Performance Measures in Female Collegiate Soccer Players According to ACL Injury Status

Bennett, N., Foggia, N., Wisniewski, K. DiSepio Institute for Rural Health & Wellness Human Performance Laboratory, Saint Francis University, Loretto, Pa

Prevalence of noncontact Anterior Cruciate Ligament (ACL) injuries has been increasing in women's athletics. Prescreening testing through functional performance measures has been recommended to help identify which athletes may be at a greater risk for ACL injury or reinjury. **PURPOSE:** To compare performance measures in NCAA division 1 female collegiate soccer players who have had an ACL injury and those who have not. **METHODS:** NCAA division 1 collegiate female soccer players (n = 12) aged (18.9 ± 1 yrs), BMI (21.2 ± 1.5kg·m^{-2}), and body fat percentage (19 ± 3.2%) underwent agility and functional hop testing. 4 had a previous ACL injury (left leg n = 2, right leg n = 2). Prior to testing, subjects performed a general warm-up around a 124 m track followed by practice trials for each test before completing the T-test, single-leg hop, triple leg hop, and triple crossover hop tests. Max distance hopped was recorded to the nearest 0.25 in. and the symmetry of the limbs was calculated as a percentage for each hop test. Data was assessed based on ACL injury status (injured vs. uninjured) and ACL injury site (injured leg vs. uninjured). Kruskal-Wallis test was used to compare groups. Significance was set at $p < 0.05$. **RESULTS:** There were no differences ($p > 0.05$) in injury status groups in all test measures. No differences were found between T-test time, hop test distances, and triple hop or crossover hop leg symmetry between injury site. However, those with a left leg ACL injury had a lower symmetry (89.5 ± 2.1%, $p = 0.04$) on the single leg hop test than both those with a right leg ACL injury (98.5 ± 0.7%) and no injury (96.1 ± 1.8%). **CONCLUSION:** Those with a left leg ACL injury had a poorer symmetry between legs on the single leg hop test. These results suggest that these individuals may be at a greater risk of reinjury