The effect of eight weeks aerobic and combined aerobic and anaerobic training on serum leptin levels, fat percentage, body mass index and body weight of healthy petrochemical office workers aged ٠٣-٥٤.

Eidy Alijani¹ (Ph.D), Mahvash Noorbakhsh² (Ph.D), Kavous Eidivandi³ (M.A)
¹,²- Karaj Islamic Azad University – Sport Sciences Research Center
³- Behbahan Islamic Azad University

Abstract

Introduction: Obesity and overweight as healthy problems threaten the health of people in any society. Many research findings have proved that physical activity including aerobic and anaerobic training can play an important role in controlling body weight and fat percentage through Leptin hormone which regulate metabolism of lipids. Research evidences show that physical activities increase serum leptin level of healthy people. Increasement of leptin leads to the fact that more fats are used to produce energy which finally causes reduction on body weight and fat percentage. The purpose of this study was to investigate the effect of eight weeks aerobic and combined aerobic and anaerobic training on serum leptin levels, fat percentage, body mass index and body weight of healthy petrochemical office workers aged ٠٣-٥٤.

Methods: The method of this applied study was Semi-experimental accompanied with pre-test, post-test using three groups. For this purpose among ٠٠٧٢ officers ٠٢١ healthy office workers voluntarily took part in this study. ٠٠٧٢ subjects were randomly selected and randomly and equally divided into three groups of ١) Aerobic group ٢) Combined aerobic and anaerobic group and ٣) Control group. Before and after ٨ weeks training, height, weight, fat percentage and serum, leptin levels (٠٠٥٠ ml venous blood) were measured. The subjects participated in aerobic training at ٦-٧٠% HR max and combined aerobic and anaerobic training at ٨-٩٠% HR max for eight weeks, three days a week and ٦٠ minutes a day. On way ANOVA and Tuki follow-up test at significant level of ٨٠٠.٠ were used to analyze the collected data.

Results and Conclusions: Results showed that significant decrease was observed between aerobic and combined group and leptin (٨٠٠.٠) comparing with control group. Also significant difference between aerobic and combined group comparing to control group considering fat percentage, (٨٠٠.٠).BMI (٨٠٠.٠) and body weight (٨٠٠.٠) were seen. so that, these three variables decrease after ٨ weeks of training, but the effect of aerobic training was more significant comparing with combined training. However, general results indicate that performing regular aerobic exercises is a better training method to activate serum leptin in order to regulate and increase fat metabolism and reduce the fat percentage, BMI and body weight.

Key Words: Aerobic training, Combined aerobic and anaerobic training, Leptin, Fat percentage, BMI, Body weight, Healthy people.