and productivity. Those who are given the opportunity to creatively problem solve and provide services to others are believed to have an improved mental well-being.
3. The *Physical Well-Being Dimension* reflects the body's health. Physical well-being is evidenced by the ability to experience sensations without pain, to effectively function with adequate energy, to be responsible for self-care, and to nurture others. Many pathologies and injuries significantly affect this dimension, particularly those presenting with pain.
4. The *Relationship Well-Being Dimension* represents the most important factor for our healing and general wellness. This dimension incorporates the need for nurturing and love, for giving and receiving, for empowering others, and for creating interpersonal bonds. On a larger scale, this well-being relates to peaceful coexistence with others.
5. The *Work Well-Being Dimension* satisfies the thirst for purpose. This dimension of wellness addresses the need for fulfilling a purpose in one's vocation. Self-worth, satisfaction, and personal fulfillment are all related to the individual's ability to serve the community in a meaningful way.
6. The *Play Well-Being Dimension* acknowledges that play provides the individual with laughter, cheer, energy, and balance. It is the ability to successfully play that provides the needed healing and revitalization to meet the demands of the other dimensions. Allowing time for this important dimension is a high priority for overall well-being, as noted in the following quote by Kahil Gibran<sup>13</sup>: "In the sweetness of friendship let there be laughter, and sharing of pleasures. For in the dew of little things, the heart finds its morning and is refreshed."
7. The *Well-Being of Our World Dimension* reflects an individual's perspective on living in a healthy environment and protecting natural resources. This final dimension incorporates a broad overview of the world. Wellness in this dimension includes responsibility, justice, an earth-caring lifestyle, a desire of well-being for all, adequate health care, dependence on others in the community, political participation, and the recognition of institutions as potential resources for meeting needs beyond the self.

These 7 dimensions are more holistic and provide a framework for exploring various aspects of health and wellness, including cultural perspectives of the world. Although the health care provider is often trained to provide education focusing on the physical dimensions of wellness, a more comprehensive or holistic perspective enables these professionals to make appropriate referrals to address other dimensions of well-being. Those in poor health benefit from additional resources, such as educational materials, support groups, and referrals to professionals with expert knowledge.

## MODELS OF WELLNESS

Various theorists have developed models and simplified descriptions of the multidimensional aspects of wellness. In addition to providing a framework for identifying clients' needs, these models of wellness offer insight into the management of illness and prevention practice. As early as 1972, Travis and Ryan<sup>14</sup> developed a continuum of wellness illustrating the effect of wellness on health and premature death (Figure 1-1). The Illness-Wellness Continuum illustrates the spectrum from good health—characterized by awareness, education, and growth—to poor health leading to premature death, experienced as signs and symptoms of disease and disability.

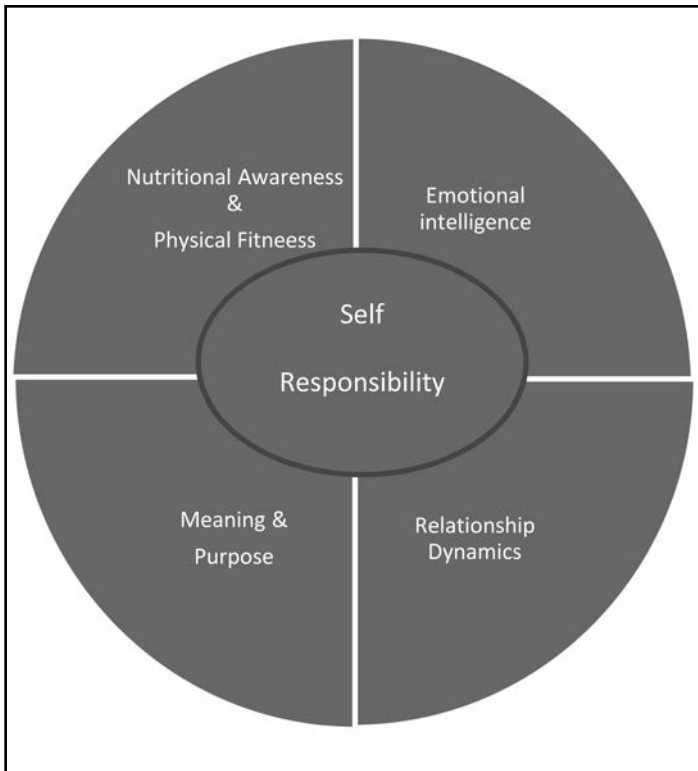


**Figure 1-1.** Travis and Ryan's Illness-Wellness Continuum. (Adapted from Travis J, Ryan R. *Wellness Workbook: How to Achieve Enduring Health and Vitality*. 3rd ed. Berkeley, CA: Ten Speed Press; 2003.)

Signs of pathology, such as abnormal blood counts and hypertension, may not be perceived by the individual but can generally be detected by medical testing, such as blood tests, vital signs, and imaging studies (ie, physiological and anatomical markers of pathology or illness). Symptoms of pathology are generally more subjective and often include an individual's report of pain, discomfort, fatigue, or feeling "ill." The individual often experiences symptoms of pathology or the awareness of illness after pathophysiological changes have taken place at the subcellular and cellular level. *Disability* is the inability to engage in gainful activity or work and commonly ensues when the individual feels very ill. Disability often results from illness and has a significant effect on all aspects of an individual's well-being.<sup>15</sup> According to the Social Security Administration, disability is "an inability to engage in any substantial gainful work activity because of a medically determinable physical or mental impairment that is expected to last for 12 continuous months or result in death."<sup>16</sup>

Both *acute disability* and *chronic disability* can significantly affect multiple dimensions of wellness, including mental well-being, physical well-being, work well-being, and relationship well-being. Travis and Ryan's<sup>14</sup> model illustrates the point where prevention practices (eg, awareness of and engagement in healthy lifestyle practices) most positively affect health and wellness. Prevention practice should be initiated when the individual is healthy and free of clinical manifestations of illness. Although medical intervention often initiates when an individual presents with signs or symptoms of pathology, earlier intervention (emphasizing awareness and avoidance of risk factors for illness, education about healthy lifestyle behaviors, and access to up-to-date and accurate knowledge) can provide a level of wisdom that buffers individuals from pathology and premature death. For example, if an individual knows that a sedentary lifestyle and high-fat diet can increase the risks of heart disease, engaging in regular, moderate-intensity exercise and eating healthy, nutritional meals could postpone illness. If an individual who is predisposed to illness has routine screenings, then these tests can often detect signs of pathology earlier in the course of disease and allow more immediate and effective interventions.

A wellness perspective invites the health care professional to provide interventions across the spectrum of health and wellness, offering healthy individuals the awareness and knowledge to develop appropriate lifestyle behaviors. Even when an individual presents with signs and symptoms of pathology, education of secondary complications prevents further signs and symptoms leading to disability. In 1977, Donald B. Ardell<sup>17</sup> introduced a new model of wellness that placed self-responsibility at the center his wellness paradigm (Figure 1-2). In this model, *self-responsibility* is surrounded by nutritional awareness and physical fitness, emotional intelligence, meaning and purpose, and relationship dynamics. According to Ardell,<sup>17</sup> "Wellness is first and foremost a



**Figure 1-2.** Ardell's model of wellness. (Adapted from Ardell D. *14 Days to Wellness: The Easy, Effective, and Fun Way to Optimum Health*. New York, NY: New World Library; 1999.)

choice to assume responsibility for the quality of your life. It begins with a conscious decision to shape a healthy lifestyle. Wellness is a mind-set, a predisposition to adopt a series of key principles in varied life areas that lead to high levels of well-being and life satisfaction.” Self-responsibility in assuming wellness behaviors is recognized as one, if not the most, significant factor determining health status.<sup>17</sup> This model emphasizing self-responsibility suggests that health professionals need to provide not only educational programs that promote health and wellness, but also relationship skills and the importance of nurturing one’s well-being.

Ardell<sup>17</sup> acknowledged the personal values that motivate individuals—meaning and purpose as well as interpersonal relationships—and developed the domains of wellness to include the physical domain, the mental domain, and the meaning and purpose domain, with 14 skill areas across these 3 domains. Exercise, nutrition, appearance, adaptation and challenges, and lifestyle habits are included in the physical domain. Emotional intelligence, effective decisions, stress management, factual knowledge, and mental health are listed in the mental domain. Finally, meaning/purpose, relationships, humor, and play are incorporated in the meaning and purpose domain, emphasizing the role of self-responsibility in controlling personal health and wellness.

Although health care professionals might focus on the physical domain (particularly addressing exercise, nutrition, knowledge of potential impairments, functional limitations, and lifestyle behaviors influencing health), effective strategies to manage stress, receive social support, and achieve personal goals are also key components of intervention. This model suggests that humor, play, mentally engaging activities, and physically challenging activities should be incorporated into comprehensive wellness programs.

## QUALITY OF LIFE

*Quality of life* is defined in various ways, ranging from the ability to lead a normal life to the fulfillment of personal goals and self-actualization. According to the World Health Organization (WHO), quality of life is “the individuals’ perceptions of their positions in life, in the context of the cultural and value systems in which they live, and in relation to their goals, expectations, standards, and concerns. It is a broad-ranging concept affected in a complex way by each individual’s physical health, psychological state, level of independence, social relationships, personal beliefs and their relationship to salient features of their environment.”<sup>18</sup> The WHO Quality of Life Measure<sup>18</sup> includes the following domains, with unique facets included in each domain:

- Physical health (energy and fatigue, pain and discomfort, and sleep and rest)
- Psychological health (bodily image and appearance, negative feelings, positive feelings, self-esteem, thinking, learning, memory and concentration)
- Level of independence (mobility, activities of daily living, dependence on medicinal substances and medical aids, and work capacity)
- Social relationships (personal relationships, social support, sexual activity)
- Environment (financial resources, freedom, physical safety and security, accessibility and quality of health and social care, home environment, opportunities for acquiring new information and skill, and participation in and opportunities for recreation/leisure, physical environment, including pollution/noise/traffic/climate and transportation)
- Spirituality/religion/personal beliefs

A quality-of-life-measure commonly used across health care settings is the most recent version of the Short Form (SF)-36.<sup>19</sup> The SF-36 is a measure that relies on a consumer’s report of his or her health status. It is practical, cost-effective, and easy to use. The survey assesses the following 8 health areas of health:

1. Limitations in physical activities because of health problems
2. Limitations in social activities because of physical or emotional problems
3. Limitations in usual role activities because of physical health problems
4. Limitations in bodily pain
5. General mental health (psychological distress and well-being)
6. Limitations in usual role activities because of emotional problems
7. Vitality (energy and fatigue)
8. General health perceptions

Other types of measures focus on health indices that determine the *quality adjusted life years* (QALY) or a year of life adjusted for its “quality” or its “value.”<sup>20</sup> A year in perfect health is considered equal to 1.0 QALY. For this measure, the QALY would be discounted by each year in ill health. For example, a year during which the individual was bedridden for 6 months might have a value equal to 0.5 QALY.<sup>20</sup> While considering objective quality-of-life measures, the health care professional must keep in mind that multiple personal, social, and environmental factors can affect an individual’s quality of life on any given day.

## HOLISTIC HEALTH

The philosophy of holistic health care is compatible with medicine designed to restore health and wellness. The clinician’s comprehensive role in health care requires a holistic perspective of

the individual seeking care. This holistic perspective looks beyond the physical functioning of the individual and recognizes the importance of multiple factors contributing to good health and optimal wellness, emphasizing the unity of mind, spirit, and body. According to the American Holistic Health Association,<sup>21</sup> this expanded perspective of holistic health care considers the whole person and the whole situation. Although there are many definitions of holistic health care, the characteristics of holistic medicine that apply to a wellness practice incorporate recognizing the interdependent parts of the whole being, including the physical, mental, emotional, and spiritual aspects of the individual. This recognition of the multiple factors influencing health and wellness leads to the following:

- Identifying and managing the root causes of disease processes
- Empowering the individual to manage these pathological processes
- Providing a comprehensive perspective of the individual in multiple social roles<sup>22</sup>

According to this holistic perspective, disease or illness manifests when the individual's state of being ("ideally the balanced state of mind, body, and spirit"<sup>21</sup>) is not in equilibrium. Holistic health recognizes the multiple dimensions of wellness and the importance of balancing these dimensions for optimal health. Health care professionals can choose to use a more holistic approach for client management as compared with a more traditional approach; however, evidence-based practice is essential. Additional research is needed in the areas of alternative medicine to determine whether less traditional approaches are cost-effective and are the most appropriate. The holistic approach tends to be more health-oriented and teaches the patient to be responsible for his or her own health. Table 1-2 illustrates the differences between traditional or conventional medicine, and holistic medicine, as well as the strengths and weaknesses of these 2 approaches.<sup>21</sup>

According to the American Holistic Medicine Association,<sup>21</sup> the holistic medical practice involves the following principles of care:

- Optimal health is the primary goal of holistic medical practice. It is the conscious pursuit of the highest level of functioning and balance of the physical, environmental, mental, emotional, social, and spiritual aspects of human experience, resulting in a dynamic state of being fully alive. This creates a condition of well-being regardless of the presence or absence of disease.
- Love has healing power. Holistic health care practitioners strive to meet the patient with grace, kindness, acceptance, and spirit without condition because love is life's most powerful healer.
- Holistic medicine addresses the whole person. Holistic health care practitioners view people as the unity of body, mind, spirit, and the systems in which they live.
- Treatment emphasizes prevention. Holistic health care practitioners promote health, prevent illness, and help raise awareness of "dis-ease" in our lives rather than merely managing symptoms. A holistic approach relieves symptoms, modifies contributing factors, and enhances the patient's life system to optimize future well-being.
- Holistic care relies on innate healing power. All people have innate powers of healing in their bodies, minds, and spirits. Holistic health care practitioners evoke and help patients use these powers to affect the healing process.
- Holistic medicine integrates healing systems. Holistic health care practitioners embrace a lifetime of learning about all safe and effective options in diagnosis and treatment. These options come from a variety of traditions and are selected to best meet the unique needs of the patient. The realm of choices may include lifestyle modification and complementary approaches, as well as conventional drugs and surgery.
- Holistic medicine offers relationship-centered care. The ideal practitioner-patient relationship is a partnership that encourages patient autonomy and values the needs and insights of both parties. The quality of this relationship is an essential contributor to the healing process.

**TABLE 1-2. COMPARING HOLISTIC MEDICINE  
AND CONVENTIONAL MEDICINE**

|  | <b>HOLISTIC MEDICINE</b>   | <b>CONVENTIONAL MEDICINE</b>  |
|--|--|---|
| Philosophy   | Based on allopathic, osteopathic, naturopathic, energy, and ethno-medicine   | Based on allopathic medicine  |
| Primary objective of care  | Designed to promote optimal health and to prevent and treat disease  | Designed to cure or reduce pathology  |
| Diagnosis  | Includes a medical history, physical examination, laboratory data, holistic health care sheet  | Includes a medical history, physical examination, laboratory data                   |
| Primary method of care   | Empowers patients to heal themselves through health promotion and lifestyle changes  | Eliminates signs and symptoms   |
| Primary care treatment options   | Emphasizes diet, exercise, environmental measures, attitudinal and behavioral modifications, relationship and spiritual counseling   | Emphasizes medications and surgery  |
| Secondary care treatment options   | Offers options of botanical (herbal) medicine, homeopathy, acupuncture, manual medicine, biomolecular therapies, physical therapy, medications, and surgery  | Offers options of diet, exercise, physical therapy, and stress management           |
| Weaknesses   | Shortage of holistic physicians and training programs; time intensive, requiring a commitment to a healing process, not a quick fix  | Ineffective in preventing and curing chronic disease; expensive                     |
| Strengths  | Teaches patients to take responsibility for their own health, and is cost-effective in treating both acute and chronic illness, therapeutic in preventing and treating chronic disease, essential in creating optimal health | Highly therapeutic in treating both acute and life-threatening illness and injuries |
| Adapted from Ivker RS. Comparing holistic and conventional medicine. <i>Holistic Medicine: The Journal of the American Holistic Medical Association</i> . Winter 1999. |  |   |

- **Individuality is emphasized in holistic care.** Holistic health care practitioners focus patient care on the unique needs and nature of the person who has an illness, rather than the illness that has the person.
- **Holistic practitioners teach by example.** Holistic health care practitioners continually work toward the personal incorporation of the principles of holistic health, which then profoundly influence the quality of the healing relationship.
- **Holistic care incorporates a lifetime of learning opportunities.** All life experiences, including birth, joy, suffering, and the dying process, are profound learning opportunities for clients and those who care for them.

## PREVENTION PRACTICE

Prevention practice encompasses health care designed to promote health, fitness, and wellness through education and appropriate guidance designed to prevent or delay the progression of pathology. Preventive care not only focuses on the promotion of general health in susceptible or potentially susceptible populations but also aims to minimize the impairments and functional limitations arising from pathological conditions, potentially affecting an individual's quality of life. According to the *Guide to Physical Therapist Practice*,<sup>22</sup> health care professionals are involved in 3 types of preventive practice: primary prevention, secondary prevention, and tertiary prevention.

1. *Primary prevention* is “preventing a target condition in a susceptible or potentially susceptible population through specific measures, such as general health promotion efforts.”<sup>22</sup>
2. *Secondary prevention* is “decreasing the duration of illness, severity of disease, and number of sequelae (abnormalities following or resulting from disease, injury, or treatment) through early diagnosis and prompt intervention.”<sup>22</sup>
3. *Tertiary prevention* involves “limiting the degree of disability and promoting rehabilitation and restoration of function in patients with chronic or reversible disease.”<sup>22</sup>

Examples of preventive care performed by health care providers include screening for potential health problems and providing education or activities to promote health, fitness, and wellness. Screening activities may include identification of children with possible developmental delays, detection of ergonomic risk factors in the workplace, and recognition of factors increasing the risk of falls by older adults. Examples of prevention activities designed to promote general health include prepartum and postpartum exercise classes to improve women's health, exercise classes for well elders to enhance balance and flexibility, and cardiovascular conditioning activities for individuals who are at risk for obesity.

Preventive care also includes instruction to minimize or eliminate injurious forces throughout daily life. This instruction includes recommendations to optimize conditions for performance, whether the performance is related to simple activities of daily living, work activities, leisure activities, or activities related to competitive sports. With back pain affecting 80% of people at some point during their lives,<sup>23</sup> programs to prevent back problems through proper exercise and body mechanics are essential. Finally, individuals with chronic or progressive pathology can benefit from programs that reduce the intensity, duration, and frequency of complications arising from their conditions while improving their health and wellness. Customized exercises for individuals with musculoskeletal, neurological, cardiopulmonary, and integumentary pathologies may forestall secondary complications arising from their conditions, as well as improve their overall health.

## RISK REDUCTION

Identification of populations at risk for developing physical and mental health problems help curtail the number of people whose quality of life is diminished by preventable pathology. Although many pathological conditions are genetic, some conditions are preventable. Knowing the populations at risk for a particular disease allows health care providers to target health promotion education and screening programs to populations at the greatest risk for illness. The website for Healthy People 2020, described in Chapter 2, provides more information about specific populations at the greatest risk for particular types of pathology.

One key to achieving wellness is developing an awareness of how to achieve a balance among the various dimensions affecting health and well-being. Populations that are susceptible to illness or injury are in particular need of this awareness, accomplished through appropriate education and guidance. Risk factors that may predispose an individual to diminished well-being and health

problems include physical risk factors (poor nutrition, physical inactivity, a poor physical environment, and substance abuse); psychological, spiritual, and social risk factors (low self-esteem and lacking values and a direction in one's life plan); and environmental risk factors (persons, things, or conditions that negatively influence other dimensions). By identifying and addressing these risk factors, the health professional can reduce the incidence of injury and illness.

## KEY PLAYERS IN PROMOTING HEALTH AND WELLNESS

According to recent statistics from the National Center for Chronic Disease Prevention and Health Promotion, nearly 6% of Americans spend 14 or more days per year limited in their activity.<sup>7</sup> Disability not only affects an individual's independent functioning, but it also places a burden on others who must either care for the individual or assume the individual's roles. Health promotion is essential for the well-being of society. All health care providers can play a role as prevention practitioners to improve the general health of our country. Although many have traditionally been involved in the management of physical impairments and functional limitations associated with medical problems, current roles encompass identifying risk factors and developing health promotion strategies that significantly influence health, fitness, and wellness.

A key element of health care management is directing clients' energies toward improving capabilities for functional independence, maintaining optimal health, and fulfilling important roles in their lives. Health care professionals need to determine an individual's functional capabilities by examining the requisite motor skills and behaviors needed to perform tasks relevant to that individual's role in society. Functional capabilities comprise not only the physical capabilities of the individual, but also the psychosocial environment and well-being of the individual. Social support can contribute significantly to individual well-being. This well-being, in turn, leads to the individual's ability to develop a personal sense of meaningful living.

### *Physicians and Physician Assistants*

Physicians and physician assistants play an essential role in promoting healthier lifestyles and preventing disease through the provision of medical care and early identification of pathological conditions. Both participate in public health activities and direct patient care by providing health education, preventing fragmentation of services, and cooperating and participating with health departments.<sup>24</sup> Health promotion and risk reduction are accomplished through regular risk assessment, counseling, immunizations, education, and research.

### *Physical Therapists and Physical Therapy Assistants*

Physical therapists are experts in examining and evaluating sensorimotor function, gross and skilled movement, physical capabilities, and activity limitations of those with musculoskeletal, neurological, cardiopulmonary, integumentary, and other body system impairments. Under the supervision of physical therapists, physical therapy assistants can ensure exercise adherence and provide health education.

According to the *Guide to Physical Therapist Practice*,<sup>22</sup> physical therapists "restore, maintain, and promote not only optimal physical function, but optimal wellness and fitness and optimal quality of life as it relates to movement and health." The practice of physical therapy encompasses the full spectrum of health and wellness that includes preventing disease and illness and optimizing health. Physical therapy plays a key role in providing education, guidance, consultation, and direct interventions to enable individuals to maintain physical activity for self-care, mobility, leisure skills, work, and play.

## *Occupational Therapists and Occupational Therapy Assistants*

Occupational therapists and occupational therapy assistants aim to help people achieve independence, meaning, and satisfaction in all aspects of their lives by enabling people to engage in activities of daily living that have personal meaning and value.<sup>25</sup> Their role is to “develop, improve, sustain, or restore independence to any person who has an injury, illness, disability, or psychological dysfunction; consult with the person and the family or caregivers and, through evaluation and treatment, promote the client’s capacity to participate in satisfying daily activities, and address by intervention the person’s capacity to perform, the activity being performed, or the environment in which it is performed. The occupational therapist’s goal is to provide the client with skills for the job of living—those necessary to function in the community or in the client’s chosen environment.”<sup>25</sup>

## *Clinical Exercise Physiologists*

Clinical exercise physiologists work in primarily supervised environments that provide services directed by a licensed physician.<sup>26</sup> Clinical exercise physiologists are trained to work with patients with chronic diseases where exercise training has been shown to be of therapeutic benefit, including, but not limited to, cardiovascular disease, pulmonary disease, and metabolic disorders.<sup>26</sup>

## *Nurses*

Nurses play an integral role in promoting public health with a focus on disease prevention and changing health behaviors. Public health nurses are involved in working with communities and populations on primary prevention and health promotion. They serve as advocates, collaborators, educators, partners, policy makers, and researchers in the area of community health promotion and prevention, with a greater emphasis on community participatory and ethnographic approaches.<sup>27</sup> Nurse practitioners provide advanced practice that enables them to serve as a patient’s primary health care provider and to see patients of all ages, depending on their specialty (eg, family, pediatrics, geriatrics). Their scope of practice includes examining for a diagnosis and providing management of acute and uncomplicated chronic illness and disease, such as high blood pressure.<sup>28</sup>

## *Physical Educators*

Physical educators introduce children and adolescents to psychomotor learning and physical activity through play, leisure activities, and competitive sports during primary and secondary education. Physical educators also incorporate nutrition and health behaviors in their classes, along with technologies that encourage play, such as Kinect (Microsoft) and Wii Fit (Nintendo).<sup>29</sup> Adaptive physical education (APE) is federally mandated for students with disabilities. Typically, APE is provided by a certified educator who adapts or modifies physical activities that enable this population to engage in activities that promote psychomotor development and play skills.<sup>30</sup> Because physical educators work with children and adolescents, they provide foundational concepts for health promotion.

## *Dieticians and Nutritionists*

Both dieticians and nutritionists advise people about healthy food and nutrition. Although “every registered dietitian is a nutritionist...not every nutritionist is a registered dietitian.”<sup>31</sup> Nutritionists are not considered legal experts because training varies between individuals. Registered dietitians (RDs) or registered dietician nutritionists (RDNs) are legally considered experts because they have specialized professional training that expands their knowledge for

practicing in a broad array of settings, ranging from hospital settings to corporate wellness.<sup>31</sup> Some RDs have advanced certifications to provide specialized nutritional consultation for sports, community health, pediatrics, renal conditions, oncological disorders, food allergies, and gerontology.

## *Certified Athletic Trainers and Personal Trainers*

According to the National Athletic Training Association,<sup>32</sup> certified athletic trainers “provide prevention, emergency care, clinical diagnosis, therapeutic intervention and rehabilitation of injuries and medical conditions” under the supervision of physicians. Athletic trainers typically work with individuals for fitness training that emphasizes strength, cardiorespiratory fitness, and performance enhancement. Personal trainers prescribe exercises and provide nutritional advice to promote health and fitness. Although various agencies certify personal trainers, those holding certifications from the American College of Sports Medicine (ACSM), the International Sports Sciences Association (ISSA), or the National Strength and Conditioning Association (NSCA) are considered the most knowledgeable.<sup>33</sup>

## *Health Psychologists*

Health psychologists use a biopsychosocial approach to promote health and wellness in the community. In addition to considering biological processes affecting health, fitness, and wellness, health psychologists also consider psychological factors (eg, stressors, health beliefs, and personal health behaviors) and social processes (eg, socioeconomic status, culture, and ethnicity).<sup>34</sup> Health psychologists advise individuals, other health professionals, and community programs to promote general well-being and to develop public policies that promote healthy psychosocial environments.

## *Recreation Therapists*

Recreation therapists work closely with other health care professionals in a variety of settings, providing primarily structured activities emphasizing leisure skills. Recreation therapists are required to have a bachelor’s degree to be certified to provide treatment services and recreation activities to individuals with disabilities or illness.<sup>35</sup>

## *Community Resources*

Professionals need to work collaboratively to integrate resources for health and wellness into their communities. Opportunities to advocate for health and wellness exist in day care centers, schools, fitness centers, community settings, and geriatric care facilities, as well as business and corporate settings. For example, in many communities the YMCA provides programming for children and adults with special needs. In addition, many schools, community centers, and clinics provide programs designed to promote community health. Prevention practice (ie, practicing healthy lifestyle habits that prevent injury and illness) involves a societal commitment to a culture of wellness. Each health care professional can provide a unique perspective on how to improve health and wellness.

# SUMMARY

Prevention practice is the holistic practice of medicine encompassing care of the individual in the context of that person’s home, work, and community. The effect of prevention practice influences not only the individual, but also society. As a member of the health care team, each professional can play a key role in identifying risk factors for poor health and promoting wellness through various strategies, including screening, health education to encourage self-responsibility

and awareness of risk factors, and promoting healthy lifestyle behaviors. The following chapters outline “healthy people” goals for our nation with key concepts for fitness training, stress management, and healthy nutrition. In addition, screening tools and evidence-based interventions are included for at-risk individuals as well as individuals with common conditions. Finally, suggestions for developing and promoting a health promotion business are provided.

## REFERENCES

1. “health.” Merriam-Webster.com. <http://www.merriam-webster.com/dictionary/health>. Accessed June 5, 2012.
2. Definition of health. World Health Organization. <https://www.who.int/about/definition/en/print.html>. Accessed May 19, 2014.
3. Aspen Health and Administration Development Group. *Community Health Education and Promotion Manual*. New York, NY: Wolters Kluwer Law & Business; 1996.
4. Kidd P. Towards optimal health: managing the multiple factors that cause disease. *Total Health Magazine*. July/August 2001.
5. Work-related musculoskeletal disorders (WMSDs) prevention. Centers for Disease Control and Prevention. <http://www.cdc.gov/workplacehealthpromotion/evaluation/topics/disorders.html>. Accessed June 5, 2012.
6. Behavioral risk factor surveillance system. Centers for Disease Control and Prevention. <http://www.cdc.gov/brfss/>. Accessed June 1, 2013.
7. Chronic disease overview. Centers for Disease Control and Prevention. <http://www.cdc.gov/nccdphp>. Accessed June 1, 2013.
8. Health-related quality of life (HRQOL) key findings. Centers for Disease Control and Prevention. [http://www.cdc.gov/hrqol/key\\_findings.htm](http://www.cdc.gov/hrqol/key_findings.htm). Accessed July 11, 2012.
9. Definition of wellness. National Wellness Institute. <http://www.nationalwellness.org/>. Accessed June 1, 2013.
10. Dacher E. A systems theory approach to an expanded medical mode: a change for biomedicine. *Altern Ther Health Med*. 1996;1:2.
11. Corbin C, Corbin W, Lindsey R, Welk G. *Concepts of Fitness*. 11th ed. New York, NY: McGraw-Hill; 2003.
12. Clinebell H. *Anchoring Your Well-being: Christian Wholeness in a Fractured World*. Nashville, TN: McMillan Publishing Co; 1997.
13. Quotation #31761 from Classic Quotes: Kahil Gibran. The Quotations Page. <http://www.quotationspage.com/quote/31761.html>. Accessed June 1, 2013.
14. Travis J, Ryan R. *Wellness Workbook: How to Achieve Enduring Health and Vitality*. 3rd ed. Berkeley, CA: Ten Speed Press; 2003.
15. Disabilities. World Health Organization. <http://www.who.int/topics/disabilities/en/>. Accessed May 19, 2014.
16. What we mean by disability. Social Security Administration. <http://www.ssa.gov/dibplan/dqualify4.htm>. Accessed June 1, 2013.
17. Ardell D. *14 Days to Wellness: The Easy, Effective, and Fun Way to Optimum Health*. New York, NY: New World Library; 1999.
18. Quality of life and wellbeing: measuring the benefits of culture and sport: literature review and thinkpiece. Scottish Executive. [www.scotland.gov.uk/Resource/Doc/89281/0021350.pdf](http://www.scotland.gov.uk/Resource/Doc/89281/0021350.pdf). Accessed June 1, 2013.
19. Brazier JE, Harper R, Jones NM, et al. Validating the SF-36 health survey questionnaire: new outcome measure for primary care. *BMJ*. 1992;305(6846):160-164.
20. Measuring healthy days: population assessment of health-related quality of life. Centers for Disease Control and Prevention. <http://www.cdc.gov/hrqol/pdfs/mhd.pdf>. Accessed May 19, 2014.
21. The principles of holistic medical practice. American Holistic Medical Association. [http://www.holisticmedicine.org/about/about\\_principles.shtml](http://www.holisticmedicine.org/about/about_principles.shtml). Accessed December 10, 2004.
22. Guide to Physical Therapist Practice. American Physical Therapy Association. <http://guidetoptpractice.apta.org/>. Accessed May 19, 2014.
23. Hoy DG, Bain C, Williams G, et al. A systematic review of the global prevalence of low back pain. *Arthritis Rheum*. 2012;64(6):2028-2037.
24. Competencies for the physician assistant profession. American Academy of Physician Assistants. <http://www.nccpa.net/App/PDFs/Definition%20of%20PA%20Competencies%203,5%20for%20Publication.pdf>. Accessed May 19, 2014.
25. A definition of occupational therapy. NYU Steinhardt School of Culture, Education, and Human Development. <http://www.steinhardt.nyu.edu/ot/definition>. Accessed May 25, 2013.
26. What is a clinical exercise physiologist? Clinical Exercise Physiology Association. <http://www.acsm-cepa.org/14a/pages/index.cfm?pageid=3304>. Accessed May 25, 2013.
27. Gott M, O'Brien M. The role of the nurse in health promotion. *Health Promot Int*. 1990;5(2):137-143.

28. Horrocks S, Anderson E, Salisbury C. Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *BMJ*. 2002;324:819-823.
29. Who we are. American Alliance for Health, Physical Education, Recreation and Dance. <http://www.aahperd.org/about/>. Accessed May 25, 2013.
30. What is adapted physical education? Adapted Physical Education National Standards. <http://www.apens.org/whatisape.html>. Accessed September 5, 2013.
31. RDs= nutrition experts. Academy of Nutrition and Dietetics. <http://www.eatright.org/HealthProfessionals/content.aspx?id=6856>. Accessed September 5, 2013.
32. Terminology. National Athletic Trainers Association. <http://www.nata.org/athletic-training/terminology>. Accessed September 5, 2013.
33. Malek MH, Nalbone DP, Berger DE, Coburn JW. Importance of health science education for personal fitness trainers. *J Strength Cond Res*. 2002;16(1):19-24.
34. Health Psychology Center Presents: What is Health Psychology? <http://healthpsychology.org/what-is-health-psychology/>. Accessed May 19, 2014.
35. "recreation therapist." *Mosby's Dictionary of Medicine, Nursing and Health Professions*. 8th ed. St. Louis, MO: Mosby; 2009.



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# Healthy People 2020

*Catherine Rush Thompson, PT, PhD, MS*

*“The greatest wealth is health.”—Virgil, *The Aeneid**

Healthy People 2020 is a federal health promotion and disease prevention agenda developed to improve the health of Americans.<sup>1</sup> The developers of this government initiative include the Healthy People Consortium, an alliance of more than 350 national organizations and 250 public health, mental health, substance abuse, and environmental agencies and teams of experts from a variety of federal agencies under the direction of Health and Human Services and working in conjunction with the Office of Disease Prevention and Health Promotion. The Healthy People 2020 document was developed through a broad consultation process, including focus groups and representatives from varied populations, built on a foundation of scientific evidence, and designed to measure progress over time.<sup>1</sup>

According to its developers, the vision of Healthy People 2020 is to promote “a society in which all people live long, healthy lives.”<sup>1</sup> As stated on its website, Healthy People 2020<sup>1</sup> strives to do the following:

- Identify nationwide health improvement priorities
- Increase public awareness and understanding of the determinants of health, disease, and disability and the opportunities for progress
- Provide measurable objectives and goals that are applicable at the national, state, and local levels
- Engage multiple sectors to take actions to strengthen policies and improve practices that are driven by the best available evidence and knowledge
- Identify critical research, evaluation, and data collection needs

The overarching goals that Healthy People 2020<sup>1</sup> hopes to achieve by 2020 are the following:

- Attain high-quality, longer lives free of preventable disease, disability, injury, and premature death