

## The Effects of Three Months of HIIT on Plasma Adiponectin on Overweight College Men

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**Abstract :** Adiponectin is a cytokine secreted by the adipose tissue that functions as an anti-inflammatory, antiathrogenic and anti-diabetic substance. Its density is inversely correlated with body mass index. The purpose of this research was to examine the effect of 12 weeks of high intensity interval training (HIIT) with the level of serum adiponectin and some selected adiposity markers in overweight and fat college students. This was a clinical research in which 24 students with BMI between 25 kg/m<sup>2</sup> to 30 kg/m<sup>2</sup>. The sample was purposefully selected and then randomly assigned into two groups of experimental (age =22.7±1.5 yr.; weight = 85.8±3.18 kg and height =178.7±3.29 cm) and control (age =23.1±1.1 yr.; weight = 79.1±2.4 kg and height =181.3±4.6 cm), respectively. The experimental group participated in an aerobic exercise program for 12 weeks, three sessions per weeks at a high intensity between 85% to 95% of maximum heart rate (considering the over load principle). Prior and after the termination of exercise protocol, the level of serum adiponectin, BMI, waist to hip ratio, and body fat percentages were calculated. The data were analyzed by using SPSS: PC 16.0 and statistical procedure such as ANCOVA, was used. The results indicated that 12 weeks of intensive interval training led to the increase of serum adiponectin level and decrease of body weight, body fat percent, body mass index and waist to hip ratio (P < 0.05). Based on the results of this research, it may be concluded that participation in intensive interval training for 12 weeks is a non-invasive treatment to increase the adiponectin level while decreasing some of the anthropometric indices associated with obesity or being overweight.

**Keywords :** adiponectin, cardiovascular, interval, overweight, training

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