

## Sarsha Cadle

Supervisor: Dr. Lauren Lattimer

### Research Focus

Sarsha's study fatigued the muscles of the hip by using a targeted set of exercises. Before tiring out the muscles, the participants executed trials of single leg triple hops and reactive cuts. The cutting tasks were reactive due to a light cue that would indicate to the individuals whether to cut at a 90-degree or 135-degree angle. The light would activate during the participant's approach to the change of direction. The dynamic tasks and targeted exercises were completed on the participant's dominant leg only. These exercises included a single leg pelvic drop on an unstable surface and a band resisted side-stepping task that timed by a metronome. After completing three sets of the exercises, the participants were tested for muscle fatigue by completing specific tests of maximal muscle strength. When a sufficient amount of strength was lost the participants would repeat the single leg triple hop task and series of reactive cutting tasks that were completed prior to the exercises. Motion capture and force plate data of the dynamic tasks were used to investigate how hip muscle fatigue effects knee kinematics and kinetics during jumping and cutting movements.

### The Researcher



Sarsha grew up in Melbourne, Australia, and moved to Wolfville to play basketball with Acadia's Axewomen Basketball team. Her supervisor for her honours project was Lauren Lattimer. After graduation she plans on taking a road trip across Canada and completing a research-based Master's program at UBC where she will continue to study biomechanics.