ABSTRACT

TITLE:	The Role of Cutaneous Sensory Feedback During Running
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PRESENTED AT:	2015 Undergraduate Research and Creative Activities Symposium, Fort Lewis College

ABSTRACT: Gait and locomotion patterns are shaped by sensory feedback and input from the outside environment. Many different sensory systems including visual, vestibular and somatosensory, contribute to the overall control of gait. The plantar surface of the foot is the only part of the body to constantly be in contact with the ground during bipedal locomotion, as a result sensory information from cutaneous receptors to thought to influence human gait patterns. The lack of information from cutaneous receptors has been shown to affect kinematic variables during human walking. However, the role of cutaneous feedback during running is not well understood. The aim of our research was to specifically minimize cutaneous feedback by anesthetizing the soles of the feet in order to further understand the role of cutaneous sensory feedback during running. We hypothesized that with loss of cutaneous feedback from the plantar surface of the foot individuals would run with similar mechanics in the barefoot and shod conditions.