

# Effects of plyometric training and creatine supplementation on maximal-intensity exercise and endurance in female soccer players

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**Objectives:** To investigate the effects of a six-week plyometric training and creatine supplementation intervention on maximal-intensity and endurance performance in female soccer players during in-season training. **Design:** Randomized, double-blind, placebo-controlled trial. **Methods:** Young (age  $22.9 \pm 2.5$  y) female players with similar training load and competitive background were assigned to a plyometric training group receiving placebo (PLACEBO, n = 10), a plyometric training group receiving creatine supplementation (CREATINE, n = 10) or a control group receiving placebo without following a plyometric program (CONTROL, n = 10). Athletes were evaluated for jumping, maximal and repeated sprinting, endurance and change-of-direction speed performance before and after six weeks of training. **Results:** After intervention the CONTROL group did not change, whereas both plyometric training groups improved jumps (ES = 0.25-0.49), sprint (ES = 0.35-0.41), repeated sprinting (ES = 0.48-0.55), endurance (ES = 0.32-0.34) and change-of-direction speed performance (ES = 0.46-0.55). However, the CREATINE group improved more in the jumps and repeated sprinting performance tests than the CONTROL and the PLACEBO groups. **Conclusions:**

Adaptations to plyometric training may be enhanced with creatine supplementation. © 2015 Sports

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