

Cassidy Klein

HONOURS RESEARCH



Research Focus:

Sex differences in lower extremity kinematics during dynamic jump landing tasks following neuromuscular fatigue of the hip extensors and knee flexors.

Anterior cruciate ligament (ACL) injuries are common in sport, especially in females due to their lack of ability to activate their hamstrings during sporting maneuvers. These maneuvers include, landing from a jump, hop or a quick change in direction. Females tend to land in a more erect posture in comparison to males, resembling a common mechanism of injury to the ACL.

When muscles of the lower extremity become fatigued, physical performance, strength and motor control become altered. Making individuals unable to perform the same caliber of not being fatigued. This makes individuals more susceptible to injury. However, the effects of fatigue on sex differences in ACL injuries are understudied and still remain unclear. For that reason, we chose to study the effects of neuromuscular fatigue on single leg landing tasks. The study was completed using a 3D motion capture system and electromyography sensors to further understand the obvious sex differences.

About Cassidy:



Cassidy Klein is a 4th year kinesiology student hailing from Coldbrook, Nova Scotia. In combination with the Acadia Sports Performance internship and her work with the Men's Football team as a Student Therapist, she has developed a keen interest in injury prevention. Cassidy's future goals, include pursuing a Master's degree to continue her love of research, specifically within the realm of exercise physiology and rehabilitation. She plans on continuing to work as a CSEP-CPT to provide fun and instructional experiences whilst building autonomy to allow her clients to reach their fitness and personal goals.

Supervisor: Dr. Lauren Lattimer