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عنوان مقاله:

The Effect of a Single Bout Circuit Resistance Exercise on Homocysteine, hs-CRP and Fibrinogen in Sedentary Middle Aged Men

محل انتشار:

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خلاصه مقاله:

Objective(s) Homocysteine, hs-CRP and fibrinogen are three novel cardiovascular risk factors. The aim of this study was to examine the effect of a single bout of circuit resistance exercise on homocysteine, hs-CRP and fibrinogen levels in healthy and inactive men. Materials and Methods The subjects were randomly divided into the experimental group (n= ۱۴) and the control group (n= ۹). Circuit training comprised ten exercises with ۳۵% of one repetition maximum intensity. Blood samples were collected thirty minutes before and immediately after training. The data were analyzed using Kolmogorov Smirnov and independent samples T test in SPSS۱۵.۰ Software (P< ۰.۰۵ was regarded significant). Results Analysis of data showed the significant elevation of serum homocysteine and hs-CRP levels after training in the experimental group but not in the control group. No significant changes of fibrinogen levels were observed in both groups. Conclusions During the exercise, the elevation of creatine synthesis for ATP production increases homocysteine levels. Moreover, muscle-derived interleukin-۶ (a stimulator of glycogenolysis in the liver) induces hepatic production of CRP. Pathological or beneficial consequences of these changes are not clearly specified. Furthermore, more research is needed to show the acute and chronic effects of physical activity on novel cardiovascular risk factors.

کلمات کلیدی:

Atherosclerosis, C-reactive protein, Exercise, Fibrinogen, Homocysteine

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