

## عنوان مقاله:

The Effect of Prolonged and Graded Exercise Protocols on Maximal Fat Oxidation and Fatmax in Trained Girls

## محل انتشار:

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## خلاصه مقاله:

Introduction: The intensity and duration of exercises are the main factors of fat oxidation and carbohydrate during the exercise. The aim of this study was to investigate the effect of prolonged and graded exercise protocols on maximal fat oxidation (MFO) and Fatmax in trained girls. Methods: Ten trained girls (age =  $22.3 \pm 1.8$  years old; weight =  $53.3 \pm 3.4$  kg; BMI =  $20.6 \pm 1.1$  kg/m<sup>2</sup> and VO<sub>2</sub>max =  $34.2 \pm 2$  ml/kg/min), attended the laboratory on seven separate occasions. In the first visit, anthropometrics and maximal oxygen uptake (VO<sub>2</sub>max) measurements were assessed. In the second session, participants completed a submaximal graded exercise protocol with seven stages, 3 min per stages at intensity of 35, 40, 45, 50, 55, 60 and 65% of VO<sub>2</sub>max. Next, each participant in five separate sessions consisting of 30 min prolonged exercises performed exercises in a counterbalanced order of intensity at 40, 45, 50, 55 and 60% VO<sub>2</sub>max. For statistical analysis of data Shapiro Wilk and paired sample t-test ( $p \leq 0.05$ ) were used. Results: The results showed that there was a significant difference between MFO ( $p = 0.01$ ) and Fatmax ( $p = 0.04$ ) after graded and prolonged exercises. Conclusion: It appears that prolonged exercise caused a higher MFO and Fatmax rather than graded exercise in trained girls.

## کلمات کلیدی:

Graded Exercise, Prolonged Exercise, Maximal Fat Oxidation, Fatmax

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