

COMPARISON OF CORE STABILITY AND BALANCE IN ATHLETES WITH AND WITHOUT SHOULDER INJURIES

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ABSTRACT

Background: Relationships between core stability and lower extremity injuries have been described in the literature; however, evidence of the relationship between upper extremity injuries and core stability and balance is limited.

Hypothesis/Purpose: The purpose of this study was to compare clinical measures of core stability and balance between athletes with and without non-traumatic shoulder injuries.

Study Design: Cross sectional.

Methods: Eighty athletes (54 males, age: 21.2 + 3.3 years) participated in this study. Forty athletes with a current shoulder injury were matched to healthy athletes by age, gender, BMI, and sport. Athletes completed clinical core stability tests including flexor and extensor endurance tests, double leg lower test (°) and balance tests including single leg stance under eyes open and eyes closed conditions, and the Y-balance test. MANOVAs were used to assess group differences.

Results: No statistically significant differences existed between athletes with and without shoulder injuries for clinical tests of core stability, $F(1,78) = 0.97$, $p = 0.41$; $\eta^2 = 0.04$. No statistically significant differences existed between injured athletes with and without shoulder injuries for static and dynamic balance measures, $F(1,78) = 0.86$, $p = 0.53$; $\eta^2 = 0.07$.

Conclusions: Although core stability is widely incorporated in rehabilitation of athletes with shoulder injuries, performance on these clinical tests did not differ in the group of athletes assessed in this study.

Level of evidence: 3.

Key words: Core stability, kinetic chain, shoulder injuries

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