

Topics in Geriatrics 2005

*An Independent
Home Study Course for
Individual Continuing
Education*

March–August 2005

Beyond Quad Sets: Therapeutic Exercise for Today's Older Adult

Colleen S. Grafa, PT, DSc, CPI
Ability Studios
Sherman, Texas



SECTION ON GERIATRICS



American Physical Therapy Association
The Science of Healing. The Art of Caring.

Mary Thompson, PT, PhD, GCS—Editor

Topics in Geriatrics 2005

Editor's Note

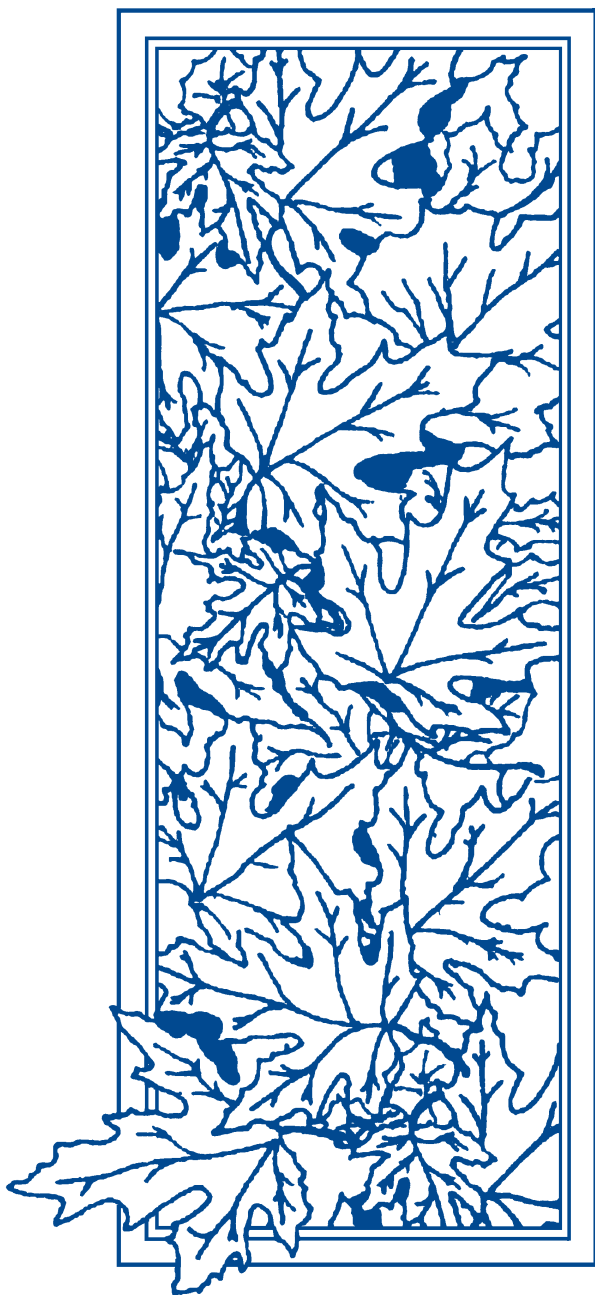
March 2005

Dear Home Study Course Participants,

I am pleased to introduce you to Colleen S. Grafa, PT, DSc, CPI. In her private practice, Dr Grafa integrates traditional Pilates exercise, yoga, and orthopaedic rehabilitation in a serene and peaceful environment. In this monograph built on the principles of Joseph Pilates, Florence Kendall, PT, and Shirley Sahrmann, PT, PhD, Dr Grafa shares how physical therapists can go beyond traditional quad sets in this informative monograph. A certified Pilates instructor, Dr Grafa introduces us to popular exercise forms including Pilates, yoga, and T'ai Chi, and relates them to the basic underlying exercise principles that make up the foundation of physical therapy. She then provides the available evidence so the reader can appropriately apply the various forms to older adults. I am sure you will find the information and applications in this monograph useful in both your practice and daily life.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



Beyond Quad Sets: Therapeutic Exercise for Today's Older Adult

Colleen S. Grafa, PT, DSc, CPI
Ability Studios
Sherman, Tex

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. List 5 common orthopaedic diagnoses seen in the older adult.
2. Identify common musculoskeletal impairments treated with traditional physical therapy therapeutic exercise.
3. Incorporate the *Guide to Physical Therapist Practice* in the exercise management of the older adult.
4. Compare and contrast a traditional therapeutic exercise with a complimentary exercise technique.
5. Design an exercise program to decrease thoracic kyphosis using modified yoga, Pilates, and postural-impairment exercise methods.
6. Modify a Pilates core-strengthening program for a patient with osteoporosis.
7. Use yoga and T'ai Chi to describe and modify 3 balance techniques for an older adult after a total knee replacement.

INTRODUCTION

Demographers have traditionally used the age of 65 for delineating old age and 85 years and older as "extreme" old age.¹ Normal aging is not necessarily burdened with disability; in fact, 63.2% of people age 65 and over reported no disability in Census 2000.² Nevertheless, almost all conditions that cause disability are more frequently seen in the older population and they are more likely to interfere with daily life. Of those reporting disability age 65 and over, 9.5% reported that it affected self-care compared to 1.8% of people under age 65.² As a result, the aged are more likely to require assessment for rehabilitative services.³ Therapeutic exercise is a direct intervention that forms the foundation for an effective rehabilitation program. This foundation is based on scientific principles and the knowledge that the human body has the ability to react and respond to physical stresses placed upon it. Once driven by professional opinion and individual patient response, therapists must now choose the specific therapeutic exercise showing efficacy for a specific impairment, patient population, or both.

One purpose of this monograph is to identify "new" popular exercise trends being used by physical therapists and to describe how these exercise principles might be more or less appropriate for certain types of older adults. The reader will discover that these new trends are not so new at all. In fact, the oldest art form to be discussed is that of the Indian practice of yoga, dating back over 5000 years. The Chinese have practiced T'ai Chi since the mid 1800s. And Pilates, the youngest, or newest, of our intro-

duced methods, dates its conception to the early 1900s. Should, and then how, does the physical therapist relate these exercise trends as specific direct interventions according to the *Guide to Physical Therapist Practice*⁴ (the *Guide*) into contemporary physical therapy treatment with its emphasis on evidence?

Should these exercise methods, traditionally taught by nonmedical instructors, be incorporated into physical therapist practice? If they are effective and efficient, then yes. How does the physical therapist incorporate these trends into a practice style? As professionals, physical therapists have a duty to create plans of care according to solid principles of exercise design based on impairments and motor function. Such principles have been established within the physical therapy profession by Florence P. Kendall, and reconfirmed by the works of Shirley Sahrmann and her team at Washington University. While the exercise techniques common to yoga, T'ai Chi, and Pilates serve as additional tools for our trade, they are powerful tools that remind us that the basic principles and concepts of controlled movement depend upon trunk stability. Not only are physical therapy programs responsible for continued introduction of these principles in the core curriculum, but also, most importantly, our seasoned therapists should be responsible for incorporating these principles into their everyday practices. In today's competitive health care environment, physical therapists that prosper are aware of the need to market services and tools (ie, to find means by which to inform the public of what physical therapists do as a profession). While the grounded concepts of controlled movement found in the complimentary exercise trends are certainly not new to physical therapists, how patients and clients perceive what physical therapists do and what it is called will certainly affect the profession's growth and secure physical therapists as leaders in exercise design.

A second purpose of this monograph is to present a logical rationale behind these complimentary techniques and how they might be similar or dissimilar to the traditional or specialized therapeutic exercise typically prescribed by physical therapists. A third purpose is to explain what the evidence says regarding these new techniques; if there is no reported evidence, we will examine whether one can follow a logical line of reasoning based on what one knows about therapeutic exercise.

At the conclusion of this monograph, the physical therapist should be able to choose an appropriate new exercise technique, modify the technique as needed, and incorporate it into a rehabilitation exercise plan for the older adult. This monograph will illustrate that "everything old is new again" in terms of therapeutic exercise.

COMMON DIAGNOSES SEEN IN OLDER ADULTS: DISEASES, INJURIES, AND RELATED IMPAIRMENTS

Researchers with the Centers for Medicare and Medicaid Services⁵ conducted a study on outpatient therapy utilization in 1998, 1999, and 2000, and found patients presenting with neurological conditions such as hemiplegia, stroke, and Parkinson disease are more likely

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March–August 2005

The Older Adult With Chronic Obstructive Pulmonary Disease

Sue E. Schuerman, PT, PhD, GCS
University of Nevada
Las Vegas, Nevada

Boulder City Hospital
Home Health Care
Boulder City, Nevada

Creekside Home Health Care
Las Vegas, Nevada



SECTION ON GERIATRICS



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Editor's Note

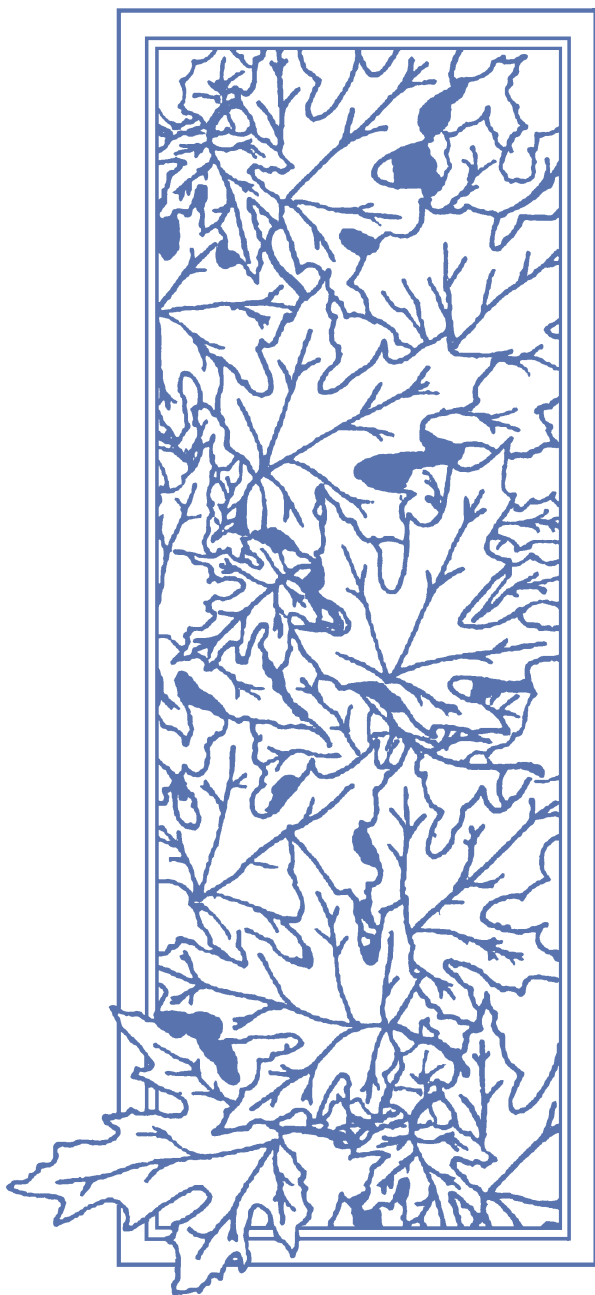
April 2005

Dear Home Study Course Participants,

Dr Schuerman has served the profession in numerous ways in the Nebraska and then the Nevada chapters of the American Physical Therapy Association and most notably as a former member of the Geriatric Specialty Council of the American Board of Physical Therapist Specialties and former editor of *GeriNotes*. Dr Schuerman has applied her knowledge and her clinical and writing skills and experiences to compile clinically relevant material to inform physical therapists as they examine, evaluate, and intervene in the care of older adults with chronic obstructive pulmonary disease. It is evident that Dr Schuerman has broad clinical experience across practice settings as she shares with us the available evidence and best practice in the management of this common and often frustrating chronic disease. I know you will find this monograph immediately relevant regardless of your practice setting.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



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The Older Adult With Chronic Obstructive Pulmonary Disease

Sue E. Schuerman, PT, PhD, GCS

University of Nevada

Las Vegas, Nev

Boulder City Hospital Home Health Care

Boulder City, Nev

Creekside Home Health Care

Las Vegas, Nev

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. Define chronic obstructive pulmonary disease (COPD).
2. Describe the pathophysiology of COPD in the lungs and systemically.
3. Be familiar with the criteria for diagnosis, classification, and clinical assessment of the patient with COPD.
4. List the goals of medical management of COPD including improving exercise tolerance.
5. Explain the physiological rationale behind research-supported exercise interventions for patients or clients with COPD.
6. Provide the essential components of a successful pulmonary rehabilitation program.
7. Discuss the guidelines for exercise prescription for patients with COPD including patient monitoring.

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) occurs most often in older people. Most recent data indicate that 2.2% of adults age 45 years and older experienced activity limitations due to chronic lung and breathing problems.¹ That percentage increases to 3% and 4.1% for women and men over age 65. In 2001, COPD ranked fourth behind heart disease, cancer, and stroke as a leading cause of death in the United States for people age 65 and older.² With increasing age, the number of deaths attributed to COPD increases (Figure 1).² Unlike the 3 leading causes of death, the mortality rate for COPD continues to increase.³ The cost of COPD in direct health care services and through lost productivity was estimated by the American Lung Association to be \$32.1 billion annually.⁴ As the United States population ages, it is expected that the physical, emotional, and financial burdens of COPD will increase if nothing changes. To prevent this, 2 objectives in *Healthy People 2010* specifically address COPD.¹ Objective 24-9 is to reduce the proportion of adults whose activity is limited due to chronic lung and breathing problems. Objective 24-10 is to reduce deaths from COPD among adults. Most patients with COPD (between 80% and 90%) have a history of smoking; therefore, *Healthy People 2010*¹ goal 27, reduction in tobacco use, and its associated objectives also may affect disability and death associated with COPD.

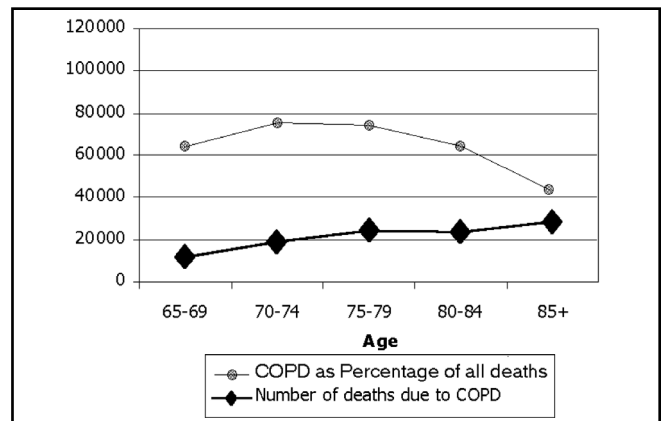


Figure 1. Number of deaths due to chronic obstructive pulmonary disease (COPD) and percentage of all deaths by age group. Data extracted from *WISQARS Leading Causes of Death Report, 2001*.²

What is Chronic Obstructive Pulmonary Disease?

Chronic obstructive pulmonary disease is really a group of diseases including chronic bronchitis, emphysema, and small airway disease, commonly occurring in various combinations. The Canadian Thoracic Society panel, in its 2003 evidence-based recommendations for management of COPD,⁵ defines COPD as “a respiratory disorder largely caused by smoking, which is characterized by progressive, partially reversible airway obstruction, systemic manifestations, and increasing frequency and severity of exacerbations.”^{5(p12A)} Physical therapists treating patients with COPD are very familiar with the primary symptom, shortness of breath when performing activities of daily living (ADLs), instrumental activities of daily living (IADLs), and exercise. This shortness of breath will progressively limit a patient’s tolerance to activity and exercise resulting in loss of muscle strength and endurance. Patients will then further limit their activity to avoid provoking respiratory discomfort and distress. This will contribute to severe skeletal muscle deconditioning to the extent that even mild activity produces dyspnea.

In addition, the Canadian Thoracic Society panel reports that the chronic inflammatory process in the lungs is also accompanied by systemic manifestations in advanced disease. The systemic manifestations that particularly affect the patient in physical therapy are skeletal muscle dysfunction with ultimate atrophy or wasting⁶ and right-sided heart failure.⁷ Muscle wasting is a common finding in advanced COPD,⁶ but it is poorly understood and not clinically evident in all patients.⁸ The right ventricular hypertrophy and the right-sided heart failure that result from pulmonary disease and its associated hypoxia are referred to as *cor pulmonale*.⁹ The combination of the effects of decreased activity and these particular systemic manifestations of the disease process will lead to the inability to participate in IADLs and to work (disability), and ultimately to an inability to fulfill the patient’s societal role (handicap).^{5,10}

Pathophysiology

Chronic obstructive pulmonary disease is characterized by persistent inflammation of the small and large air-

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Post-Polio Syndrome

Carolyn Kelley, PT, MS, NCS
Texas Woman's University
The Institute for Rehabilitation
and Research
Houston, Texas

Mary Thompson, PT, PhD, GCS—Editor



SECTION ON GERIATRICS

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Editor's Note

May 2005

Dear Home Study Course Participants,

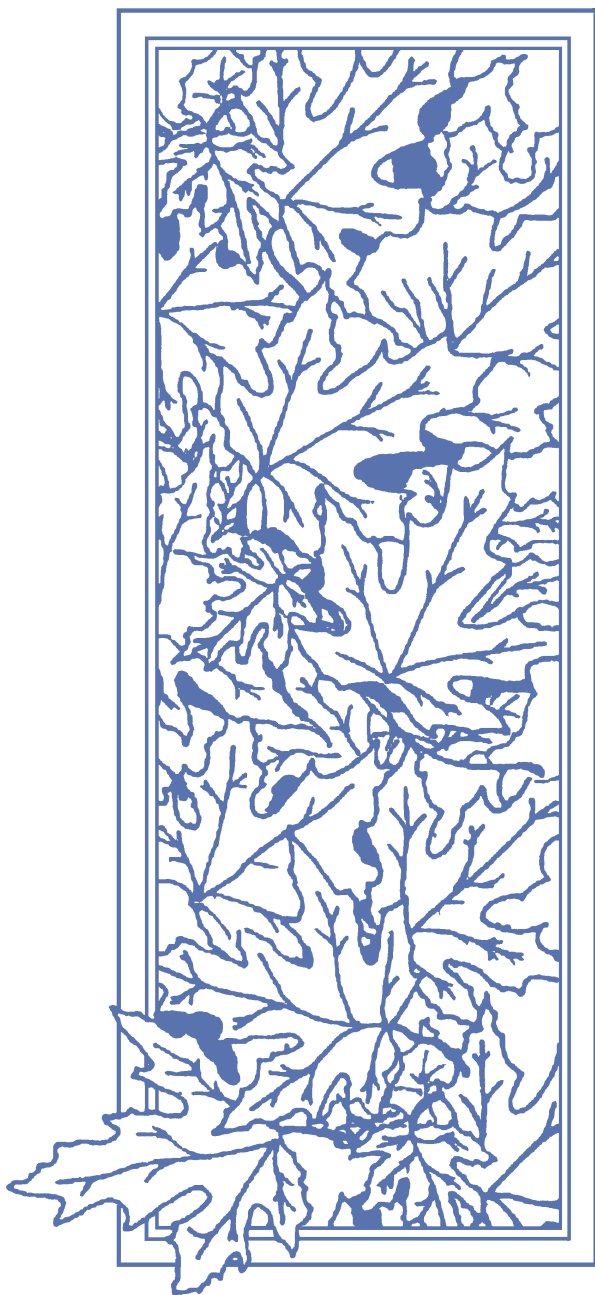
I am pleased to introduce you to Ms Carolyn Kelley, PT, MS, NCS, who is board certified in neurological physical therapy. Ms Kelley is a noted expert in the area of post-polio syndrome. For the past 5 years she has consulted at The Institute for Rehabilitation and Research in the post-polio clinic. She teaches at Texas Woman's University in Houston, Texas, and is a sought-after speaker on post-polio syndrome. In addition, Ms Kelley conducts research examining strength and functional measures of individuals with post-polio syndrome. She is a member of the Texas Polio Survivors' Association and currently serves on their assistance fund board.

In this monograph, Ms Kelley provides us with a thorough review of the literature in the area of polio and post-polio syndrome. She then walks us through an excellent case study, not only providing the pertinent facts, but also the clinical reasoning and evidence involved in the case using the *Guide to Physical Therapist Practice* as a framework. A second case study further illustrates the principles presented in the text. Where evidence is lacking, her clinical experience provides additional insight.

As they age, polio survivors face unique challenges with their impairments, functional limitations, and disability. Many also will face additional challenges with post-polio syndrome. While polio survivors are small in number, all therapists should be aware of the information presented. I hope that you find this monograph as interesting and helpful as I did.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



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Post-Polio Syndrome

Carolyn Kelley, PT, MS, NCS
Texas Woman's University
The Institute for Rehabilitation and Research
Houston, Tex

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. Understand the causes of post-polio syndrome.
2. Understand the differences between post-polio syndrome and post-polio sequelae.
3. Incorporate the disablement model and patient management framework into a patient case, as described in the *Guide to Physical Therapist Practice*.
4. Use standardized measures when examining the patient's disabilities, functional limitations, and impairments.
5. Discuss appropriate and inappropriate interventions for the patient with post-polio syndrome, especially the use of exercise, assistive devices, body mechanics, and energy conservation.
6. Understand the polio survivor's ability or inability to accept recommendations from the health care team.

INTRODUCTION

Poliomyelitis, also known as infantile paralysis, is caused by the enteric poliovirus. The ancient Egyptians first recorded it, and huge epidemics swept across North America and Europe in the early to mid 1900s (Figure). A massive effort, led by President Franklin Roosevelt and The National Foundation for Infantile Paralysis (currently called the March of Dimes), yielded unprecedented donations towards research, treatment, and professional education. The Salk inactivated vaccine was introduced in 1955, and the Sabin live attenuated oral vaccine was introduced in 1959; both halted the polio epidemic. The polio survivors grew up and proceeded to compensate and become productive citizens.¹

Approximately 15 to 25 years later, increasing numbers of polio survivors began experiencing frightening new weakness in muscles known to have been infected by the poliovirus and in those thought to have been spared. They began to have more difficulty keeping up with their daily activities and turned to exercise programs to get back into shape, which usually caused more weakness and fatigue. The cluster of symptoms that include new muscle weakness and fatigue in polio survivors is now known as post-polio syndrome (PPS).¹ Today, the oldest polio survivors are in their 90s, and well over half of the estimated 1 to 1.8 million survivors are in their late 40s, 50s, and 60s.² All of these individuals must deal with impairments, functional limitations, and disability resulting from the original polio as they age and may face the added burden of PPS. The purpose of this monograph is to educate physical therapists about PPS so that appropriate management can occur to minimize the aging polio survivor's impairments, functional limitations, and resultant disability.

NATURAL HISTORY OF POLIO

Poliovirus is transmitted through human contact and enters the body through the gastrointestinal system. Most frequently, it is destroyed in the stomach and then excreted. If the poliovirus enters the bloodstream, it produces flu-like symptoms, such as fever and muscle pain, with recovery and subsequent immunity.¹ In the early half of the 20th century, for approximately 5% of those infected, the poliovirus invaded the central nervous system, yielding positive results from a spinal tap culture, but no clinical paralysis. For another 1% to 2%, it caused a variable degree of clinical paresis or paralysis. These individuals developed weakness or paralysis of their limbs and trunk, their swallowing and breathing muscles (bulbar/brainstem involvement), or both.³

When the poliovirus crossed the blood-brain barrier, it bathed the entire central nervous system through the cerebral spinal fluid, selectively attacking the motor nerve cells in the spinal cord, brainstem, and brain. The person, usually a child, initially experienced fever, headache, muscle pain to touch and stretch, and flaccid muscle weakness or paralysis. Many motor neurons were destroyed during this acute illness.^{1,4} In the Bodian⁵ animal models, only 4% of the anterior horn cells were normal at 2 to 6 days post onset, but at day 14, the motor neurons were either destroyed or normal appearing.

Approximately 2 weeks after the febrile illness, each motor neuron, with its complement of a few to many muscle fibers, could be spared, recovered, or killed with subsequent denervation of those muscle fibers. From the perspective of an individual muscle, 3 possibilities existed. All the motor neurons innervating a muscle could be spared or recovered, all of the motor neurons to a single muscle could be killed, or the muscle could be partially denervated with combinations of recovered and killed motor neurons. Acutely, an electromyogram (EMG) would show muscle fiber fibrillations consistent with denervation.¹

Given optimum care and balanced rest and exercise, maximum recovery of muscle strength in partially denervated muscles occurs within 2 years, with about half of that recovery occurring within the first 3 months. Four physiological processes can account for this recovery of muscle strength and function: neuronal sprouting, muscle fiber hypertrophy, improved motor learning, and increased motor unit recruitment. Sprouting of recovered motor neurons occurs to reinnervate recently denervated muscle fibers.⁶ A motor neuron can reinnervate approximately 5 times the original amount of muscle fibers. On EMG, the polyphasic, large-amplitude action potentials associated with these reinnervated muscle fibers are called giant motor units, and as long as they continue to function, the EMG evidence persists. Muscle strength and function also recover secondary to stringent exercise and activity during aggressive rehabilitation causing innervated muscle fibers to hypertrophy.¹ Additionally, increased skill and functional performance occur because of practice and repetition; this motor learning can occur independent of actual strength changes.^{1,7,8} Lastly, affected

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Aquatic Exercise: Indications and Effectiveness for Older Adults

Veronica Southard, PT, DHSc, GCS
New York Institute of Technology
Old Westbury, New York

Mary Thompson, PT, PhD, GCS—Editor



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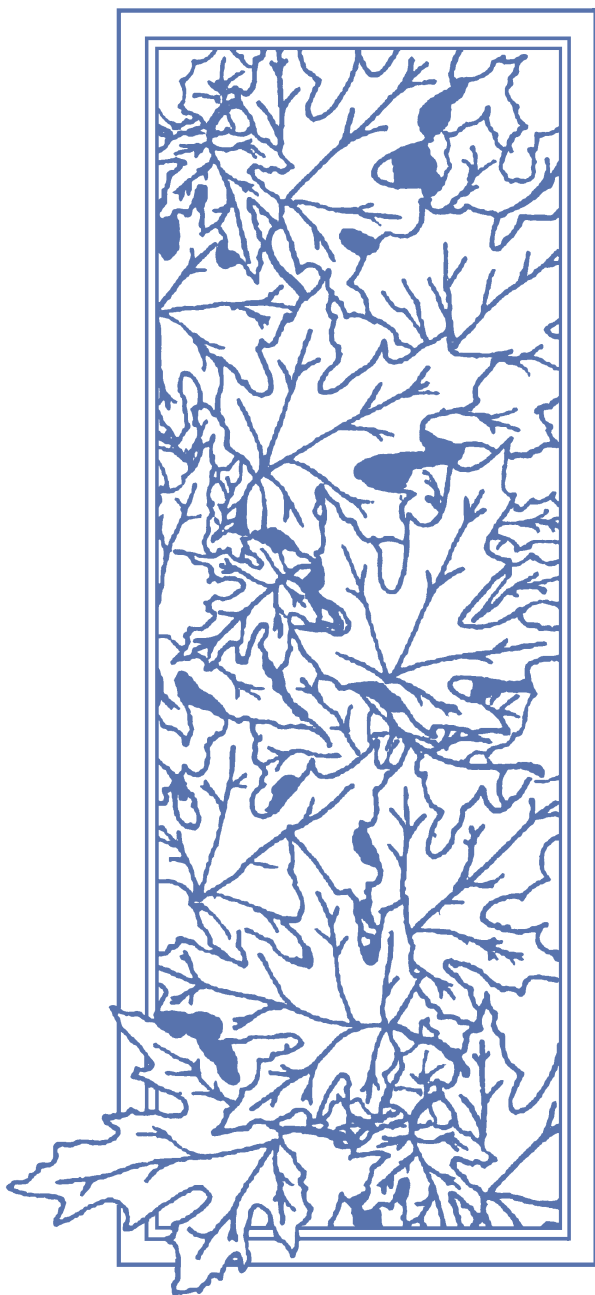
June 2005

Dear Home Study Course Registrant,

I am pleased to introduce you to Dr Veronica Southard, PT, DHSc, GCS. She is particularly interested in falls and has studied the effects of land and aquatic exercise on the balance abilities of older adults. In this monograph, Dr Southard reminds us why physics is a prerequisite for professional physical therapy education and clearly applies those principles to aquatic interventions with older adults. In addition to providing information about the indications and contraindications for aquatic activity, Dr Southard shows the reader how to develop an efficacious aquatic intervention for the older adult with impairments or for wellness and prevention. Her excellent case studies illustrate how aquatics can be part of outpatient and home health intervention programs. I am sure you will find this monograph useful, if not for your patient/client base, for yourself or your family members, as we all can benefit by exercising in water.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



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Aquatic Exercise: Indications and Effectiveness for Older Adults

Veronica Southard, PT, MS, GCS, DHSc
New York Institute of Technology
Old Westbury, NY

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. Readily identify the unique properties of water and exercise in water.
2. Describe the physiologic effects of water on the older adult at rest and during exercise.
3. Recognize the indications for intervention in the water.
4. Know the contraindications for aquatic activity.
5. Incorporate these aquatic materials in order to develop an efficacious intervention for the older adult.
6. Recognize the aquatic environment as an ideal venue for wellness and prevention.

INTRODUCTION

Water has been used as a therapeutic agent since even before the ancient Greeks. Hippocrates recommended the use of water for treating muscle spasms and joint diseases.¹ Bath houses, warm springs, and mineral baths have all been used to promote healing or relaxation over the ages. In physical therapy, water has been used as a passive medium in the form of ice and heat; over time, the use of water progressed to extremity whirlpools and Hubbard tanks. Today most aquatic physical therapy is conducted in a pool, either as a group intervention or individually. Across the aquatic care continuum, physical therapists use aquatic therapy as an important adjunct for patients with impairments, functional limitations, and in the wellness and prevention arena.

This monograph will enhance the reader's knowledge as a physical therapy professional regarding the specific application of water to promote not only the reduction of impairments and functional limitations, but also the enhancement of health and wellness, in the older adult. To accomplish this goal, physical therapists and physical therapist assistants must have a thorough understanding of the unique properties of water and exercise in water. Therefore, the monograph begins with the static and then dynamic properties of water followed by a discussion of the physiologic effects of the aquatic environment on the older adult. Next, various exercise equipment will be discussed. Specific to older adults, the evidence for using aquatics for impairments and functional limitations, special considerations, and development and implementation ideas will be presented. The monograph will conclude with information on the older swimmer, specialized aquatic interventions, and the importance of measuring outcomes.

PROPERTIES OF WATER

Properties of water include refraction, temperature, hydrostatic pressure, buoyancy, and viscosity. The depth

of immersion of a body must be considered as it relates to these properties.

Refraction

Refraction is bending of a ray of light as it moves from one medium to another medium of different density. When light passes into a denser medium, such as water, from a less dense medium, like air, its path is altered and the light rays bend away from the surface of the water. Pools appear shallower than they are because of refraction, and the deeper the water, the greater the distortion. Patients appear to be shorter in the water because the parts submerged appear to bend at the water level.² Refraction is a consideration when working with a group and the instructor is outside of the pool. Since each subject's appearance is altered, the therapist will need to make adjustments and possibly consider different cues to assist the client in correct completion of the activity.

Temperature

The average indoor pool temperature ranges from about 24°C to 34°C (the upper 70s°F to the lower 90s°F), whereas outdoor pool temperatures can range from 4.4°C (40°F) to over 37.8°C (100°F). Water too hot or too cold can add a thermal load to the body with negative cardiovascular effects.²

As in land-based exercise, environmental temperature is an important exercise consideration. Heat between a person and the environment is transferred by conduction, convection, radiation, and evaporation. As a person exercises, heat is generated. In addition to mechanical heat transference listed above, the body attempts to maintain the core temperature within a relatively narrow range to maintain optimal functioning of body systems via sweating (ineffective in high humidity or when immersed in water) and vasodilatation, which in turn increases heart rate and cardiac output. When the environment is cool, the excess body heat is transferred easily to the environment. When the environmental temperature exceeds the body surface temperature, heat absorption begins. Practically speaking, both the exercising older adult and the body of water can be either a heat source or heat sink.

At any given time, a body of water is at a certain temperature, although water surface temperatures tend to be warmer than deep water temperatures, given sufficient water volume. Depending on the therapeutic environment, water and air temperature may be easily manipulated. In other circumstances, temperatures may be relatively fixed or dependent on weather conditions. Body surface temperature also varies but is based on the need to maintain a relatively constant core body temperature (36.8°C or 98.2°F ± 0.6).³ Typically, skin temperature varies between 33°C and 35°C (91.4°F and 95°F) in environments where sweating or shivering is unnecessary to maintain core temperature.⁴ Nevertheless, the laws of thermodynamics apply. Heat flows from a relatively hot object to a cool object as the system seeks thermal equilibrium among all its parts.

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March–August 2005

Clinical Management of Physical and Chemical Restraints

Cathy Haines Ciolek, PT, GCS
University of Delaware
Newark, Delaware

Daniel E. Ciolek, PT, MS, GCS
AdvanceMed, a CSC Company
Baltimore, Maryland



SECTION ON GERIATRICS


American Physical Therapy Association
The Science of Healing. The Art of Caring.

Mary Thompson, PT, PhD, GCS—Editor

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Editor's Note

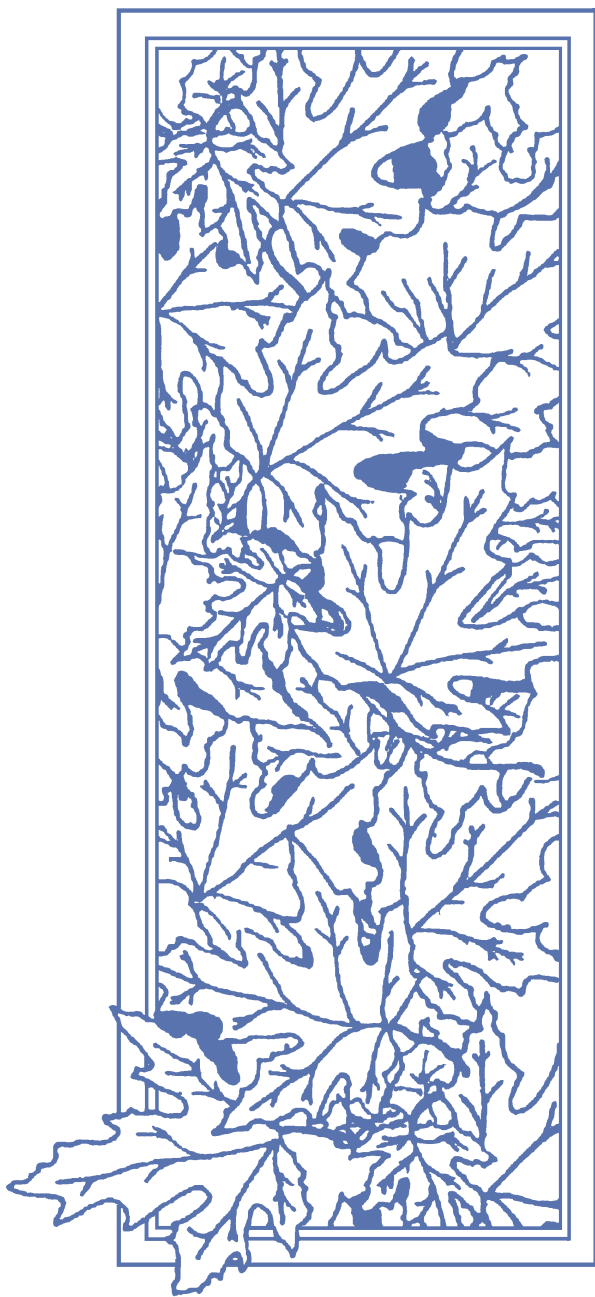
July 2005

Dear Home Study Course Registrant,

The Section on Geriatrics has been a leader in advocating restraint reduction, in part because of the selfless work of Ms Cathy Haines Ciolek, PT, GCS, and Mr Daniel E. Ciolek, PT, MS, GCS. Both board-certified geriatric specialists, they provide up-to-date information on the regulation of physical and chemical restraints. The Cioleks highlight the role of the physical therapist in the implementation of programs that recognize the dignity of older adults. Together, they bring their national expertise with restraint reduction and their clinical experience across the continuum of care to help us understand and apply principles in a variety of practice settings. I hope that this monograph empowers each reader to be a better advocate for patients and residents in the area of restraint reduction.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



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Clinical Management of Physical and Chemical Restraints

Cathy Haines Ciolek, PT, GCS
University of Delaware
Newark, Del

Daniel E. Ciolek, PT, MS, GCS
AdvanceMed, a CSC Company
Baltimore, Md

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. Define physical and chemical restraints as they relate to physical therapist practice.
2. Identify similarities and differences in the policies and procedures of different regulatory agencies responsible for monitoring and enforcing restraint policies in various health care settings, including acute, long-term, and home health care environments.
3. Cite evidence that validates the negative impact, including cost, of physical and chemical restraint use on the restrained individual, the restrained individual's caregivers, and society.
4. Describe various alternatives to physical and chemical restraint use, including positioning devices, enabling devices, environmental adaptation, caregiver intervention, and nonpharmacological alternatives.
5. Incorporate the unique skills of a physical therapist into a comprehensive physical and chemical restraint clinical-management process for an older adult within a multidisciplinary organization. This includes an understanding of the appropriate assessment and documentation necessary to support skilled physical therapist services in the 3 most common situations where staff members feel a restraint may be needed.
6. Initiate or enhance a restraint-reduction program in a geriatrics-care facility or agency by developing, reviewing, enhancing, and delivering restraint use policies and procedures, quality improvement and assurance processes, or educational programming.

INTRODUCTION

The purpose of this monograph is to describe the clinical decision-making process for physical therapists involved in the utilization and management of physical and chemical restraints. A similar module written by these authors, first published in 1998, dealt primarily with physical restraints in the skilled nursing facility (SNF).¹ The regulatory environment at that time was primarily focused on physical restraints, as was most of the research in the field.

Since then, physical therapists have seen a significant increase in their role on the interdisciplinary team, both in the SNF and in the acute care setting, in minimizing physical restraints, as well as a new role in the interdisci-

plinary management of chemical restraints. In addition, as physical therapy proceeds toward a doctoring profession, increased knowledge of the effects and impact of physical and chemical restraints, and advances in alternative intervention strategies, will be essential for providing the safest and most effective care plans for individuals, regardless of their living environment.

With this expanding role and regulatory changes over the last several years, the Section on Geriatrics members and leadership indicated that it was time to update this clinical monograph. By understanding and implementing the concepts presented in this course, the physical therapist can use this document as a resource to enhance the rehabilitation goals and quality of life of older adults in acute, long-term, and home health care settings.

What is a Restraint?

In its simplest form, a restraint is any means that restricts freedom of movement or normal access to one's body, or that controls behavior. A restraint may be a form of elder abuse that involves the use of physical force, and that may result in bodily injury, physical pain, or impairment. The mechanism of this type of abuse may involve the unwarranted administration of drugs and physical restraints.² According to the National Elder Abuse Incidence Study of 1998, physical and chemical restraints meet the federal definition of *physical abuse* as enacted in the Older Americans Act.³

The legal definition of a physical or chemical restraint may vary slightly by state law or federal regulations, but in a health care environment, such definitions present a singular concept: individuals have the right to be free from unnecessary means that restrict freedom of movement or normal access to one's body, or that control behavior. Table 1 identifies the current federal regulations regarding restraints for facilities that furnish health care services to Medicare and Medicaid beneficiaries. Some of the details will be discussed later in this monograph.

For the purposes of this monograph, physical restraints will be described in the context of federal SNF regulations. In other words, physical restraints are "any manual method or physical or mechanical device, material or equipment attached or adjacent to the resident's body that the individual cannot remove easily which restricts freedom of movement or normal access to one's body....Physical restraints include, but are not limited to, leg restraints, arm restraints, hand mitts, soft ties or vests, lap cushions and lap trays the resident cannot remove. Also included in the definition of restraints are facility practices that meet the definition of a restraint."⁴ The facility practices may include such interventions as: tucking in bed sheets to prevent rising, placing residents in seats that prevent rising, locking wheelchairs to prevent locomotion, placing tables or trays in front of residents to prevent rising, and other similar practices. Therefore, the definition of physical restraint is not related to the device used, but to **the intended purpose** of the device.

A clear definition of chemical restraints is more difficult to describe. Unlike some physical restraints that

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Ethics in Geriatric Physical Therapy

Laura Lee Swisher, PT, PhD
University of South Florida
Tampa, Florida

Mary Thompson, PT, PhD, GCS—Editor



SECTION ON GERIATRICS

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Editor's Note

August 2005

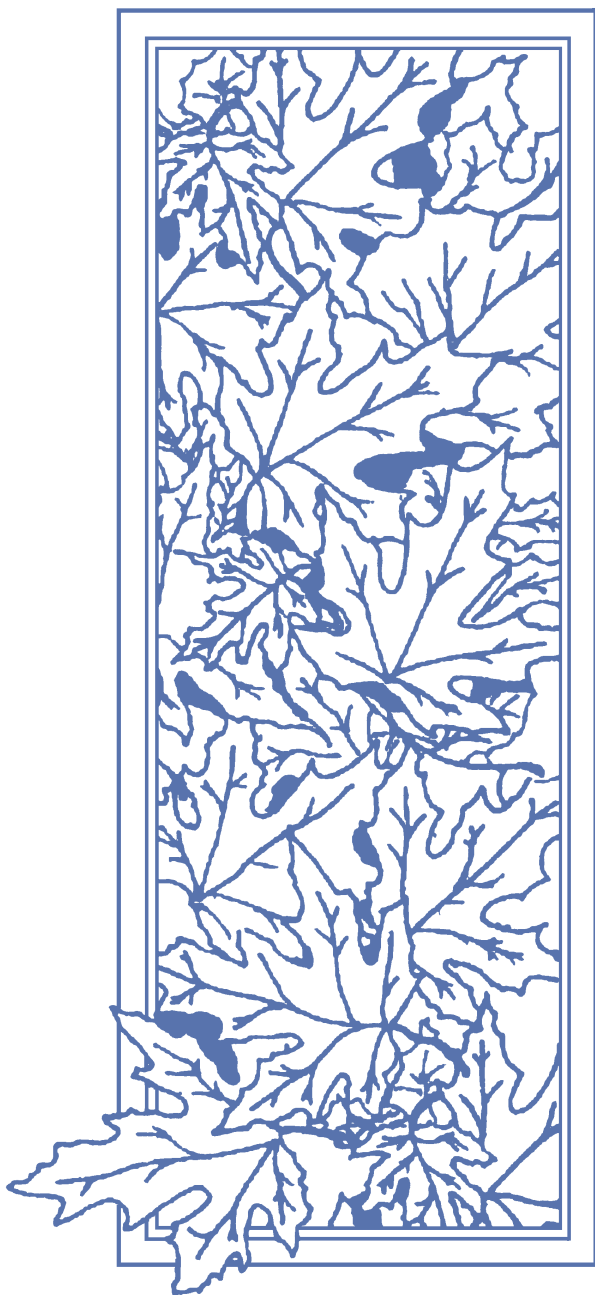
Dear Home Study Course Participants,

I am pleased to present Laura Lee (Dolly) Swisher, PT, PhD. She came to physical therapy via a circuitous route, albeit one that has greatly benefited the profession of physical therapy. Dr Swisher's background is in religious ethics prior to physical therapy. Upon entering the profession, her clinical work has been in outpatient, subacute, and inpatient settings with interests in orthopaedics and hand therapy. Dr Swisher is a noted teacher, researcher, and author on subjects such as moral reasoning, decision making, legal and ethical issues in physical therapy, and professionalism. Through 2007, she serves the profession as a member of the Ethics and Judicial Committee of the American Physical Therapy Association.

In this monograph, Dr Swisher walks us through the theoretical basis for ethical decision making and key professional documents and legal standards. In addition, she provides a practical framework by which we can examine and work through ethical problems. Dr Swisher's hypothetical case scenarios target issues of special interest to physical therapists working primarily with older adults to allow immediate application. I hope that you will use the information provided in this monograph to better serve your older patients and clients.

Mary Thompson

Mary Thompson, PT, PhD, GCS



2920 East Avenue South, Suite 200
La Crosse, WI 54601 • 877-766-3452



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Ethics in Geriatric Physical Therapy

Laura Lee Swisher, PT, PhD
University of South Florida
Tampa, Fla

LEARNING OBJECTIVES

Upon completion of this monograph, the course participant will be able to:

1. Describe major ethical theories.
2. Identify ethical issues commonly encountered by physical therapists in working with geriatric populations.
3. Determine a course of action in response to an ethical situation.
4. Describe the impact of organizational and societal influences on physical therapy.
5. Discuss resources and strategies for handling difficult ethical situations.
6. Discuss the advocate role of the physical therapist.

INTRODUCTION: THE ETHICAL DIMENSIONS OF PHYSICAL THERAPIST PRACTICE

“As physical therapists assume a more autonomous role in health care delivery, ethical judgments will play an increasingly important role in the gamut of clinical decisions a physical therapist will have to make.”^{1(p531)}

“The majority of therapists know that ethics can be about life and death issues: abortion, euthanasia, or switching off life-support machines. Fewer therapists have an understanding of ethics as a day-to-day event.”^{2(p208)}

Ethics and Professionalism

Being a professional requires the ability to formulate a response to ethical situations, implement difficult ethical decisions, and possess the courage to speak and act on behalf of patients and clients. Like other professionals, physical therapists routinely encounter ethical issues or dilemmas, and most physical therapists recognize that clinical issues have an ethical dimension. For example, management of an elderly patient after total hip arthroplasty with the diagnosis of dementia and limited family, social, or financial support may present ethical issues involving informed consent, discharge planning, and fair distribution of resources. These ethical issues are intimately connected and interwoven with the clinical dimensions of each situation, and patients expect that, as a professional, the physical therapist will have the expertise to address the ethical dimensions of clinical problems.

While every person will confront difficult ethical decisions, an understanding of ethics is especially important for professionals. Although there is some debate about the characteristics necessary to be considered a profession,³⁻⁹ there is agreement that *true professions* possess at least the following 5 characteristics. Professions have a body of knowledge and technical expertise. They have some measure of autonomy in decision making and have a code of ethics that is enforced by members of the pro-

profession. A true profession performs a valuable service to society. Finally, true professions have both responsibility and accountability to clients and society. Taken together, these qualities indicate that professionals are expected to abide by high ethical standards, to exercise professional expertise responsibly, and to make difficult decisions that are in the best interests of society. In essence, professionals have an implied contract with society to hold themselves to high standards of behavior. In exchange for freedom and autonomy to make decisions on behalf of patients and clients, professionals are obligated to act responsibly and be accountable to society.

Although the sociology literature of part of the 20th century generally emphasized the positive aspects of professionalism,⁹ some sociologists believe that there has been a gradual erosion of the perceived status of professionals among members of the public.¹⁰ One possible source of this erosion of status and trust may be highly publicized cases in which professionals have abused the trust placed in them (eg, cases of sexual abuse of patients by professionals or instances in which professionals may exploit the vulnerability of patients or participate in overbilling or fraud). In addition, professionals have been faulted for failing to abide by their own professional standards and for the lack of self-policing. Although only a handful of professionals may have participated in these events, the overall effect of such widely publicized events is that the reputation of all professionals is tarnished.

Another reason for decreased trust in professionals may be that some professionals appear to use their freedom and autonomy to act in their own self-interests rather than in the public interest. The net result of these developments is that patients and clients may hold ambivalent ideas about professionals, viewing them with both trust and skepticism. Although most patients continue to have high expectations for the behavior of medical professionals, they may simultaneously believe that professionals are self-interested and overpaid.

An understanding of the general characteristics of professions provides little information about the unique values and beliefs held by individual professionals within a specific profession or about its collective values. For example, relatively little research has been conducted to define the professional beliefs and values of physical therapists.¹¹ However, the Education Section¹² of the American Physical Therapy Association (APTA) has recently published a consensus document on the core values of professionalism. This document delineates the 7 core values and associated behaviors that are most important in the practice of physical therapy. These core values and their definitions appear in Table 1. An examination of these core values of professionalism indicates that each professional core value has an important ethical dimension. That is, each core value delineates obligations and legitimate expectations for the behavior of physical therapists in fulfilling their professional role. It is useful for each physical therapist as a professional to consider the legitimate obligations, expectations, and values that he believes are appropriate. Consider the questions in Table 2.