Learning Objectives

MedBridge
Understanding Postural Control and Risk of Falling
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Course Objectives:

- Compare/contrast current models of balance/postural control
- Discuss the neurophysiological basis underlying postural control and how it varies over the lifespan
- Explain how characteristics of the person, the task, and the environment interact and influence postural control
- Explain how principles of motor learning and neural plasticity relate to balance and fall risk
- Describe the ways in which postural control and risk of falling overlap and differ

Chapter 1: Conceptual Models

This first chapter provides a foundation for understanding of postural control by presenting conceptual models used to define fall events, and to understand relationships of an individual's health status, body structure/function, and functional activity. This chapter also discusses factors involved in patients' ability to participate in social roles understand current models of postural control.

Chapter 2: Neurophysiology of Balance

Using this data-driven model, this chapter will review how the visual system, proprioceptive system, vestibular system and their interpreting structures influence effective motor response to postural control. Understanding the underlying mechanisms of postural control will help clinicians prioritize assessment and recognize when risk factors can be modified or require compensatory strategies.

Chapter 3: How Does Aging and Pathology Impact Postural Control?

This chapter considers how "typical" anatomical and functional changes related to aging sensory, musculoskeletal, and neuromuscular systems impact on the efficiency and efficacy of postural responses, as well as how commonly occurring pathologies influence an older adult's ability to "data collect" , 'integrate", and respond to challenges to balance.

Chapter 4: Interaction of the Person, Task, and Environment

Postural Control is a multifactorial process, emerging from the interaction of one's personal resources/characteristics, the task that is being performed, and conditions within the environment in which the person is moving. In this chapter, clinicians will gain facility with task and movement analysis strategies that include consideration of all three contributors to postural control, and will explore how principles of motor learning and of facilitating neuroplasticity form the foundation for any interventions aimed at improving postural control.

Chapter 5: Postural Control and Risk of Falls

Now that clinicians understand the underlying mechanisms of postural control, they can begin to consider what additional intrinsic or extrinsic risk factors contribute to an older adult's vulnerability to fall. Such risk factors can be considered "yellow" or "red" flags indicating which older adults are most in need of full risk assessment/evaluation.