

مقایسه سطوح برخی هورمون‌های آنابولیک، ترکیب بدن و آمادگی جسمانی کشتی‌گیران فرنگی کار نوجوان در مراحل مختلف بلوغ

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Introduction: The aim of this study was to compare the testosterone hormones, growth hormone, IGF1, insulin, body composition and physical fitness among young Greco-Roman wrestlers in various stages of maturity. With this study, we can see whether the maturity is predictor of the testosterone hormones, growth hormone, IGF1, insulin, body composition and physical fitness levels among young Greco-Roman wrestlers or not. **Methodology:** 42 wrestlers (age: $15/34 \pm 2/17$ year; height: $166/50 \pm 11/62$ cm) were ed randomly in Langerud Takhti club and Assigned in three groups (2&3, 4, 5) according to the maturation stage (Tanner Scale). Growth hormones and body composition were measured by blood tests and Inbody570 device respectively. Physical fitness was measured by Sargent jump, hand strong, 4 x 6m and 1600-m run tests. **Findings:** There was a significant difference between the testosterone, IGF1, lean body mass and physical fitness levels of young wrestlers at different stages of maturity ($p \leq 0.05$) but non-significant difference observed between the levels of growth hormone, insulin, fat percentage and fat mass in various stages of maturity. **Conclusion:** The results showed significant differences between young wrestlers in the beginning, middle and end of maturity in the body composition particularly lean body mass which is the result of differences in IGF1 and especially anabolic hormones such as testosterone. young wrestlers Following these changes in body composition with different maturity levels had improve physical fitness levels. In total, the maturity is a significant predictor for Testosterone, IGF1, lean body mass, Fat percent, aerobic power, agility and hand strong among young wrestlers.

کلمات کلیدی : testosterone hormone ,IGF1 ,insulin , body composition and physical fitness

