

Strength gain in bench press and spirometric parameters in sedentary healthy women #82

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The aim of this study was to evaluate the correlation between strength gain in bench press and spirometric parameters of sedentary women submitted to a circuit resistance training (CRT). 14 healthy and non-trained women 39.8 ± 3.9 years, 60.6 ± 6.6 kg and 163.6 ± 6.6 cm were submitted to a CRT. The training consisted of 3 sessions/week of a circuit training of 9 stations with alternating muscle groups. In each session, the subjects performed the circuit 2 times with one set of 8-12 maximal repetitions (RM) in each station, during 10 weeks. The spirometric maneuvers, slow vital capacity (SVC), forced expiratory volume (FEV₁) and forced vital capacity (FVC) were analyzed by spirometric test, while the strength in bench press was measured by 1-RM test. These tests were performed before and after the CRT. Paired Wilcoxon's test was applied for comparison between the pre versus post CRT values of the spirometric parameters and of the 1-RM test; and the Spearman's test for correlation between strength gain in bench press and spirometric parameters in the pre and post CRT ($\alpha=0.05$ for all statistical tests). In post CRT the strength in bench press test increased, but there was not modification in spirometric parameters; and there was not correlation between the strength gain in bench press and the spirometric parameters analyzed. Therefore, our findings suggest that the gain of strength in bench press induced by CRT do not change spirometric parameters in healthy women.

Key words: spirometry; circuit resistance training; maximum strength test.