

The effect of eight weeks of interval anaerobic training on some of the respiratory parameters in sedentary students

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Abstract

Introduction: One of the methods for improving performance is intense interval training that have attracted the attention of sports science researchers in recent years, which are usually attributed to relatively short intermittent repetitive patterns of intensity or intensity close to the maximum. The purpose of this study was to investigate the effect of eight weeks of anaerobic interval training on respiratory parameters of sedentary students.

Methodology: The subjects of this study were 20 healthy sedentary male with a range of 20-30 years old who were selected among students of Payame Noor University of Ardebil. Independent variable of this study was an anaerobic interval training, which lasted for eight weeks and every week for four sessions and each session consisted of 10 minutes warm up, 9-6 repetitions of 30 second dash-run and 5 minutes of cooling down. Prior to administering independent variable, all subjects went through preparatory phase including 30-minute low intensity aerobic training (3 sessions a week with intensity 65-60%). Some respiratory indices were measured before and after the training program by a spirometer. Descriptive statistics were used to determine the mean and standard deviation of each variable and Shapiro-Wilk test to determine the normal distribution of data. T-test was used to examine intra-group variations and covariance analysis was used for intergroup variations. All calculations were performed using SPSS software version 23 and the significance level of the tests was less than 0.05.

Results: Anaerobic interval training increased 21% IRV, 13% vital capacity (IVC), 49% expiratory volume (ERV), 33% current volume (VT), 32% peak tail flow (PIF), 55% of the maximum expiratory flow of 25% (MEF25), 63% of the maximum expiratory flow of 50% (MEF50), 89% of the maximum expiratory flow 75% (MEF75), 78% peak expiratory flow (PEF) and 93% 75% (85-MEF75).

Discussion and Conclusion: It seems that anaerobic interval training can increase the performance of the respiratory muscles in sedentary male and improve lung function by increasing some respiratory parameters.

Keywords: Interval training, respiratory indexes.

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