Abstract

Objective: The aim of this study was to compare the effect of a high-intensity interval training session on salivary cortisol level, blood lactate anaerobic power, heart rate and blood pressure in teenagers and youth.

This study was semi-experimental nature of and just survey was carried out. The study population included 100 males, established in Karaj. Among them 30 people on a voluntary basis in two equal groups (n=15, teenager group aged 13 to 16 years) and (n=15, Young group, aged 18 to 25 years) were divided. In this study, the best 30-second Wingate test on a bicycle ergometer was used. The variables include: Salivary cortisol, blood lactate anaerobic power, resting heart rate and blood pressure were measured before and immediately after exercise. t Dependent and t independent statistical method to analyze the data using SPSS version 21 was used.

The results showed between pre and post test scores lactate, cortisol, blood pressure and heart rate were significant differences in adolescent and young adult groups. In anaerobic power indices only significant difference was in the youth group. Between the two groups in measures of salivary cortisol and lactate there was a significant difference (p=0/05).

Conclusion: A high intensity training session can cause significant changes in hormone levels and heart rate variables are teenagers and young.

Keywords: high-intensity interval training, salivary cortisol, lactate, heart rate variables, teen, youth.