

# **Comparison of the effect of resistance training on testosterone and cortisol in adolescent and young boys**

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**Abstract:** The overall aim of this study was to compare the effect of resistance training on testosterone and cortisol in adolescent and young boys. The research sample consisted of 50 young futsal young men Fajr Club of Kurdistan who participated voluntarily and through recall in the research. Subjects were divided into four groups: adolescent training group (13), adolescent control group (13), youth training group (12) and young control group (13). Before and after the exercise program, early assessments were made to determine age, height, weight, and hormonal factors. In the present study, both experimental groups performed their training sessions for three weeks a week for eight weeks. Descriptive statistics were used to calculate central indices, disperse and draw tables, K-S test for natural distribution of data, and for inter-group and inter-group t-test, and independent t-test. All statistical tests were performed using SPSS software and significance level of tests at  $P \leq 0.05$ . The findings of the study showed that 8 weeks resistance training in adolescents and young people caused a significant decrease in cortisol in adolescents ( $P = 0.001$ ) and youth ( $P = 0.001$ ), and a significant increase in testosterone levels in adolescents ( $P = 0.001$ ) And youth ( $P = 0.001$ ), which was not significant in the control groups of adolescents and young people. Also, the results showed that the increase in steroid test after 8 weeks of resistance training in the youth group was higher than that of the adolescent group, but there was no significant difference between the two groups regarding cortisol. In addition, it was shown that there is a significant difference between the results of the pre-test and post-test changes and the control of adolescents and young people in the ratio of testosterone to cortisol. Conclusion: Strength training can increase the anabolic state of adolescents and young people.

**Keywords : Key words: resistance training, testosterone, cortisol, adolescent and young boys.**

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