

Research Project Details	
Title	Does Early Weightbearing for Stable Ankle Fractures Accelerate Fracture Healing and Return to Pre-Injury Function?
Investigator(s)	Dr. Prism Schneider, University of Calgary
Funding Period	2018-2024
Budget	\$61,550 (total across all funding periods)
Issue/Rationale	<p>There is strong evidence that early weightbearing immediately after surgical fixation of ankle fractures is safe and has good clinical outcomes. However, although widely practiced, there is limited evidence if early weightbearing has similar clinical outcomes in stable, non-surgically managed Weber B ankle fractures. Importantly, the effect that early weightbearing has on time to fracture healing and quality of fracture healing has not been quantified. Our research question is: What are the effects of early weightbearing on time to fracture healing, quality of fracture healing, and clinical outcomes in patients with stable Weber B ankle fractures?</p>
Objective(s)	<ol style="list-style-type: none"> 1. To quantify the effect of early weightbearing on time to fracture healing using HR-pQCT. 2. To quantify the effect of early weightbearing on quality of fracture healing, as measured by bone density, geometry, and microarchitecture using HR-pQCT. 3. To quantify the effect of early weightbearing on clinical outcomes, as measured by gait analysis, return to work, PROMs, and pain scores. 4. To determine if PROMs and clinical outcomes correlate with HR-pQCT parameters.
Anticipated Results/ Impact	By quantifying the effect of immediate weightbearing on fracture healing and clinical outcomes in stable Weber B ankle fractures, this study aims to evaluate whether early weightbearing accelerates healing in this type of injury. The results of this research could alter clinical practice and reduce complications associated with prolonged immobilization. This study may provide evidence for a change in guidelines in support of earlier mobilization and earlier rehabilitation. This could have a significant impact on reducing the time required for Albertans to return to their work and activities of daily living following an ankle fracture.
Keywords	Ankle fractures, surgical fixation, early weightbearing, outcomes, return-to-work