

Functional Movement Screen™ Scores in Collegiate Track and Field Athletes in Relation to Injury Risk and Performance

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Category: Masters

ABSTRACT

Purpose: The purpose of this study was to examine the relationship between Functional Movement Screen™ (FMS) scores, injury rate, and performance in collegiate track and field athletes. **Methods:** Forty seven male (n=17) and female (n=30) competitive track and field athletes at an NCAA Division I university volunteered for this study. As part of their regular team assessment, the athletes were evaluated on three separate occasions using the FMS tool: in August, one week prior to the start of university organized practice for the fall (T1); in December, one week prior to the end of the fall academic semester (T2); and in March, the week following the conclusion of the indoor competition season (T3). The FMS consists of the performance of seven fundamental movement patterns that are evaluated and scored by a trained professional. For each time point, athletes were divided into two categories based on total FMS score (≤ 14 and ≥ 15). Throughout the competitive season, injuries were tracked and categorized as either mild (no loss of practice or competition time) or moderate/severe (loss of practice or competition time). As part of an ongoing injury prevention program, athletes performed generalized corrective exercises for 15 min 2-3 times per week. The performance in the last event of the season (conference meet) was also recorded. **Results:** Average FMS scores significantly ($p < 0.05$) decreased across the three time points (Mean \pm SD, T1: 15.5 ± 2.2 , T2: 14.9 ± 1.8 , T3: 14.7 ± 1.6) despite that generalized corrective exercises were performed. Analyses of results found no association between FMS scores and likelihood to sustain a moderate/severe injury. Athletes with a score of ≤ 14 on the FMS at T1 were 3.1 times more likely not to place in the top 8 at the conference meet. 53% of the athletes who had a score of ≥ 15 at T1 placed in the top 8 at the meet while only 27% of athletes with a score of ≤ 14 at T1 placed in the top 8 at the meet. **Conclusion:** FMS scores ≤ 14 indicate reduced performance ability but not increased likelihood of injury in track and field athletes.

