Original Paper

Effect of eight weeks resistance training on malondialdehyd, total, antioxidant capacity, liver enzymes and lipid profile in overweight and obese women

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Abstract

Background and Objective: Oxidative stress plays an important role in the pathogenesis of some diseases such as atherosclerosis and doing high intensity training may enhance oxidative stress. This study was done to evaluate the effect of eight weeks resistance training on malondialdehyd, total, antioxidant capacity, liver enzymes and lipid profile in overweight and obese women.

Methods: In this quasi-experimental study, 16 overweight and obese women were non-randomly divided into intervention (n=9) and control (n=7) groups. The resistance training included the resistance training (with intensity of 50-80% one repetition maximum) that lasted for 8 weeks and 3 sessions per week. Every session lasted for 60 minutes. Malondialdehyd, total antioxidant capacity, liver enzymes and lipid profile for each subject was measured.

Results: The eight weeks resistance training significantly increased total antioxidant capacity high density lipoprotein and triglyceride in interventional group in compared to controls (p<0.05). The eight weeks resistance training significantly reduced alanine aminotransferase in comparison with control group (p<0.05).

Conclusion: Eight weeks resistance training by reducing malondialdehyd and increasing total antioxidant capacity may reduce the risk of atherosclerosis disease and improving cardiovascular health.

Keywords: Resistance training, Lipid peroxidation, Total antioxidant capacity, Liver enzyme, Overweight, Woman

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Received 19 Jun 2017 Revised 16 Oct 2017 Accepted 17 Oct 2017