Effect of Preseason Concurrent Muscular Strength and High-Intensity Interval Training in Professional Soccer Players

Abstract
Wong, P-L, Chaouachi, A, Chamari, K, Della, A, and Wisloff, U. Effect of preseason concurrent muscular strength and high-intensity interval training in professional soccer players. J Strength Cond Res 23(x): 000-000, 2009-This study examined the effect of concurrent muscular strength and high-intensity running interval training on professional soccer players' explosive performances and aerobic endurance. Thirty-nine players participated in the study, where both the experimental group (EG, n = 20) and control group (CG, n = 19) participated in 8 weeks of regular soccer training, with the EG receiving additional muscular strength and high-intensity interval training twice per week throughout. Muscular strength training consisted of 4 sets of 6RM (repetition maximum) of high-pull, jump squat, bench press, back half squat, and chin-up exercises. The high-intensity interval training consisted of 16 intervals each of 15-second sprints at 120% of individual maximal aerobic speed interspersed with 15 seconds of rest. EG significantly increased (p <= 0.05) 1RM back half squat and bench press but showed no changes in body mass. Within-subject improvement was significantly higher (p <= 0.01) in the EG compared with the CG for vertical jump height, 10-m and 30-m sprint times, distances covered in the Yo-Yo Intermittent Recovery Test and maximal aerobic speed test, and maximal aerobic speed. High-intensity interval running can be concurrently performed with high load muscular strength training to enhance soccer players' explosive performances and aerobic endurance.

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