

Title: Focus on Rehab: External Focus of Attention and Rehabilitation

- Sooo what's the big deal about focus?
 - There are 2 theories that are important to know before we talk about the effects of focus
 - First it's important to understand that humans are dynamic systems
 - The important aspect here is the we have the ability to self organize in order to achieve a task
 - We don't need to tell our selves how to perform every task or have prior knowledge to try and execute tasks
 - Next, and very important to explaining the effects of focus on motor learning, is the constrained action hypothesis
 - Explains how the body uses the conscious and unconscious, environment, and task goals to create the desired movement
- Soo how does this even relate to focus
 - There are two types of focus we are going to talk about
 - Internal
 - Focus on the body segment
 - Patient is instructed to focus on feet, knees, etc.
 - External
 - Focus on the movement effect
 - Focus on a target, markers, etc.
 - How does focus and the constrained action hypothesis relate
 - When a patient is given instructions that directs the focus internally
 - The body gets in it's own way
 - This conscious focus on movement interferes with the bodies subconscious ability to create efficient movement
 - When instructions are given that focus attention on external cues
 - The body is allowed to self organize and find the most efficient motor program
- What's the evidence to support this?
 - Literature has shown that internal focus creates inefficient movement patterns
 - Increased co-contraction of muscles groups
 - Interfering with muscle synergies
 - Increased EMG activity
 - Compared to lower EMG activity for the same task in external focus
 - Internal focus even affect sensory feedback going back to the brain
 - Internal focus has a lower decrease in sensory information of the muscle creating movement to the brain
 - The body now has to use resources to interpret information it already anticipated
 - As opposed to focusing on other sensory information from other segments



- How does this relate to performance and rehab
 - External focus has been shown to improve
 - Jump Height/distance
 - Force Production
 - Muscle endurance
 - Accuracy tasks
 - Sprint/agility ability
 - All linked to the bodies ability to create its own efficient movement pattern
 - This is also seen in rehab variables
 - External focus has shown to be able to improve kinematics and kinetics associated with injury risk
 - Improved retention of these skills

