



Rehab-U
MOVEMENT & PERFORMANCE THERAPY

**Movement
Optimization**
for Prehab and Performance

INTRODUCTION

- A. What is Movement Optimization?
- B. What is functional training?
- C. What are the prerequisites to training?

SECTION 1 —

FOUNDATIONAL THEORIES AND CLINICAL CONCEPTS FOR MOVEMENT OPTIMIZATION

1.1 FOUNDATIONAL THEORIES

- 1.1.1 Posture: Discuss basic postural assessment and how the principles of muscle facilitation and inhibition provide perspective on muscle imbalance and functional instability
- 1.1.2 The Joint-by-Joint Theory: Review Cook & Boyle's Joint-by-Joint theory to understand the relationship between structure and function

1.2 CLINICAL CONCEPTS

- 1.2.1 Joint Clearing: Discuss how this clinical approach can be modified for the coach/trainer scope of practice and integrated into a kinetic chain assessment for dysfunction
- 1.2.2 Homework and reprogramming: Discuss the importance of frequency to create an adaptive response and how to ensure client compliance

SECTION 2 —

MOBILITY AND STABILITY

- 2.1 **THE CONTINUUM:** Understand the relationship between mobility, stability and motor control
- 2.2 **JOINT DISSOCIATION:** Understand the importance of joint dissociation as a fundamental capacity for mobility and stability
- 2.3 **PASSIVE VERSUS ACTIVE RANGE OF MOTION:** Discuss passive versus active range of motion to assess for and differentiate soft-tissue or motor control limitations

SECTION 3 —

MOBILIZATION — ACTIVATION — INTEGRATION: THE FUNDAMENTAL STRATEGY

3.1 MOBILIZATION

- a. Describe the objectives of the Mobilization sequence as a means of creating space for optimal movement capacity
- b. Identify limiting factors for optimal movement and strategies to address these

3.2 ACTIVATION

- a. Describe the objectives of the Activation sequence as a means of creating awareness for optimal movement control
- b. Identify contributing factors for optimal movement and strategies to correct and improve these

3.3 INTEGRATION

- a. Describe the objectives of the Integration sequence as a means of creating behavior for optimal movement patterning
- b. Determine appropriate exercise selection to minimize compensation and maximize performance within the context of current dysfunction

SECTION 4 —**FUNCTIONAL ASSESSMENT — PART 1****4.1 THE CORE**

- 4.1.1 Breathing: Anatomy, Assessment and Intervention: Understand appropriate breathing mechanics, assess for dysfunctional breathing and select interventions to improve breathing
- 4.1.2 Function of the Core: Assessment: Understand the link between the core and the complexes to create stability

4.2 THE FOOT

- 4.2.1 Anatomy, Assessment and Intervention: Understand appropriate foot mechanics, assess for dysfunction and select interventions to improve proprioception and stability

SECTION 4 —**FUNCTIONAL ASSESSMENT — PART 2****4.3 THE HIP COMPLEX**

- 4.3.1 Review of Hip Function: Review the lumbopelvic hip complex, the lumbar spine, hip joint mobility and the sacroiliac joint and their contribution to optimal hip function
- 4.3.2 Common myths and miscues for the hip complex
- 4.3.3 Assessment of Soft-Tissue Limitations: Learn and apply 5 tests to assess for limitations in soft-tissue
- 4.3.4 Joint Clearing: Learn and apply 5 tests and screens to assess joint range of motion of the regions above and below the hip complex

4.4 THE SHOULDER COMPLEX

- 4.4.1 Review of Shoulder Function: Review the scapulothoracic joint, scapular crossed syndrome, the cervical spine, the thoracic spine and shoulder joint mobility and their contribution to optimal shoulder function
- 4.4.2 Common myths and miscues for the shoulder complex
- 4.4.3 Assessment of Soft-Tissue Limitations: Learn and apply 5 tests to assess for limitations in soft-tissue
- 4.4.4 Joint Clearing: Learn and apply 5 tests and screens to assess joint range of motion of the regions above and below the shoulder complex

SECTION 5 —**INTERVENTION IN MOVEMENT OPTIMIZATION****5.1 GENERAL PARAMETERS**

- a. Set up the Mobilization, Activation and Integration sequences and understand how to select parameters for each sequence
- b. Apply Mobilization, Activation and Integration exercises for the shoulder and hip complex
- c. Link assessment information to select the most appropriate Mobilization, Activation and Integration exercises and parameters

5.2 PROGRAMMING

- a. Review and redefine the objectives of a warm-up
- b. Review programming strategies for implementation: Movement Optimization for training preparation and Integrated Movement Optimization for movement priming
- c. Build a Movement Optimization intervention based on an ongoing case study (information collected in previous sections)