

# Effect of 8 weeks of aerobic exercise on plasma levels of growth hormone and leptin in obese adolescents

Hussein Taherkhani\*, Dr. Hadi Rouhani,

**Abstract:** Obesity is a common metabolic disorder not only in developing countries but also in developed countries and also it's increasing. Obesity, especially abdominal obesity is a risk factor in the disease such as diabetes, , Gallstones, gout, osteoarthritis, cancer of the breast, colon and prostate, high blood pressure and cardiovascular disease. Obesity happens during the time, and when it was formed in the early stages of the disease requires a lot of effort. Several hormones play major role in regulating body weight. Growth hormone and leptin are among them. The aim of this study was to investigate the effect of aerobic exercise on growth hormone, Plasma leptin and body composition in obese adolescents. The statistical population of the present study is obese male students (First high school) with a body mass index of at least (27/63) that which 20 volunteers was randomly ed and was divided into the two groups: 10 experimental patients and 10 control patients group. Control group was sedentary group and the experimental group did aerobic exercise for eight weeks, three sessions per week and each session took 60 minutes. After completing the training, the level of growth hormone and leptin was measured in the control and experimental tests of variables, 24 hours before the first practice session and 24 hours after the exercise. Then, after checking the data normality and homogeneity of variance, correlation and univariate covariance data using were analyzed. To analyze the data, SPSS software was used. The results of this study showed the positive and stable relations between variables of plasma leptin levels in adolescents after eight weeks of exercise aerobic exercise.

**Keywords :** Key words: obesity, growth hormone, plasma leptin, aerobic exercise.

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