

The aim of this study was to investigate if an extended timeline for post-ACLR patients would result in a significant difference in the RSI value of the affected knee between men and women. The reactive strength index (RSI) is a measure of the amount of force that can be generated by the knee. It is determined by dividing the jump height by ground contact time. In order to prove a significant change in RSI values from 6 to 9 months post-ACLR, volunteers were evaluated at each timepoint. The volunteers were told to stand in anatomical position on a box positioned in front of a force plate. Once prompted, they would land on the force plate with their repaired knee and perform a single-leg hop 45 degrees in the opposite direction of their injured knee. The goal was to land and push off the leg in the shortest amount of time while also achieving the greatest distance traveled. It was determined that the extended recovery time of 9 months vs. 6 months did not yield a statistical improvement in RSI for the sexes combined. In addition, women displayed poorer RSI compared to men at 6 months post-ACLR but not at 9 months. RSI may not be sensitive to other factors that define recovery, and future research is necessary to determine whether improving RSI values between 6 and 9 months post-ACLR reduces the risk of re-injury.