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Effects of aerobic training on leptin, tumor necrosis factor-α and interleukin-٦ levels in obese and lean men

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View references (٤٥)

Abstract

Introduction: Obesity results in some diseases such as of atherosclerosis diabetic and therefore influence on the immune system, greatly. Given the undeniable role of sport in general health, the aim of this present study was to assay the effects of regular exercise on serum levels of immunoregulators factors (leptin, tumor necrosis factor- α (TNF- α) and interleukin-٦) in obese and lean men. Material and methods: ٣٧ male subjects divided two groups of obese and lean with body composition analyzer. Blood samples were taken ٤٨ h before starting the aerobic training program. Then, both groups performed the aerobic training program included running with ٦٥-٨٥٪ of individual maximum heart rate on treadmill for ٣ sessions per week, ٣٠ minutes per session and ٢ consecutive months. Then another blood sample was taken following the training period. Serum levels of leptin, TNF- α and interleukin-٦ of all subjects before and after the training period were measured using standard biochemical methods from all the subjects and all the parameters were measured in both groups again. Results: Our results showed that the aerobic training resulted in a significant decrease in leptin levels in obese (p=٠,٠٠٠) and non obese (p=٠.٠٠٤) peoples and also a significant decrease in TNF- α (p=٠,٠٤٢) in lean people. However, the aerobic training had no significant influence in the levels of interleukin-٦ in both groups. Conclusion: The results showed that regular and light aerobic exercises could decrase leptin levels in both obese and lean men, but have differential effects on levels of TNF- α in both groups. These effects may influence functions of immune system and metabolism in obese and lean men in a different way.

Reaxys Database Information

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Indexed Keywords

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