



Mid Atlantic Regional Chapter of the American College of Sports Medicine

Annual Scientific Meeting, November 1st – 2nd, 2019
Conference Proceedings

International Journal of Exercise Science, Volume 9, Issue 8



Positional Differences in Training Load During Matches and Practices in Collegiate Female Soccer Players.

Charles P. Nolte¹, Alexis Q. Shafer², Jordan M. Paisley², Andrew T. Askow³, Joel A. Luedke², Jacob L. Erickson¹, Andrew R. Jagim¹. ¹Mayo Clinic Health System, Onalaska, WI, ²University of Wisconsin – La Crosse, La Crosse, WI, ³University of Illinois at Urbana-Champaign, Champaign, IL

In soccer, players are subjected to differential movement demands based on their position. Further, research describing the specific positional demands during matches and practices in Division III female collegiate soccer athletes is limited. **PURPOSE:** To assess position differences in movement kinematics and energy expenditure in Division III female soccer athletes during matches and practices. **METHODS:** Twenty-six Division III female soccer athletes (height: 1.61 ± 0.3 m; body mass: 66.7 ± 7.5 kg; fat-free mass: 50.3 ± 6.5 kg; body fat %: $25.6 \pm 5.1\%$) were equipped with a wearable athlete monitoring system to assess training load, total distance, distance in high speed zones ($>4.16 \text{ m}\cdot\text{s}^{-1}$), acceleration/deceleration, and energy expenditure during four non-conference matches and practices. Data were then collapsed by session type and analyzed to determine whether differences existed between position groups (goal keepers [GK], center defenders [CB], flank players [FP], forwards [F] and center midfielders [CM]). Paired sample t-tests were used to detect differences in movement kinematics between matches and practices. A one-way ANOVA was used to detect differences by position group for session type. **RESULTS:** There were no significant differences in training load, total distance covered, distance in high speed zones or high intensity accelerations/decelerations between matches and practices. However, total energy expenditure was significantly higher during matches compared to practices ($1,060 \pm 282$ vs. 930 kcal; $p = 0.033$). During matches, GK covered significantly less distance than CB (GK: 3.6 ± 1.5 vs. CB: 8.7 ± 1.6 km; $p = 0.04$). In practice, GK (4.1 ± 0.4 km) covered significantly less ($p < 0.05$) distance than F (7.9 ± 0.6 km), CB (8.0 ± 0.7 mi), and FP (7.6 ± 1.5 km) and less distance in high speed zones than F and FP (GK: 0.2 ± 0.1 vs. F: 0.8 ± 0.2 ; FP: 0.7 ± 0.3 km; $p < 0.05$), respectively. **CONCLUSIONS:** Training load and distances covered were similar during matches and practices however energy expenditure was higher during matches. Players should focus on a post-match recovery beverage or snack to help maintain energy balance and facilitate recovery. GK appear to cover less distance during matches and practices compared to other position groups.