Anticipation and adaptation-Theory and implication of internal model

During the past decade, many schools of thoughts regarding human movement have blossomed and shaped various clinical practices and fitness training systems. Now we are getting into an exciting era in which these schools of thoughts are combined to serve the unified goal of helping people truly enjoy and control the variability of human systems. In the center of this trend, there exists a huge advancement of sensorimotor neuroscience unlocking the mechanisms underlying plasticity of human nervous system. In this presentation, Internal Model, a dominating theory of human motor adaptation, will be discussed as well as the ways we can translate this knowledge into practice.

Biography

Daehan Kim has been serving his role as a Clinical Kinesiologist in Canada for 6 years helping people with injuries and pain achieve both rehabilitation and various activity goals. His areas of expertise include biomechanical assessment, exercise-based treatment to enhance motor learning and coordinating interdisciplinary teams for complex cases. He is passionate about bridging the gap between rehabilitation training and strength conditioning by applying evolving knowledge of Kinesiology and Pain Sciences. He earned his Master’s Degree in Kinesiology from University of Saskatchewan in 2012 after graduating from Arizona State University with his Bachelor’s degree in Kinesiology in 2009. He has published peer-reviewed research articles in the field of biomechanics and human motor control. He presented his work in various scientific and fitness conferences including American College of Sports Medicine, National Strength and Conditioning Association and Canadian Society for Biomechanics. He is currently a research collaborator at Simon Fraser University (SFU) Pain Studies Lab investigating the effect of Virtual Reality games on improving persistent pain. Prior to this, he also worked as a research collaborator at SFU Sensorimotor Neuroscience Lab and Oregon Research Institute investigating supra-spinal mechanism of human motor learning and effect of exercise on symptoms of Parkinson’s Disease. Being a clinical product consultant for E-treat Medical Diagnostics, Inc., he helps developing mobile-based self-management tools for people with chronic conditions.

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