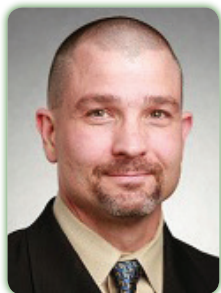


# International Conference on Sports Medicine and Fitness

March 23-25, 2015 Chicago, USA



## Trent Nessler

A.C.L., LLC, USA

### Clinical biomechanical analysis of the athlete

Every year there are over 250,000 anterior cruciate ligament injuries (ACL) in high school athletics. According to McCullough et al., over 20% have a re-rupture in 2 years and over 79% suffer osteoarthritis in 12 years. The negative impact on future joint health is significant but there is also an unspoken loss of future opportunities. According to Rugg et al., those who suffer a knee injury or ACL injury prior to their Division I college career are at an 8 fold to 800 fold increase risk of a knee injury or surgery during their college athletic career. The potential loss of future scholarship and educational opportunities highlights the importance of prevention programs. Despite all the preventative measures Dodwell et al., has shown a 1000 fold increase in the number of ACL injuries in youth athletics over the last 20 years. It has been well documented in the research that improvement in movement results in a reduction of injury risk as well as an improvement in athletic performance. In this symposium, the presenter will provide participants with the latest research in biomechanics related to non-contact injuries; describe the use of an innovative biomechanical analysis using Xbox gaming technology, its application in sports injury prevention and how implementation of this analysis in the Brazilian Military & Sports as well as in US college Division I athletics has impacted injury rates and performance.

### Biography

Trent Nessler, PT, DPT, MPT is an Author, Innovator in Movement Science and Technology. He is the CEO/Founder of Accelerated Conditioning and Learning, LLC, developer of the Dynamic Movement Assessment® (DMA®), Fatigue Dynamic Movement Assessment® (FDMA®) and 3D-DMA®. He has lectured in the area of movement assessment for over 15 years and is the author of the e-textbook *Dynamic Movement Assessment: Reduce Injuries and Improve Performance*. He holds a Bachelor's degree in Exercise Physiology, a Master's in Physical Therapy and a Doctorate in Physical Therapy with a focus on biomechanics and motor learning. He has been a physical therapist for over 17 years and has treated high school, collegiate, Olympic and professional athletes for over a decade. He has also worked with police departments, fire departments and military institutions to assist in injury prevention and improved performance in the tactical athlete. He has been an invited speaker to present nationally and internationally on movement assessment in the elite athlete. He has also been used as a nationally recognized resource for *Advance PT*, *The Washington Post*, as well as *Web MD*. He currently sits on the USA Cheer Safety Council, is Associate Editor of *The International Journal of Athletic Therapy and Training* and currently serves as an injury consultant to the Brazilian Navy.

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