

## عنوان مقاله:

Effect of Arginine Supplementation and High Intensity Training on Appetite Hormones and Body Composition of Obese Boys

## محل انتشار:

دوماهنامه پزشکی هرمزگان، دوره 22، شماره 4 (سال: 1397)

تعداد صفحات اصل مقاله: 5

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## خلاصه مقاله:

**Background:** There is little information about the effects of high intensity aerobic exercise training (HIT) and L-arginine supplementation on appetite-regulating hormones among obese male adolescents. We aimed to determine the effect of eight weeks of HIT and L-arginine supplementation on appetite-regulating hormones and body composition indices in obese adolescent boys. **Methods:** Twenty obese adolescents were randomly divided into two groups of HIT and placebo (P-HIT, n = 10) and HIT with supplementation of L-arginine (A-HIT, n = 10). The HIT protocol was treadmill running with ventilation threshold (VT) intensity and training sessions were isoenergetic and energy consumption were set to 350 kcal per session for each participant, which were evaluated indirectly by calorimetry. The A-HIT group received 3 g of L-arginine per day for 8 weeks. Before the interventions and 48 hours after the last exercise session, anthropometric indices and levels of appetite-regulating hormones were measured. **Results:** There was no significant changes between the groups with respect to leptin, agouti, and PYY3-36 peptide levels. There were significant changes in weight reduction between the groups ( $P \leq 0.05$ ). However, body mass index (BMI) and percent body fat (PBF) changes were not significant in between groups ( $P \geq 0.05$ ). **Conclusion:** Our findings suggest that co-supplementation of L-arginine with HIT training had no further effects on appetite regulatory hormones and body composition of obese male adolescents.

## کلمات کلیدی:

L-arginine, Leptin, Agouti, PYY3-36, High intensity training, Obesity

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