

Course Title

Pain Science, Movement, and Manual Therapy (PSMMT) for Rehabilitation Professionals

Course Background

Research on the science of pain spanning the past three decades has changed the way we understand and teach patients about the human pain experience. This educational evolution is built on a biopsychosocial framework and its application has resulted in improvements of clinical outcomes including: decreased pain, reduction in fear of movement, promotion of better quality movement, increased motivation and willingness of patients to participate in exercise and skilled therapy, and decreased overutilization of medical services. Furthermore, these improvements have been shown to be *greater when combined with *movement* and *manual therapy**. Cornerstone to this educational approach is recognizing the role of threatening (nocebo) language in worsening patient outcomes and iatrogenic disorders. Concurrent to these developments in pain science, movement science has increasingly recognized the interplay of biopsychosocial factors in human movement. Advancements in research on biomechanics and motor control have also revealed an increased need for clinicians to recognize and understand the complex layers of the lived human experience as playing important roles in assessment and prescription of movement.

Course Description

This course provides a broad overview and practical application of contemporary pain science, movement science, and manual therapy assessments and interventions, utilizing a biopsychosocial framework. Conceptual integration of the Neuromatrix framework with loading capacity, graded exposure, sensorimotor strategies and movement variability, interaction with the human nervous system, and applications of existing, and novel, manual therapy will be interwoven throughout this course. Each application will be built around developing non-threatening language skills and patient centered education. This course work is a blend of lecture, lab, and case studies to maximize clinical application.

Course Objectives

- 1.) Discuss why understanding that nociception does not guarantee pain is important for both clinicians, and our patients, to understand and treat pain.
- 2.) Describe why understanding nociception, in the absence of pain, is important to understanding mobility and movement.
- 3.) Summarize two changes you can make in your current practice to more effectively educate patients on pain and improve their participation in skilled therapy.
- 4.) Compare and contrast movement/exercise from a biomedical perspective and a biopsychosocial perspective using current research related to neuromuscular control and coordination.

- 5.) Summarize two changes you can make in your current practice related to manual therapy to more effectively educate patients on pain and mobility, while increasing self-efficacy without increased dependency on passive interventions.
- 6.) Describe how a biopsychosocial informed approach to movement and manual therapy can be integrated into existing practice.

Course Educator Biography

Leonard Van Gelder is a physical therapist (DPT), athletic trainer (ATC), therapeutic pain specialist (TPS), spinal manual therapist (CSMT) and strength and conditioning specialist (CSCS) with a strong interest in pain science and manual therapy. He has previously studied, published research, and presented at regional and international conferences on the science of stretching, strength and conditioning, and therapeutic pain science interventions. He has explored a diverse spectrum of manual therapy and movement approaches, and emphasizes a biopsychosocial approach to education, movement, and manual therapy in his practice.