

# Advanced Management of the Lumbar Spine and Pelvic Girdle

Improving Your Outcomes with a Comprehensive Approach

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Certificates of attendance are provided upon successful completion of the course.  
 This course is 16 contact hours, 1.6 ceu's/16 ccu's  
 19 contact hours/1.9 ceu's for therapists licensed in Florida, New York, Illinois or the District of Columbia  
 BOC provider #P2047  
 California approval # PTNAS-201615  
 IL provider #216000074



Presented by  
 Robert Friberg, PT, PhD, CFMT

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PT, PTA and ATC - Continuing Education Course

## Day One

- 7:30 8:00 **Registration**  
 8:00 9:30 **Theoretical Foundation for Neuromechanical Evaluation and Intervention**
- Characteristics of neuromechanical dysfunction
  - Components of neuromechanical dysfunction
  - Examples of lower quarter neuromechanical dysfunction
- 9:30 10:30 **Neuromechanical Screen**
- Rationale for a neuromechanical screen (lecture)
  - Lab: practice the neuromechanical screen
- 10:30 10:45 **Break**  
 10:45 12:00 **Examination and Intervention for Lumbar/Pelvic Muscle Dysfunction**
- Evidence for selected muscle inhibition associated with lumbopelvic spine dysfunction (lecture)
  - The role of the "lower-crossed" pattern in neuromechanical dysfunction of the lumbosacral spine (lecture)
  - Strategies for examination and intervention (lecture)
  - Lab: specific assessment and intervention activities
  - Lab: examination, evaluation and intervention of muscle dysfunction associated with the lumbopelvic spine
- 12:00 1:00 **Lunch (on your own)**  
 1:00 2:00 **Examination and Intervention for Lumbar/Pelvic Muscle Dysfunction (con't.)**
- 2:00 3:00 **Intervention for Sympathetic Nervous System Dysfunction (Lecture)**
- The role of the sympathetic nervous system in lumbopelvic spine dysfunction
  - Strategies for intervention
- 3:00 3:15 **Break**  
 3:15 4:45 **Neurodynamics of the Lower Quarter**
- Concepts and principles of neurodynamic examination and intervention (lecture)
  - Strategies for intervention (lecture)
  - Lab: examination and intervention for lower quarter neurodynamic dysfunction
- 4:45 6:00 **PNF: The Role in Neuromechanical Rehabilitation**
- Neuromechanical foundation of PNF (lecture)
  - Pelvic girdle patterns (lecture/lab)
  - Rolling (lecture/lab)

## Day Two

- 8:00 12:00 **Strategies for Improving Lumbopelvic and Hip Motion**
- Muscle Energy Technique: A Neuro Mechanical Perspective (lecture)
- Review the theory of using MET for spinal dysfunction. (lecture)
  - Develop a rationale for use as a neurophysiologic intervention. (lecture)
  - Lab: specific assessment and intervention activities
  - Neuromechanically Organized Mobilization
  - Principles for intervention (lecture)
  - Lab: Lumbar spine, Pelvic Girdle, Hip
- 12:00 12:30 **Lunch (on your own)**  
 12:30 1:30 **The Role of Primitive and Postural Reflex Dysfunction in Lumbopelvic Spine Neuromechanical Dysfunction**
- Examine the development and role of reflexes (lecture)
  - Identify the primitive and postural reflexes that are relevant for lumbopelvic dysfunction. (lecture)
  - Lab: specific assessment and intervention activities
- 1:30 2:30 **Vestibular System Dysfunction and the Lower Quarter**
- Explore the relationship between the lumbopelvic spine and vestibular system. (lecture)
  - Lab: specific assessment and intervention activities
- 2:30 3:30 **Motor Learning: Principles for Lower Quarter Dysfunction**
- Fundamentals of motor learning and motor control (lecture)
  - Characteristics of an effective physical therapy intervention for movement dysfunction (lecture)
  - Specific strategies for lumbopelvic spine and lower quarter movement dysfunctions (lecture/lab)
- 3:30 4:00 **Clinical Application and Summary**

# About the Educator

**Robert Friberg, PT, PhD, CFMT** is a professor in the Physical Therapy Program at Hardin-Simmons University. He teaches the kinesiology and orthopedics components of the curriculum. His clinical certification is the Certified Functional Manual Therapist© from the Institute of Physical Art. Dr. Friberg brings 35 years of clinical experience with a specialization in chronic pain associated with spinal dysfunction. His training includes experience with a variety of models for orthopedic practice. This experience led to a unique perspective for examination, evaluation and intervention of movement dysfunction associated with the spine. He has taught nationally on topics associated with the spine including manual therapy, motor control and stabilization. He has provided systematic spinal dysfunction training for national physical therapy groups. He has numerous clinical and research presentations at national meetings. His research interests include such topics as neurodynamics, the neuromechanical effects of posture, the relationship of reflexes in spinal dysfunction, and the role of muscle inhibition and facilitation in spinal movement dysfunction. Dr. Friberg currently has a private practice with consistent patient interaction.

# Why You Should Attend This Course

Lumbopelvic and hip movement dysfunction represent a large component of physical therapy practice. Yet many of us struggle with explaining how some patients improve and others do not. Developing a perspective regarding the nature of movement dysfunction is the key to improving outcomes. Movement dysfunction should be conceptualized as dysfunction within or between the body's biomechanical and neuromechanical systems. Biomechanical dysfunction refers to abnormalities of the musculoskeletal system including the osteokinetics and arthrokinematics associated with creating movement. Neuromechanical dysfunction refers to abnormalities associated with the anatomy and physiology of the central, peripheral, and autonomic nervous systems influencing movement. The effective intervention for lumbopelvic spine and lower quarter movement dysfunction must integrate all anatomic/physiologic components of the lumbopelvic spine and lower quarter and be multi-system in scope. In other words, the intervention must integrate a biomechanical and neuromechanical perspective.

This two-day, advanced level course provides a unified biomechanic and neuromechanic model with strategies for the examination, evaluation, and intervention of the lumbopelvic spine and hip. The information presented in this course enables the clinician to utilize a new representation of the underlying mechanisms that contribute to lower quarter movement dysfunction. Much lumbopelvic dysfunction is unrecognized secondary to the traditional biomechanical examination and evaluation paradigms. Content for this course includes significant discussion of the scientific basis and rationale for an integrated biomechanical and neuromechanical orientation for rehabilitation. The course incorporates lecture with substantial laboratory experiences. Laboratory sessions enable the participants to integrate both biomechanical and neuromechanical examination and intervention techniques and strategies for neuromechanical system components associated with movement dysfunction. These include for the nervous system, neurodynamics and the sympathetic component of the autonomic nervous system; the role of muscle facilitation and inhibition associated with the lumbosacral spine and hip; the vestibular system and motor learning. The use of a muscle energy technique is developed and implemented from a biomechanical and neuromechanical outlook.

The strategies developed for examination and intervention provided in this course work well with traditional approaches used for intervention of movement dysfunctions. Course information is immediately relevant and applicable in the clinical setting. Additionally, the concepts and principles learned in this workshop transfer to all movement dysfunction.

## Course Objectives

Upon completion of this course, participants will be able to:

- Understand and describe the foundation for neuromechanical examination, evaluation and intervention techniques for the lumbopelvic region.
- Describe the components of, and complete, a neuromechanical screen of the lower quadrant.
- Recognize the role of the sympathetic nervous system in chronic pain and movement dysfunction.
- Describe the mechanical and physiologic functional implications associated with movement of the nervous system and implement an examination to differentiate compression, sliding or tension dysfunctions.
- Integrate concepts and principles of motor control with the fundamentals of neuromechanical dysfunction.
- Explain inhibition and facilitation of lumbopelvic and lower quarter muscle dysfunction in the context of Janda's "lower-crossed" model.
- Describe the sequence of normal reflex development and assess the presence or absence of reflexes in the context of lumbopelvic and lower quarter movement dysfunction.
- Describe the basic concepts and principles associated with the use of PNF.
- Explain the relationship between the vestibular system and lumbopelvic spine movement dysfunction.
- Explain the neuromechanical rationale for using a MET and integrate the MET with PNF to facilitate motor learning and control.
- Utilize a neuromechanically organized mobilization to facilitate lumbopelvic segmental and extrasegmental motion.
- Develop a comprehensive treatment approach to improve functional outcomes for lumbopelvic dysfunction

## Registration Form



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Credit Card \_\_\_\_\_

Exp.date \_\_\_\_\_ Phone (required) \_\_\_\_\_

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