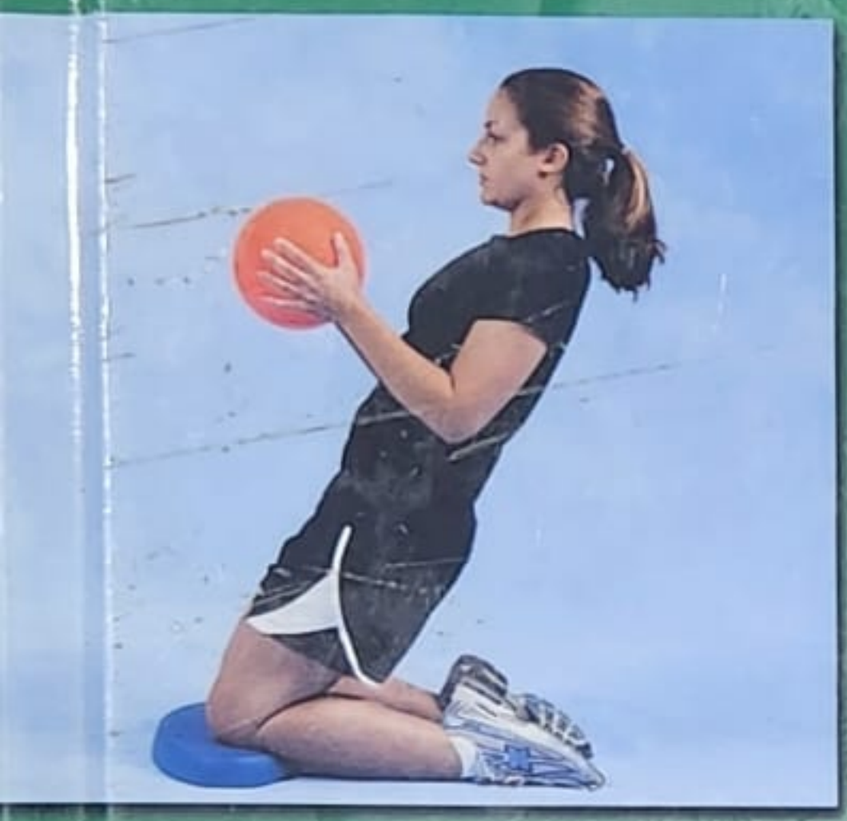
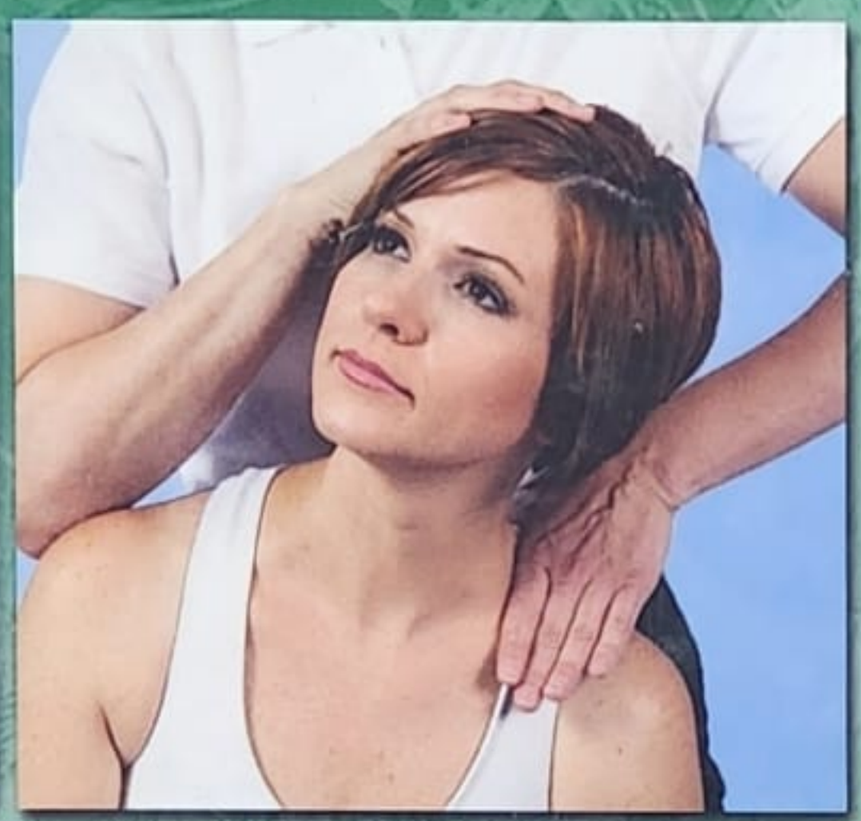
CAROLYN **KISNER** ■ LYNN ALLEN **COLBY**
JOHN BORSTAD

Therapeutic Exercise

FOUNDATIONS AND TECHNIQUES

Seventh Edition







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CHAPTER 1

Therapeutic Exercise: Foundational Concepts

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Almost everyone, regardless of age, values the ability to function as independently as possible during activities of everyday life. Health-care consumers (patients and clients) typically seek out or are referred for physical therapy services because of physical impairments associated with disorders of the movement system caused by injury, disease, or health-related conditions that restrict their ability to participate in any number of activities that are necessary or important to them. Physical therapy services may also be sought by individuals who have no impairments or functional deficits but who wish to improve their overall level of fitness and quality of life or reduce the risk of injury or disease. An individually designed therapeutic exercise program is almost always a fundamental component of the physical therapy services provided. This stands to reason because the ultimate goal of a therapeutic exercise program is the achievement of an optimal level of symptom-free movement during basic to complex physical activities.

To develop and implement effective exercise interventions, a therapist must understand how the many forms of exercise affect tissues of the body and body systems and how those exercise-induced effects have an impact on key aspects of physical function as they relate to the human movement system. A therapist must also integrate and apply knowledge of anatomy, physiology, kinesiology, pathology, and the behavioral sciences across the continuum of patient/client management from the initial examination to discharge planning. To develop therapeutic exercise programs that culminate in positive and meaningful functional outcomes for patients and clients, a therapist must understand the relationships among physical functioning, health, and disability and apply these conceptual relationships to patient/client management to facilitate the provision of effective and efficient health-care services. Lastly, a therapist, as a patient/client educator, must know and apply principles of motor learning and motor skill acquisition to exercise instruction and functional training.

Therefore, the purpose of this chapter is to present an overview of the scope of therapeutic exercise interventions used in physical therapy practice. This chapter also discusses several models of health, functioning, and disability as well as patient/client management as they relate to therapeutic exercise and explores strategies for teaching and progressing exercises and functional motor skills based on principles of motor learning.

Therapeutic Exercise: Impact on Physical Function

Of the many procedures used by physical therapists in the continuum of care of patients and clients, therapeutic exercise takes its place as one of the key elements that lies at the center