

Bronchospasm Analysis Following the Implementation of a Program of Maximum Aerobic Exercise in Active Men

Authors : Sajjad Shojaeidoust, Mohsen Ghanbarzadeh, Abdolhamid Habibi

Abstract : Exercise-induced bronchospasm (EIB) is a transitory condition of airflow obstruction that is associated with physical activities. It is noted that high ventilation can lead to an increase in the heat and reduce in the moisture in airways resistance of trachea. Also causes of pathophysiological mechanism are EIB. Accordingly, studying some parameters of pulmonary function (FVC, FEV1) among active people seems quintessential. The aim of this study was to analyze bronchospasm following the implementation of a program of maximum aerobic exercise in active men at Chamran University of Ahwaz. Method: In this quasi-experimental study, the population consisted of all students at Chamran University. Among from 55 participants, of which, 15 were randomly selected as the experimental group. In this study, the size of the maximum oxygen consumption was initially measured, and then, based on the maximum oxygen consumed, the active individuals were identified. After five minutes' warm-up, Strand treadmill exercise test was taken (one session) and pulmonary parameters were measured at both pre- and post-tests (spirometer). After data normalization using KS and non-normality of the data, the Wilcoxon test was used to analyze the data. The significance level for all statistical surveys was considered $p \leq 0/05$. Results: The results showed that the ventilation factors and bronchospasm (FVC, FEV1) in the pre-test and post-test resulted in no significant difference among the active people ($p \geq 0/05$). Discussion and conclusion: Based on the results observed in this study, it appears that pulmonary indices in active individuals increased after aerobic test. The increase in this indicator in active people is due to increased volume and elasticity of the lungs as well. In other words, pulmonary index is affected by rib muscles. It is considered that progress over respiratory muscle strength and endurance has raised FEV1 in the active cases.

Keywords : aerobic active maximum, bronchospasm, pulmonary function, spirometer

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