

George Fox University School of Physical Therapy Presents

# Motor Control Update for the Orthopaedically Minded

**By Andrew Meszaros, PT, PhD**

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CANYON COMMONS - ROOM 101 & 102 – 6:00-8:00PM

*(No RSVP Necessary for this free lecture and 2 CEU's will be offered)*



Recent trends suggest that a number of patient problems that were once thought to be purely orthopaedic in nature are, in fact, problems of a neural or non-orthopaedic etiology. Unfortunately, what passes as “motor control” in orthopaedic circles is sometimes outdated, incomplete, or “gym science” jargon that is not supported in research. History became legend. Legend became myth. And some things that should not have been forgotten were lost. Clinical progress is held back when orthopaedic and neurologic PTs have asymmetric understandings of sensorimotor control. This presentation will provide a succinct modern update of select broad concepts in motor control. Topics include: effects of motivational influences and autonomy on motor learning; senses of effort and force; movement as a self-organizing and emergent property; “good” versus “bad” variability in movement; antifragility; multifractality; the role of reflexes in voluntary movement; and a survey of misconceptions in sensory processing and therapeutic exercise.



Andrew Meszaros, PT, PhD, is an Associate Professor in the School of Physical Therapy at George Fox University. Prior to joining GFU, he worked at the University of Toledo, holding positions in the College of Medicine’s Department of Neuroscience and in the College of Engineering’s ECORE (Engineering Center for Orthopaedic Research Excellence). His primary goal is to understand how sensory and motor pathways influence each other, and then apply those neurophysiologic principles toward the development of novel injury prevention strategies. Clinically, he has practiced throughout the country, most notably at Woodrow Wilson Rehabilitation Center in Virginia. Dr. Meszaros is a graduate of the University of Iowa (PhD), earning a NIH-funded post-doctoral fellowship in the Iowa Injury

Prevention Research Center to study the effects of exercise-induced fatigue on neuromuscular control. He serves as a manuscript reviewer for a number of clinical and basic science journals.

