Original Paper

Effect of resistance training on serum level of resistin and insulin resistance indices in underweight inactive men

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Abstract

Background and Objective: A few data is available about effect of exercise training on level of resistin and novel insulin resistance indices in underweight inactive men. This study was performed to determine the effect of a period of resistance training on serum level of resistin and insulin resistance indices in underweight inactive men.

Methods: In this clinical trial study, nineteen underweight inactive men were randomly divided into resistance training (n=9, 20.9±3.6 yr) and controls (n=10, 21.4±2.7 yr). Resistance training protocol consisted of twelve weeks weight training, 3 sessions training per week, each session for 60 minutes. General characteristics of subjects, serum concentration of resistin, and indices adiponectin-resistin (AR), homeostasis model assessment - adiponectin ratio (HOMA-AD) and insulin resistance (IRAR) were assessed before and after the training.

Results: HOMA-AD and IRAR were reduced in resistance training group compare to controls, while serum resistin and AR did not significant reduce. Pretest-posttest difference means of HOMA-AD and IRAR were different between resistance training and control groups, while no significant differences were observed in the case of serum resistin concentration and AR. These parameters were not significant in the control group.

Conclusion: Resistance training is associated with improved insulin resistance (decrease of HOMA-AD and IRAR indices), while did not change resistin level in underweight inactive men.

Keywords: Resistance training, Insulin resistance, Resistin

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