

## **Normative Data for the Functional Movement Screen in Collegiate Football Players**

Robert Livezey, J. Nathan Wilder, Mary Nadelen, Michael Higgins, Patricia Ponce, Peter Lisman  
Towson University, Towson, MD

The Functional Movement Screen (FMS) is a 7-step screen that identifies limitations and asymmetries in fundamental movement patterns to determine potential injury risk. Previous reports have presented normative data for FMS scores, as well as prospectively identified that low scores ( $\leq 14$ ) and pattern asymmetry are associated with increased risk of injury in professional football players. However, we are unaware of any descriptive FMS data for collegiate football players. **PURPOSE:** To determine normative values for the FMS in collegiate football players. **METHODS:** A total of 80 collegiate football players underwent an FMS prior to the 2014 season. FMS testing included deep squat (DS), push-up (PU), shoulder mobility (SM), in-line lunge (ILL), hurdle step (HS), active straight leg raise (ASLR), and rotary stability (RS), which were scored on a 0-3 scale with a max. score of 21. A score of 3 on any test indicated full movement completion without compensation. A score of 2 indicates movement completion but with compensation; a score of 1 indicates the movement was not completed; and a score of 0 was recorded if pain was reported with any part of the movement. Descriptive statistics were calculated for FMS results. FMS composite scores were dichotomized as low ( $\leq 14$ ) versus high ( $>14$ ) whereas movement asymmetry was defined as the presence of 1 or more right/left differences on any of the 5 tests scored unilaterally (HS, ILL, SM, ASLR, RS). **RESULTS:** The mean composite FMS score was  $14.1 \pm 2.2$  (range 5 – 19), with 14 being the most frequent score among players (20.0%). More than half (43 of 80) of participants scored  $\leq 14$ , whereas 19.2% (15 of 80) of players had scores  $\leq 12$ . Two-thirds of players (53 of 80) had 1 or more asymmetries on any of the movements scored unilaterally; 27.5% (22 of 80) had 2 or more asymmetries. The highest frequency of 1s was recorded on the ASLR (21.3%), which was also the test with the highest frequency of 3s (32.5). The DS was the test with the highest frequency of 2 (71.3%). SM was the test that exhibited the highest number of asymmetries (42.5%). **CONCLUSION:** Normative FMS scores in collegiate football players were lower than previously reported for other athlete populations. We are continuing to follow this cohort of players to determine if low FMS scores and/or pattern asymmetry are predictors of injury during the 2014 season.