

EFFECT OF A 2-WEEK PRESEASON CONDITIONING PROGRAM ON REPEAT SPRINT ABILITY IN COLLEGIATE SOCCER ATHLETES

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Keywords: conditioning, sprint, anaerobic power

Introduction

Preseason is the period just prior to the competitive season and conditioning is among the most important goals. For USA collegiate athletes, preseason is only two week long and typically involves 2 workouts per day. Little time for or poor recovery during preseason can lead to prolonged fatigue (1). The AIM of this study was to determine the effect of an intense preseason program on repeated sprint ability (RSA) and lower extremity power production using horizontal and vertical jumps.

Methods

Sixteen men's collegiate soccer athletes were recruited for the study (age 20.21 yrs). Following prior familiarization with each test, the athletes performed standing long jump (SLJ), countermovement jump (CMJ) and a repeated sprint ability (RSA) test (6 x 30 m sprints 30 s apart) test (2). Blood lactate levels were measured 3 minutes after the completion of the RSA test. The pre-tests were conducted 2 days prior to the beginning of preseason training and the post-tests were conducted 2 days prior to the first game (14 days later). Total daily workload was calculated by multiplying a session RPE by duration of activity. This study was approved by the University of Portland Institutional Review Board.

Results & Discussion

There were no differences in the athletes' weights before or after the preseason conditioning period (76.82 vs. 76.74 kg). We found no statistical differences between the best sprint time before and after preseason conditioning period (4.35 +/- 0.13 vs. 4.36 +/- 0.14 sec.). We observed no differences in the fatigue index for the repeated sprints as athlete sprint times declined by an average of 4.06% before and 4.14% after the preseason conditioning program. Similarly post RSA lactate levels were not different. Neither of the anaerobic power tests, SLJ (2.45 vs. 2.48 m.) or CMJ (63.50 vs. 61.46 cm) were different when compared before and after the preseason conditioning period. During the 14 day preseason, three passive recovery days were interspersed where athletes received treatment and/or stretched.

Conclusion

While preseason conditioning can be very intense and fatiguing, intentionally planned recovery periods introduced every three or four days can prevent cumulative fatigue that would otherwise inhibit power production and sprint performance.

References

1. Tessitore, A. et al. (2007) *J. Str. Cond. Res.* 21(3), 745-750.
2. Mujika, I. et al. (2009) *J. Sport Sci.* 27(14): 1581-1590.