

## ORIGINAL RESEARCH

## ASSOCIATION BETWEEN ROWING INJURIES AND THE FUNCTIONAL MOVEMENT SCREEN™ IN FEMALE COLLEGIATE DIVISION I ROWERS

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## ABSTRACT

**Background.** 48 percent of rowing injuries are due to overuse and occur more often in females. The Functional Movement Screen™ (FMS) is a screening tool utilized to identify the risk of musculoskeletal injury in field sport athletes based on movement patterns. It has not been used to identify risk of injury in rowing.

**Objectives.** The purpose of this study was to determine if the scores on the FMS™ are predictors of incidence of all injuries, including low back pain (LBP) in female collegiate rowers during one season of rowing.

**Methods.** Prospective cohort conducted in a clinical setting. Thirty-seven Division I female collegiate rowers (33 rowers and 4 coxswains). Investigators performed pre-season FMS™ screening and collected demographic data, rowing data, and Oswestry Low Back Pain questionnaire scores. Based on FMS™ scores, individuals were grouped high or low risk for injury. Injury reports and patient complaints of LBP over the course of a season were compared to FMS™ group.

**Results.** Those in the high risk group were significantly more likely to experience LBP during the season ( $p = .036$ ) and reported a 58 percent greater mean in years of rowing experience ( $p = .008$ ) than individuals in the low risk group. Those with a history of LBP were six times more likely to experience LBP during season ( $p = .027$ ).

**Discussion.** The FMS™ indicated that rowers at a high risk of injury and more years of rowing experience, have a higher probability of sustaining LBP. Results could be due to chronic overuse associated with the rowing motion. Low back pain was evident in 25 out of the 37 participants over the season.

**Conclusion.** While the FMS™ has been proven to predict injury in field athletes, there was no statistically significant evidence to support prediction of a reported time loss injury in female collegiate rowers. However, it did indicate a higher likelihood for subjective report of low back pain.

**Level of Evidence:** Cohort study, level 2b

**Key Words.** Crew, injury risk, prevalence, women

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