

Comparison of an intensive training session on growth hormones, insulin, testosterone and cortisol in children, adolescents and athletes

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Abstract Aim: The purpose of this study was to compare an intensive training session on growth hormones, insulin, testosterone and cortisol in children, adolescents and athletes. **Method:** In this study 29 eligible football volunteers participated in the study. The entry criteria for the study was included with football players with 2-3 years of continuous work experience (3 sessions per week) and with lack of illness and injury. The subjects were volunteered to participate in the study in three groups of children (10.88 ± 0.92), adolescents (14.40 ± 1.17) and youth (17.70 ± 0.82). On the day of the test at first, 30 minutes before the onset of intensive training, and at rest situation, 8 ml of blood the venous vein in the sitting position was taken the subjects. Then subjects of all three groups performed Bruce test up to fatigue. Subjects were requested to observe normal sleep patterns (at least 8 hours of sleep), normal daily activity patterns and dietary patterns (12 hours pre-test fasting) before the test, and avoided for to any physical activity Excessive consumption of food supplements, medication, coffee, tobacco and cocoa up to 48 hours before the test and until the blood sample is collected. Afterwards, immediately after the Bruce test and after 10 minutes of rest at 20 ° C temperature, 8 ml blood was taken all subjects. To reduce the effect of Circadian rhythm, all specimens were collected at the same time per day 7.30 to 9 am. **Finding:** The results of the study showed that there was a significant increase in pre and post test of growth hormone in young and younger groups, this difference was more in young group than adolescent group (p

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